Appendix D
CDOT Structure Records

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made TDS

Checked

Date Mar. 1976

Location Sec. 25 Township 30S Range 64W Photo. Neg. No.

Bridge over Dry Wash Station 156+10 No. and Type of Spans 3-CBC Total length 42.03'

Rating HS-20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 76

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 20° Lt Superelevation
Bridge	Tan	0.00%		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		2 @	38'0"	Minimum	Forward approach pavement and Rdwy
Bearing	89° 49' E			Sidewalks			

Design by DOH Built by DOH Maintained by DOH Plans FF050-4(5)

Contract No. Contractor Peter Kiewit Sons Fabricator Contract price 114,357 21

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 12.48 sq. miles

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4609.5

Nature of stream bottom

Remarks # Int. Alt.

Replaces K-18-K and K-18-M

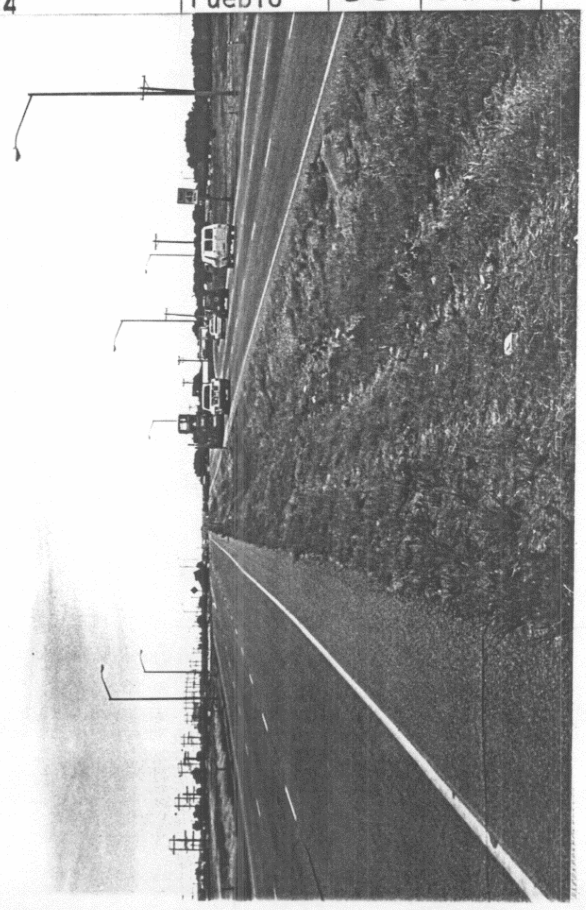
SUBSTRUCTURE

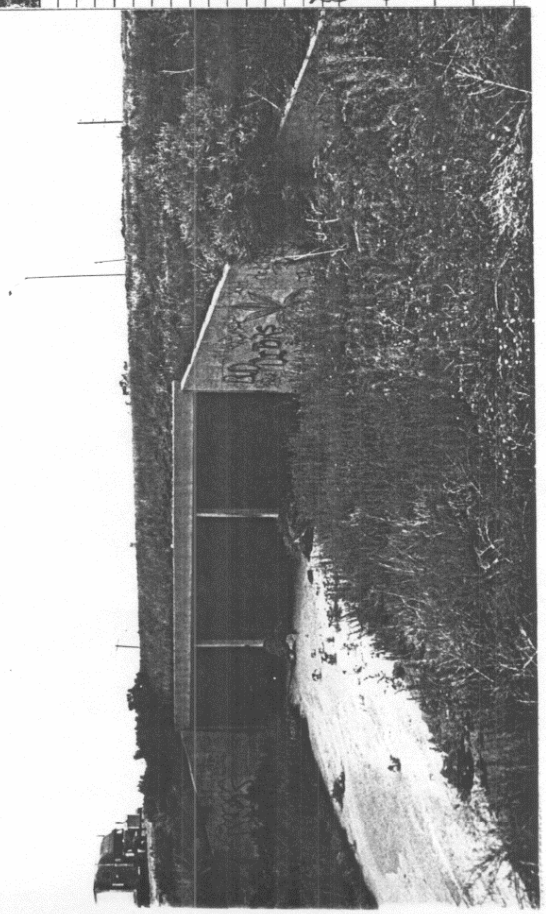
Abut's / Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								2-80°@30'
orward	Triple 11' x 14' x 11'				x 10' x 186' CBC			2-40°@44'
Pier								
Pier					Type 11-14-B			

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
K-18-EZ	FF050-4(5)	Pueblo	50	B 321.40	FA	—10 10 12½ 15 **20**	15-18 19-22 23-26 27-30 40 50 **2@38'0"**	—12 12-14 14— **Open**





SUPERSTRUCTURE

Curbs — Hand rail

Wearing Surface

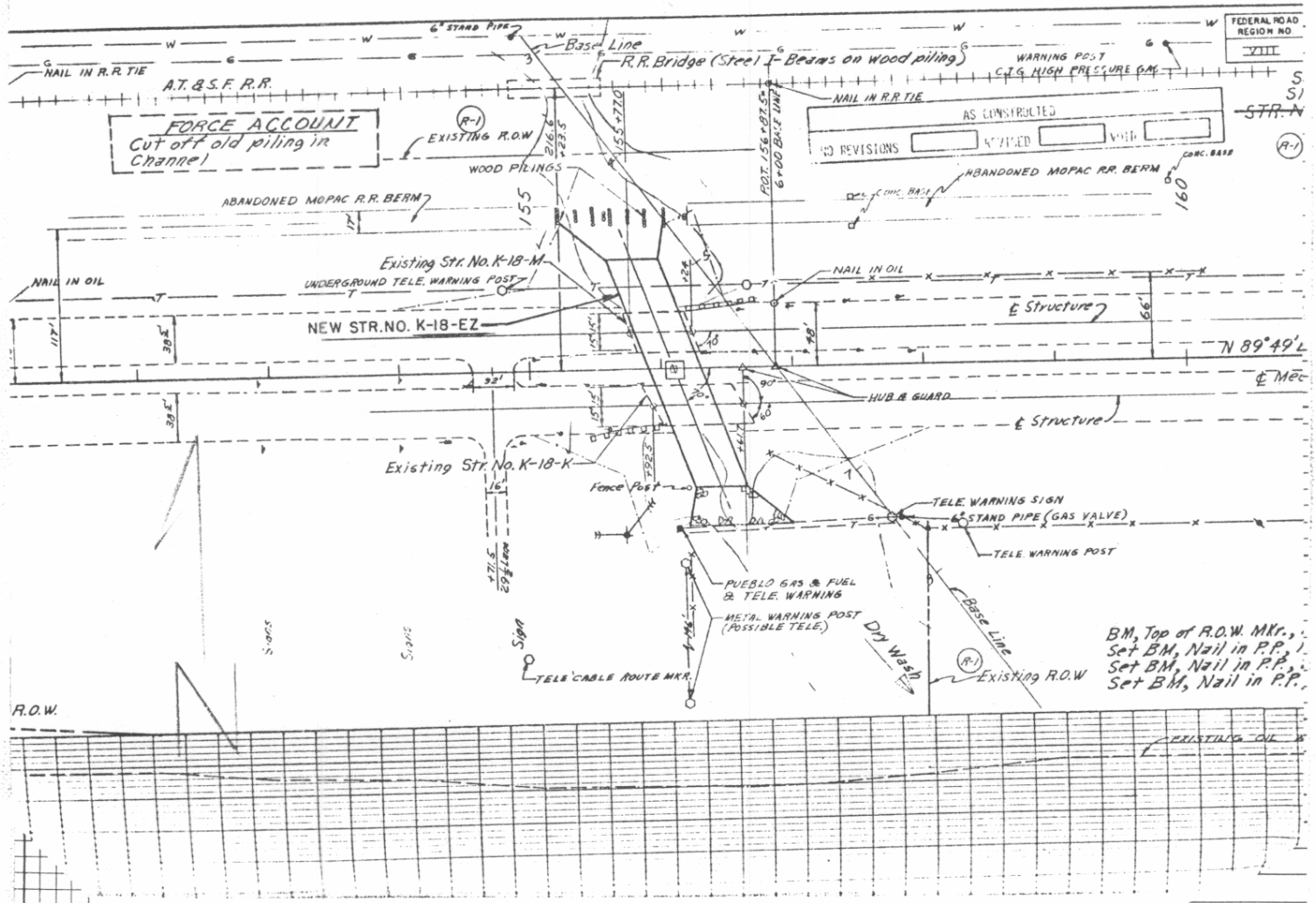
Max Height of Fill 10'

CONCRETE SLAB - Clear Span 11, 14, 11 — Thickness Top Slab 12 1/2"

Bottom Slab 13 1/2"

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks



First Bridge | Second Bridge | Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
K-18-E7	FF050-4(5)	Pueblo	50	B 321.40	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							20@38'0"	

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made B 6-42

Location Sec. 29 Township 20 S Range 63 W Photo. Neg. No. B-120-6 Checked Date

Bridge over Wash Station 287+98 to 288+21.0 No. and Type of Spans 4 Spans 2-10"x10 CBC Total length 230"

Rating H-20-S16 Member Rating Unit Stress Design Live Load H-15'35 Required Live Load H-20 S16 38' Posted Live Load Year built 1938

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	Tan	- 0.45	Open	Between Curbs		Maximum	Rear approach pavement and Rdwy	
Rear approach	"	- 0.45	"	Between Rail				
Forward approach	"	-0.45 to +0.10 200' VC	"	cl. rdwy.	2@26'0"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks	38'0"		Widened ADAF 9(1)	

Design by CSHD Built by Orig. Pueblo County Maintained by Pueblo Co Plans SP 859-C

Contract No. Contractor Fabricator Contract price 16594.75

WATERWAY Area of Br. opening 200 □' ± 228 □' 70' Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4585.06
Low bridge	4576.5
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 6.43 Sq. Mi.

Drift and Ice Dams none

Channel width Depth Elevation of Stream bed 4566.5'

Nature of stream bottom

Remarks

K-19-F Joined together with a 2-10'x12' Roll TS 19 CBC. B145 per FF 050-4(5)

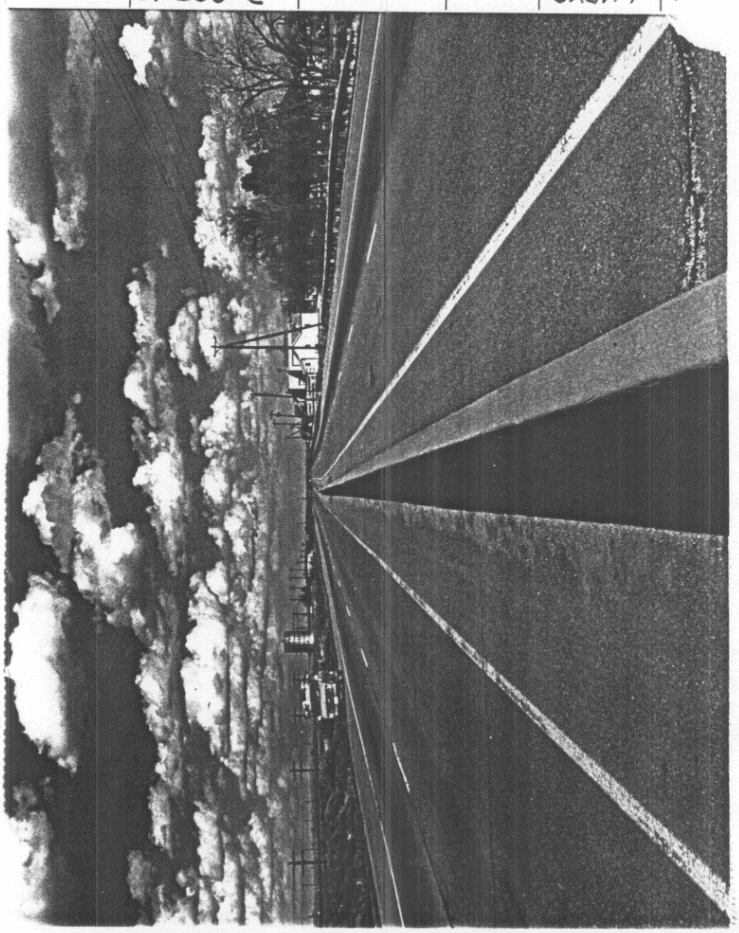
SUBSTRUCTURE

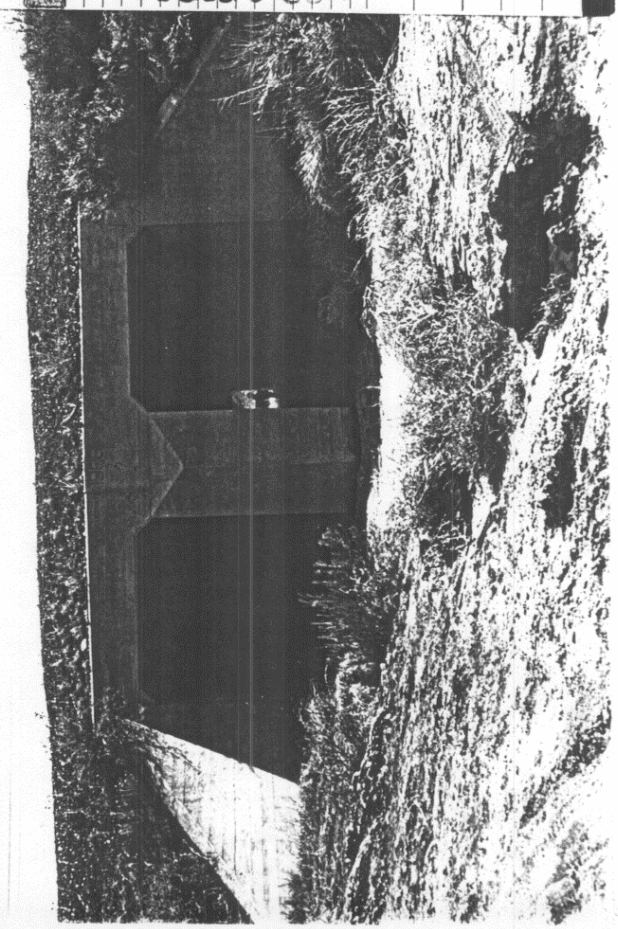
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward		Double 10'x10'x48' CBC EXTENDED 40' Rt. - ADAF 9(1)						
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2600

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
K-19-F	AD-AF 9(1) SP 859-C	Pueblo	50	B 323.99	FA	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	2@26'0" 38'0"	—12 | 12-14 | 14— | Oper



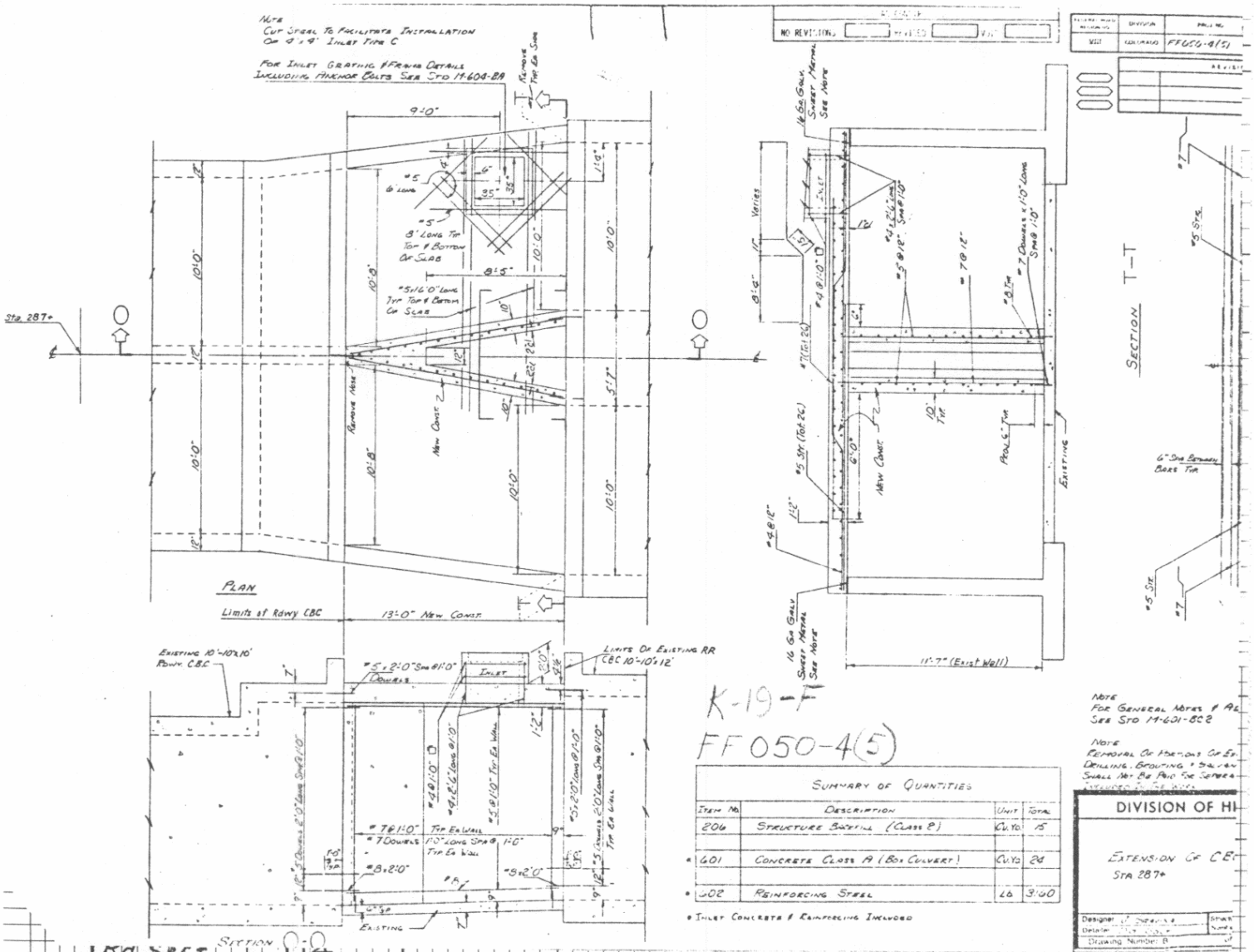


SUPERSTRUCTURE

Curbs 6' Median strip Hand rail None

Wearing Surface Fill over Conc Box OS

CONCRETE SLAB - Clear Span Thickness



K-19-F

FF 050-4(5)

Summary of Quantities			
Item No.	Description	Unit	Total
206	Structure Backfill (Class 2)	Cu.Yd.	15
* 601	Concrete Class A (Box Culvert)	Cu.Yd.	24
* 602	Reinforcing Steel	Lb	3160

* Inlet Concrete & Reinforcing Included

DIVISION OF HI

Extension Of CBC Sta 287+

Designer
Detailer
Drawing Number B

Rd. Sect. P-4
Br. Letter Q

LOCATION SKETCH

REMARKS:-General condition of structure (in pencil)

Scoured 1'± at downstream

Scoured 2'-6" at downstream B.S. 1960
S.E. wing pushing in, footings exposed. B.S. 1966.
Vert. wall broken @ bottom SW corner '68 '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2600

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
K-19-F	AD-AF 9(1) SP 050-6	Pueblo	50	B 32299	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Location Sec. 33 Township 20S Range 63W Photo. Neg. No. Checked Date May 1976

Bridge over Wash Station 339+05 No. and Type of Spans 3-CBC Total length 43.6'

#Rating HS-20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 76

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 25° Lt. Superelevation
Bridge	Tan	0.00%		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		2 @	38'0"	Minimum	Forward approach pavement and Rdwy
Bearing	S82-32E			Sidewalks			

Design by DOH Built by DOH Maintained by DOH Plans FF 050-4(5)

Contract No. Contractor Peter Kiewit Sons Fabricator Contract price #45,862.45

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation	
Grade center of bridge		Drainage area (size and character) 0.97 sq. miles
Low bridge		Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed 9556.5
Normal high water		Nature of stream bottom
Maximum high water		Remarks [# Int. Alt.

Remove K-19-I and K-19-G

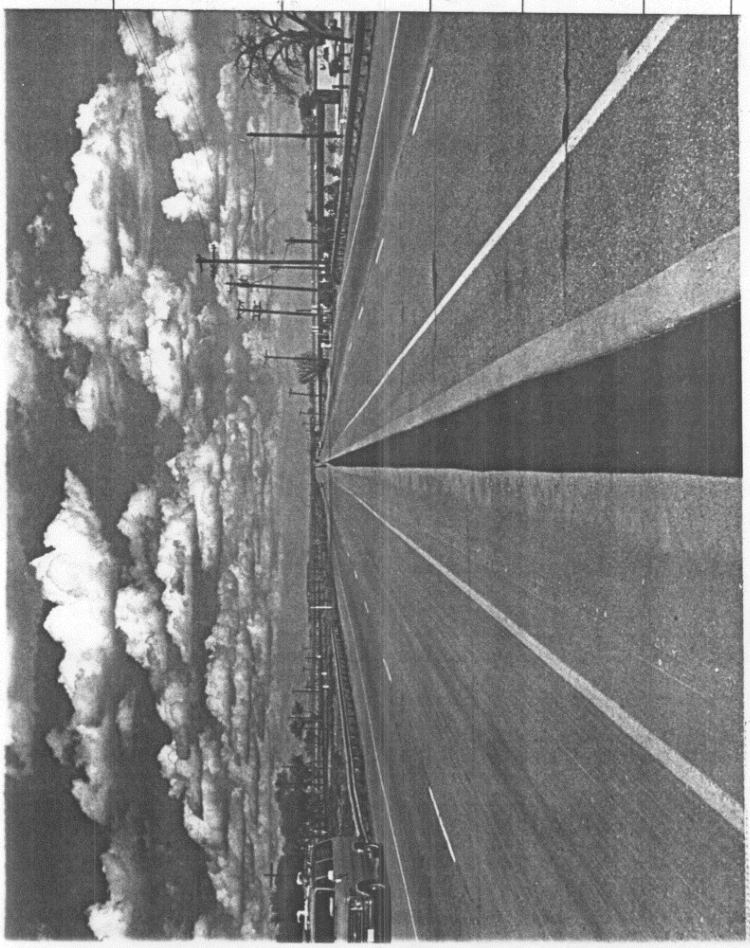
SUBSTRUCTURE

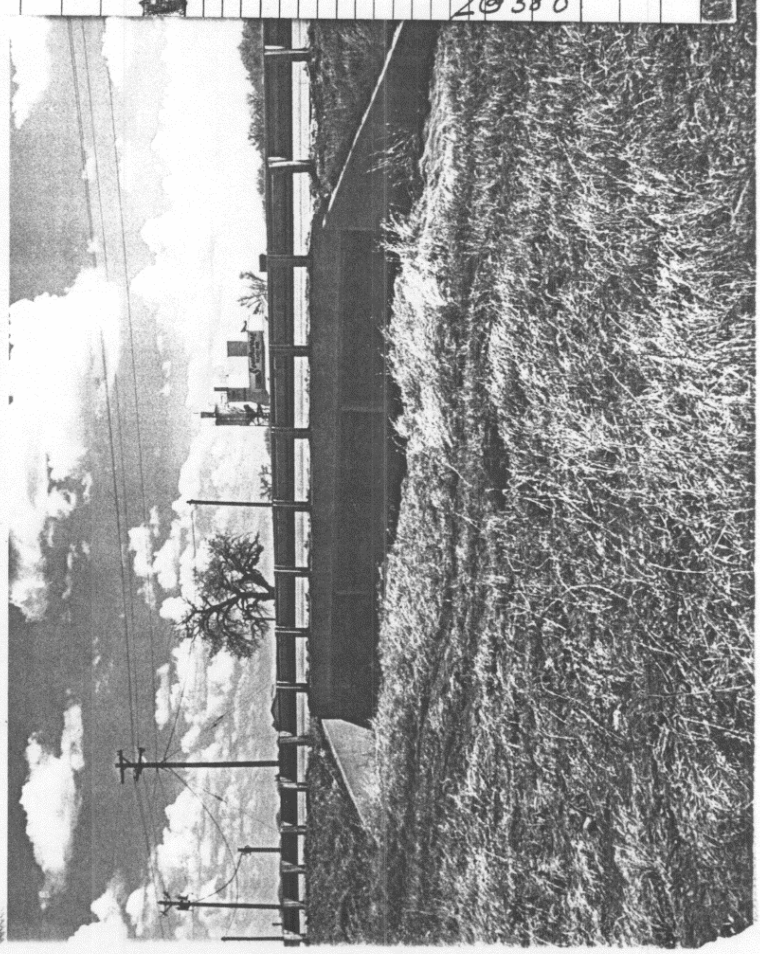
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								2-85°@ 13'
Forward								2-35°@ 22'
Pier		Triple (11' x 14' x 11') x 4' x 95'						
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY					CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40 50	—12	12-14	14—	Open
K-19-AA	FF050-4(5)	Pueblo	50	B 324.83	FA									2@38'0"					





SUPERSTRUCTURE

Curbs — Hand rail

Wearing Surface

Max Height of Fill 5'

CONCRETE SLAB - Clear Span 11, 14, 11 Thickness Top Slab 11"
Bottom Slab 12"

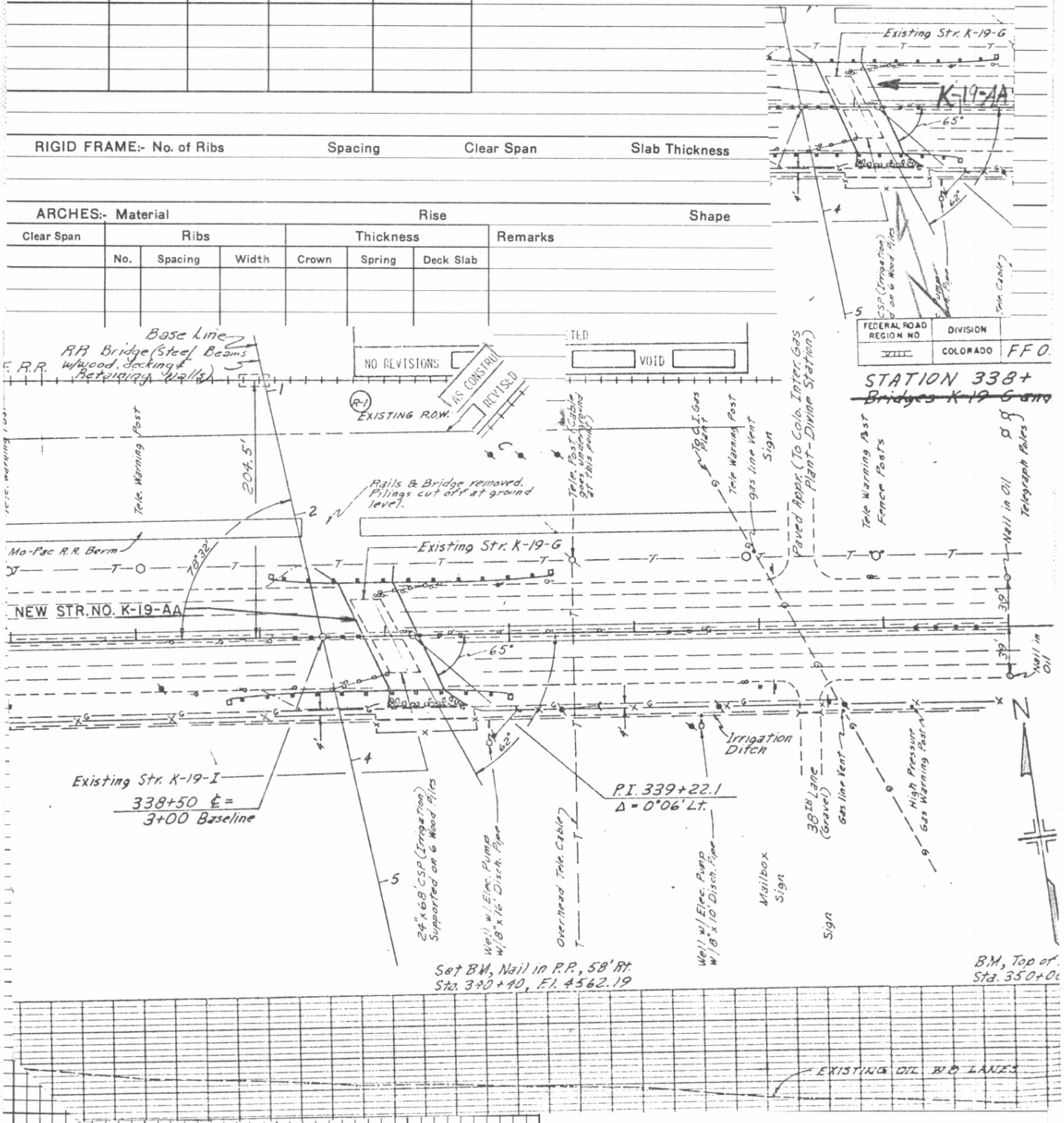
CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
K-19-AA	FF050-4(5)	Pueblo	50	B 324.83	FA									2@38'0"						

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made TDS

Location Sec. 25 Township 20S Range 64W Photo. Neg. No. Checked

Bridge over Dry Wash Station 363+65 No. and Type of Spans 3-CBC Date Mar 1976

Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Total length 39'6"

Posted Live Load Year built 76

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0 Superelevation
Bridge	Tan	1.00%		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		2@	38'0"	Minimum	Forward approach pavement and Rdwy
Bearing	S82°43'E			Sidewalks			

Design by DOH Built by DOH Maintained by DOH Plans FF 050-4(5)

Contract No. Contractor Peter Kiewit Sons Fabricator Contract price 45,802.13

WATERWAY	Area of Br. opening	Elevation	Area of Relief opening	Skew of flow (Normal)	Flood
Grade center of bridge					
Low bridge					
Low water					
Normal high water					
Maximum high water					

Drainage area (size and character) 1.90 Sq. Mi.

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4546.3

Nature of stream bottom

Remarks #Int. Alt.
K-19-H and K-19-K Removed

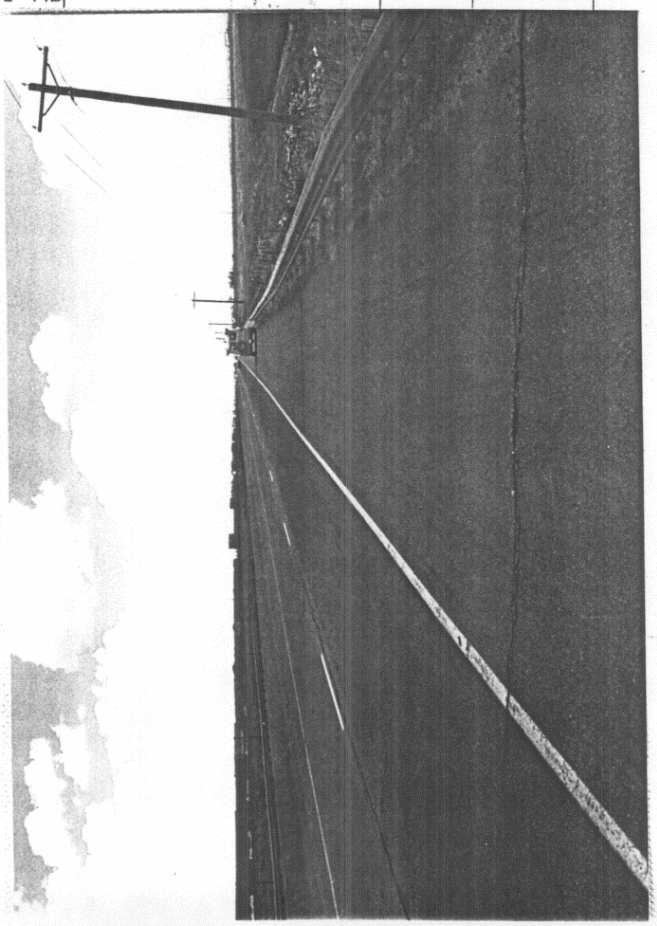
SUBSTRUCTURE

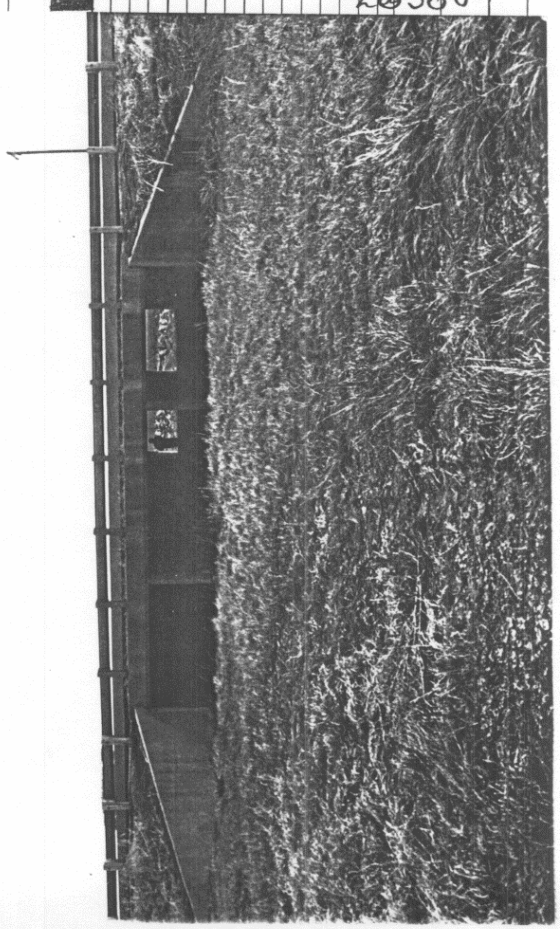
But's / ers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
ar								
ard		3(11'x 14'x 11')x 6'x 86' CBC 11-14-A						2-60° @ 22'0"
er								2-45" @ 15'0"
er								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
K-19-AB	FF050-4(5)	Pueblo	50	B 325.30	FAP	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open
							2@38'0"	





SUPERSTRUCTURE

Curbs — Hand rail

Wearing Surface

Max Height of Fill 5'0"

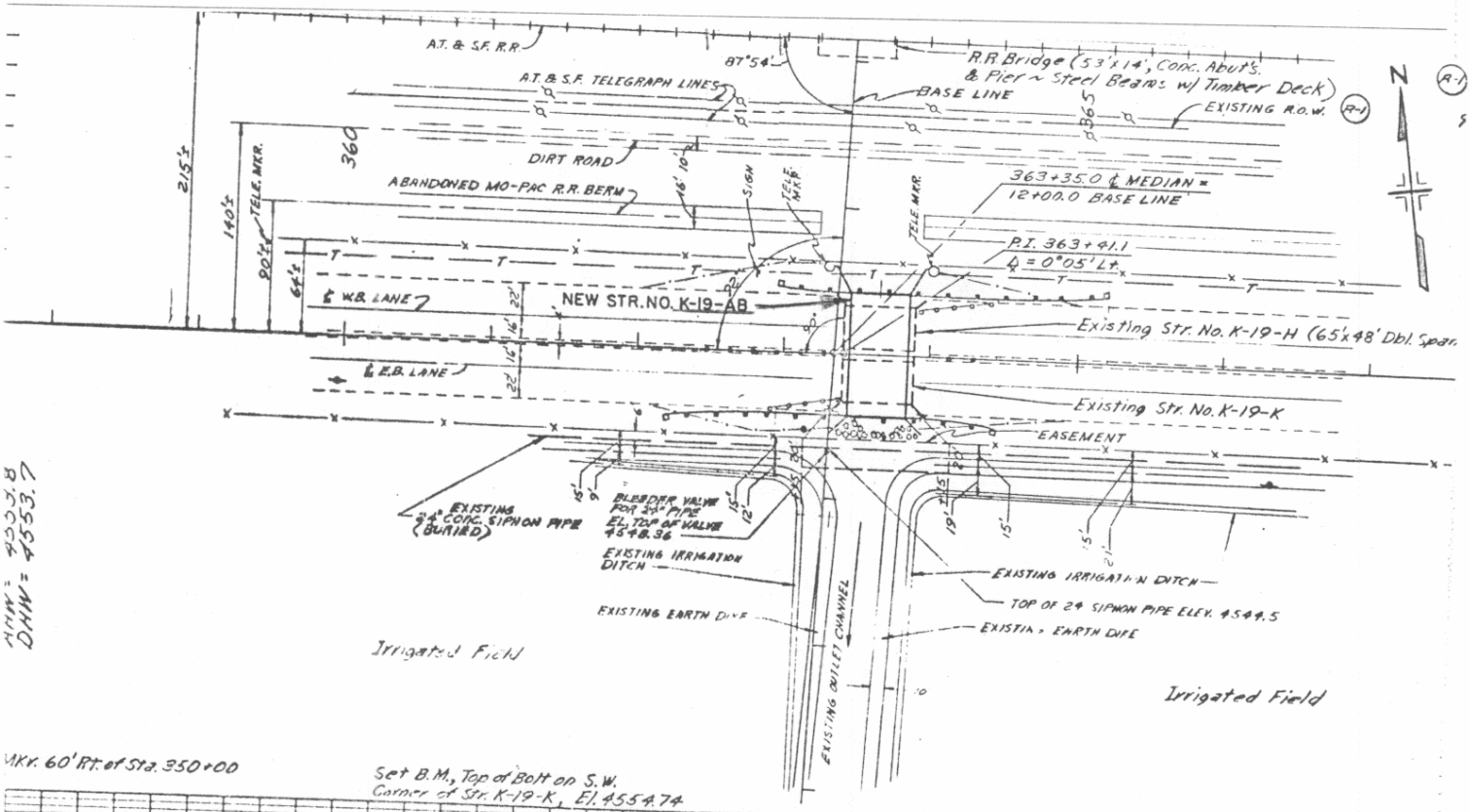
CONCRETE SLAB - Clear Span 11, 14, 11 Thickness Top Slab 11"

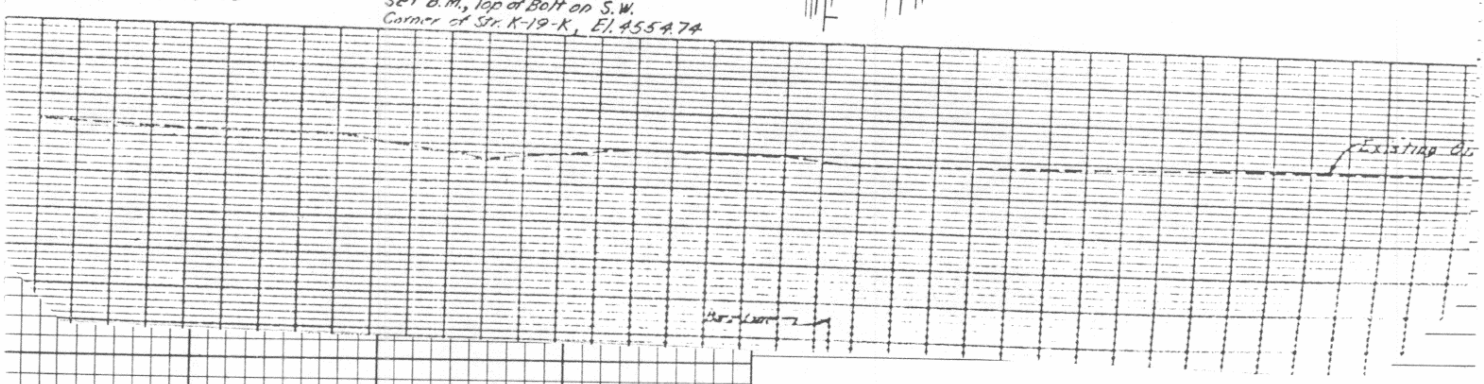
Bottom Slab 12"

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness





Traffic Survey Data

First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
-19-AB	FF050-4(5)	Pueblo	50	B 325.30	FAP					■				■ 32'0"						■

Colorado State Highway Bridge Dept.

STEEL BEAM and GIRDER BRIDGES

Made J.R.J. 3-53

Location Sec. 31 Township 20 S Range 62 W Photo. Neg. No. Checked Date

Bridge over CHICO CREEK Station 553+26.49 to 556+63.31 No. and Type of Spans 5-CI (CONT.) Total length 305' 7½"

Rating H-20S16-44 Member Rating Unit Stress fc 1000 fs 18000 Design Live Load H-20S16-44 Required Live Load Posted Live Load Year built 1953

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° Lt. Superelevation
Bridge	TANGENT	-0.028%	645'	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	✓	✓		Between Rail	34'-0"		
Forward approach	✓	300' V.C.		C to C Truss		Minimum	Forward approach pavement and Rdwy
Bearing	S 45°08'E			Sidewalks	2@2'-0"		

Design by ALFRED J. RYAN Built by C.D.H. Maintained by C.D.H. Plans AD-AF 9 (2)

Contract No. Contractor J.H. & N.M. MONAGHAN Fabricator Midwest Steel Contract price

WATERWAY Area of Br. opening 324 Area of Relief opening NONE Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4544.91
Low bridge	4541.29
Low water	4527.0
Normal high water	DRY
Maximum high water	—

Drainage area (size and character)

Drift and Ice MEDIUM Dams

Channel width Depth Elevation of Stream bed 4527.0

Nature of stream bottom SAND & CLAY

Remarks

Per MP 02-0000-04 Handrail Painted (1982) by Rocky Mtn. Steel Painters Inc. $1037.67

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	6'-6" x 4'-0"	CONC.	8	10"H@42"	4@57.0" 4@59.0"		SAND & CLAY	NO WINGS
Forward	✓	✓	✓	✓	✓		✓	
Pier	2'-6" x 2'-6"	CONC.	9	12"H@53"	45'-0" LONG CONC. GRAV.			
Pier	✓	✓	✓	✓	✓			Swaybraces
	✓	✓	✓	✓	✓			Backing Plank

First Bridge Second Bridge Third Bridge

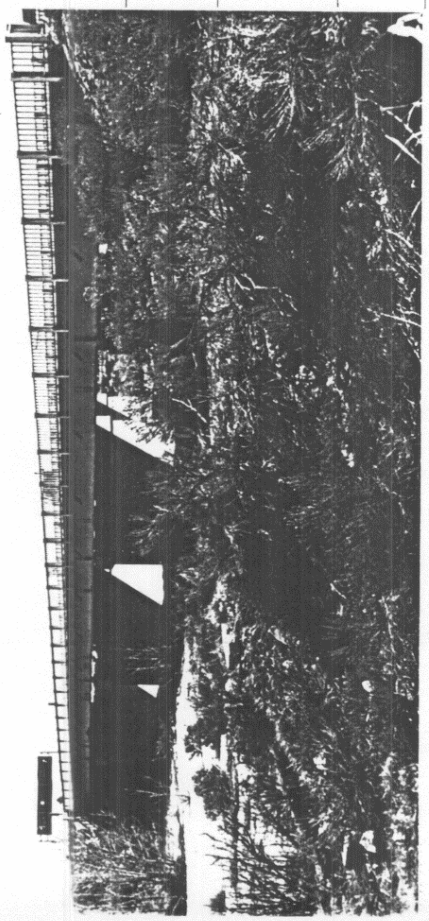
Traffic Survey Date 1600

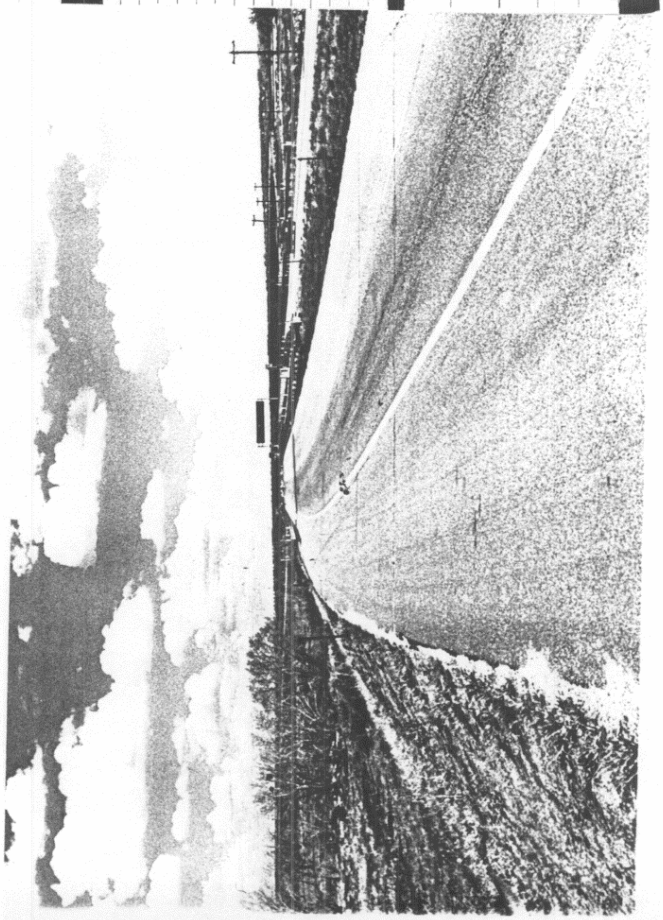
STR. NO.	PROJECT	COUNTY	Highway	LOG	
K-19-Q	AD-AF 9 (2)	PUEBLO	50	328.91	F4

H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open





Stringers Lapped or butted CONTINUOUS

Wheel guard 9" CONC. Hand rail STEEL 3'-0" HIGH

Remarks

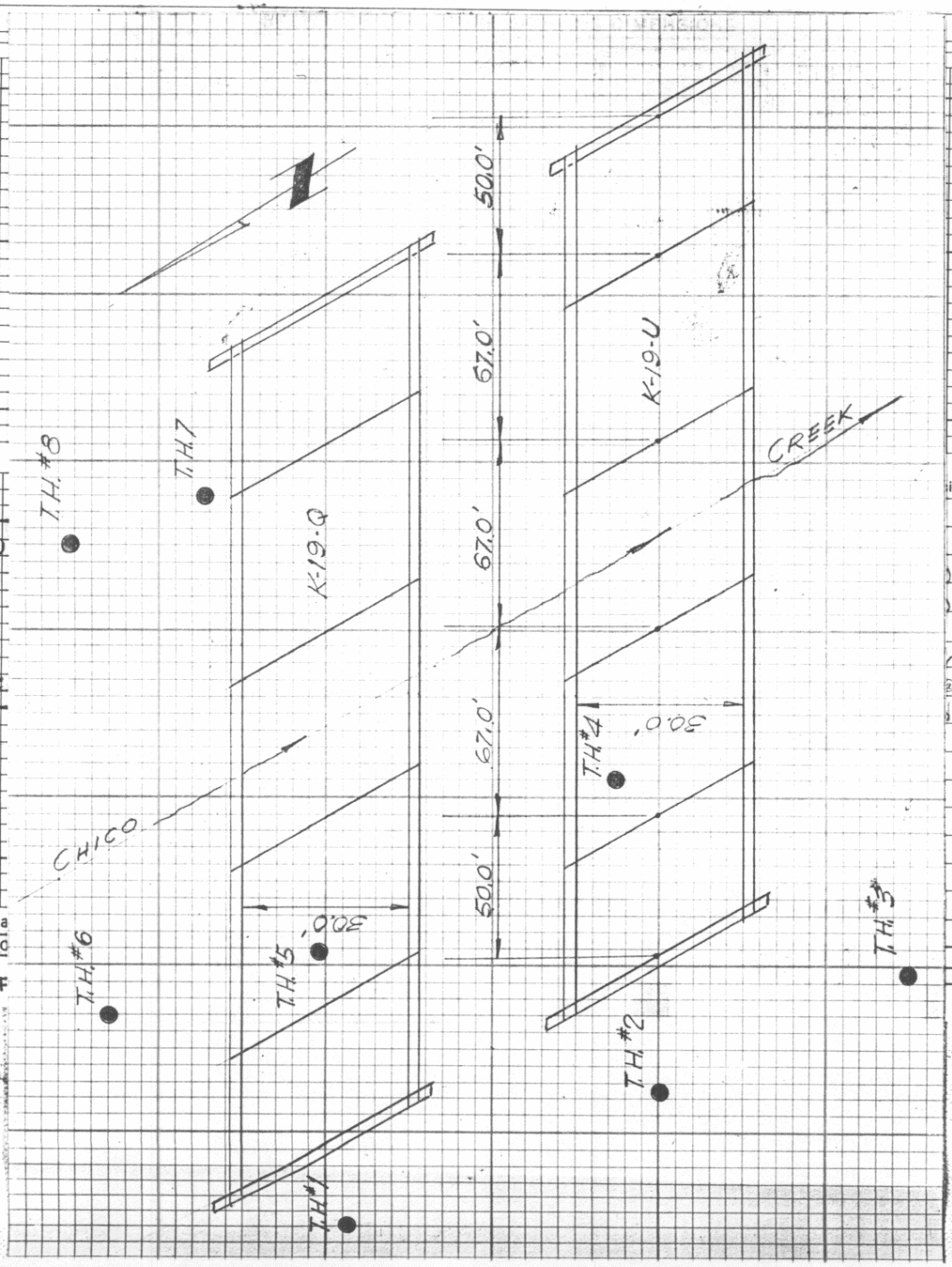
I-BEAM GIRDERS Size Spacing

PLATE GIRDERS Depth Web Flange Ls Cover Plates Bearing Stiffeners Interior Stiffeners C to C bearing

FLOOR BEAMS End Interior Spacing

Floor Beam Connections

Remarks



D

LAT.
LONG.
Rd. Sect.
Br. Lette

Traffic Survey Data

STR. NO.	PRO
K-19-Q	AD-AF

ail)

B.S. 1960
ose on south side.
oles in deck, 2" deep

rip rap '68'
@ West end. Pot holes
d fence on So. side

Third Bridge

CLEARANCE					
40	50	—12	12-14	14—	Open

Floor Beam Co

Remarks

DOD

LAT. 38°

LONG. 104°

Rd. Sect. 11

Br. Letter Y

Traffic Survey Data 1600

First Bridge | Second Bridge | Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open
K-19-Q	AD-AF 9(2)	PUEBLO	50	B 328.91	FA			

Colorado State Highway STEEL BEAM and GIRDER BRIDGES

Bridge Dept.

Location Sec. 9 Township 21 S Range 62 W Photo. Neg. No. Checked Date

Bridge over ARKANSAS RIVER Station 663+62.08 to 667+67.92 No. and Type of Spans 6-CI (CONT. COMP.) Total length 405'-10"

Rating H-20-S16 Member Rating Unit Stress f 1000 / f 18000 Design Live Load H-20S16-44 Required Live Load Posted Live Load Year built 1955

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° Lt. Superelevation 86
Bridge	TANGENT	-0.10%		Between Curbs	34'6"	Maximum	Rear approach pavement and Rdwy
Rear approach	✓	✓		Between Rail	34'6"		
Forward approach	✓	✓		C to C Truss		Minimum	Forward approach pavement and Rdwy
BEARING	S50°00'38"E			Sidewalks			Deck Replaced BRF 050-3(31)

Design by CDH Built by CDH. Maintained by CDH. Plans F 001-4(2)

Contract No. Contractor DOMENIC LEONE CONST. Fabricator MIDWEST STEEL & IRON Contract price [illegible]

WATERWAY Area of Br. opening 3900 □' Area of Relief opening OVERFLOW 7400 □' Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4503.738
Low bridge	4500.138
Low water	4487.0
Normal high water	
Maximum high water	4499.5

Drainage area (size and character)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4487.0

Nature of stream bottom

Remarks

Per MP 02-0000-04 Handrail painted (1982) by Rocky Mtn. Steel Painters $1371.36

Proj BRF 050-3(31) Deck replaced. Contractor: Marquo, Inc. $327,378.80 Completed 4/22/86

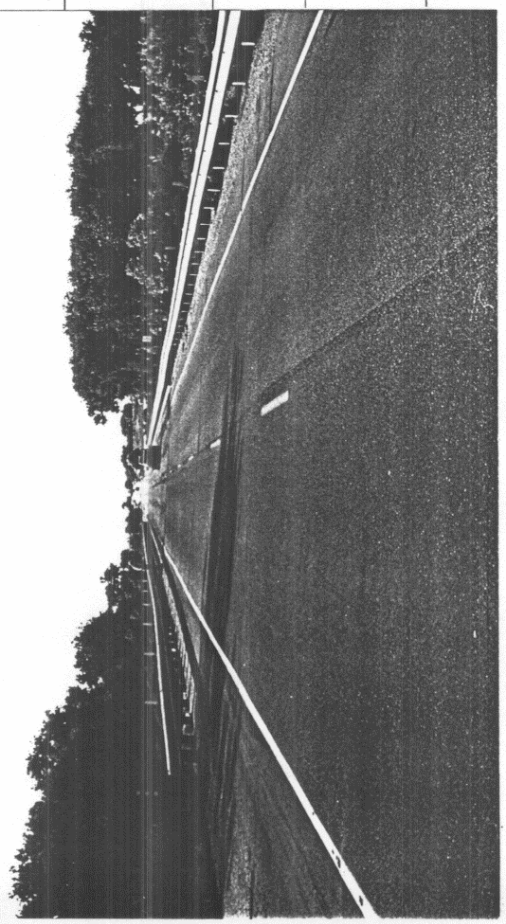
SUBSTRUCTURE

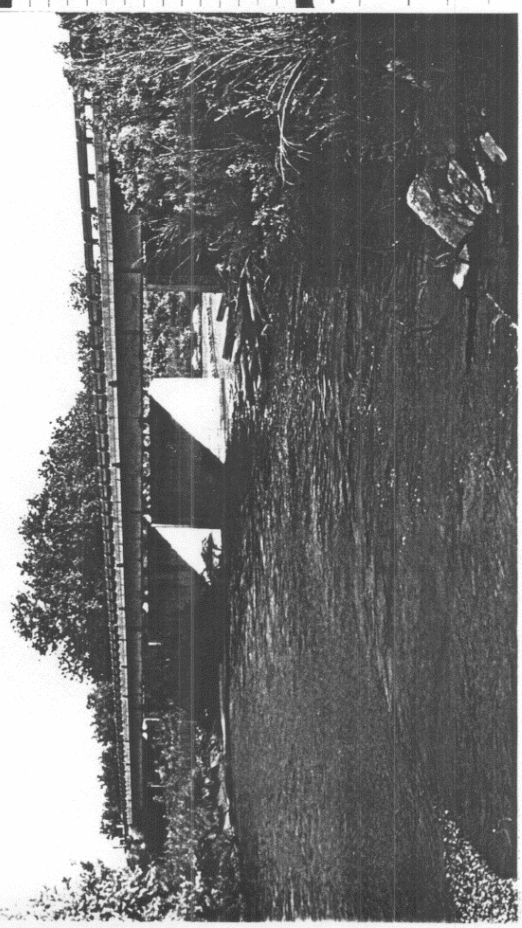
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear 1	2'-10 1/2" x 2'-2 3/4"	CONC.	7	10" BP @ 42#	40'-0"			NO WINGS.
Forward 7	✓	✓	✓	✓	✓			
Pier 2 & 5	CONC. WALL		12	10" BP @ 42#	31'-0" 34'-0"			
Pier 4		✓	✓	✓	✓			Swaybraces
3 & 6		✓	✓	✓	✓			Backing Plank

First Bridge Second Bridge Third Bridge

Traffic Survey Data 1600

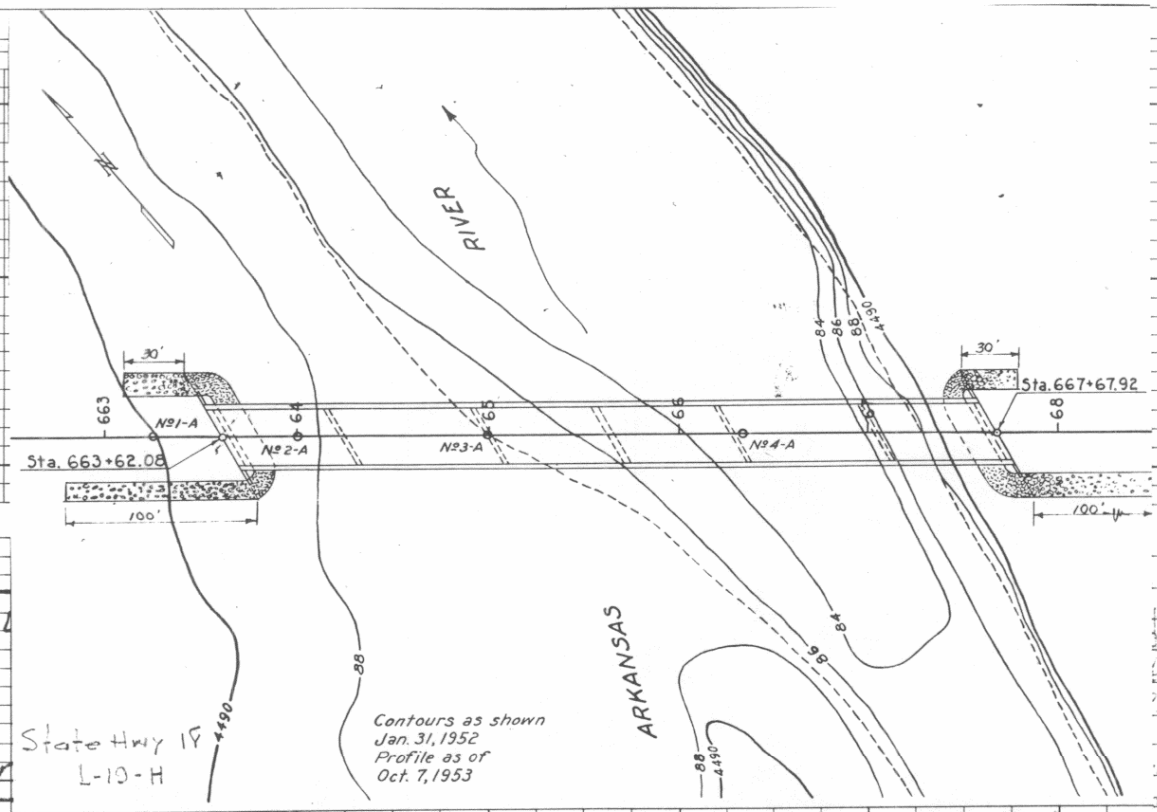
STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED (10, 10, 12½, 15, 20)	ROADWAY (15-18, 19-22, 23-26, 27-30, 40, 50)	CLEARANCE (12, 12-14, 14, Open)
L-19-H	F001-4(2)	PUEBLO	50	330.98	FA			





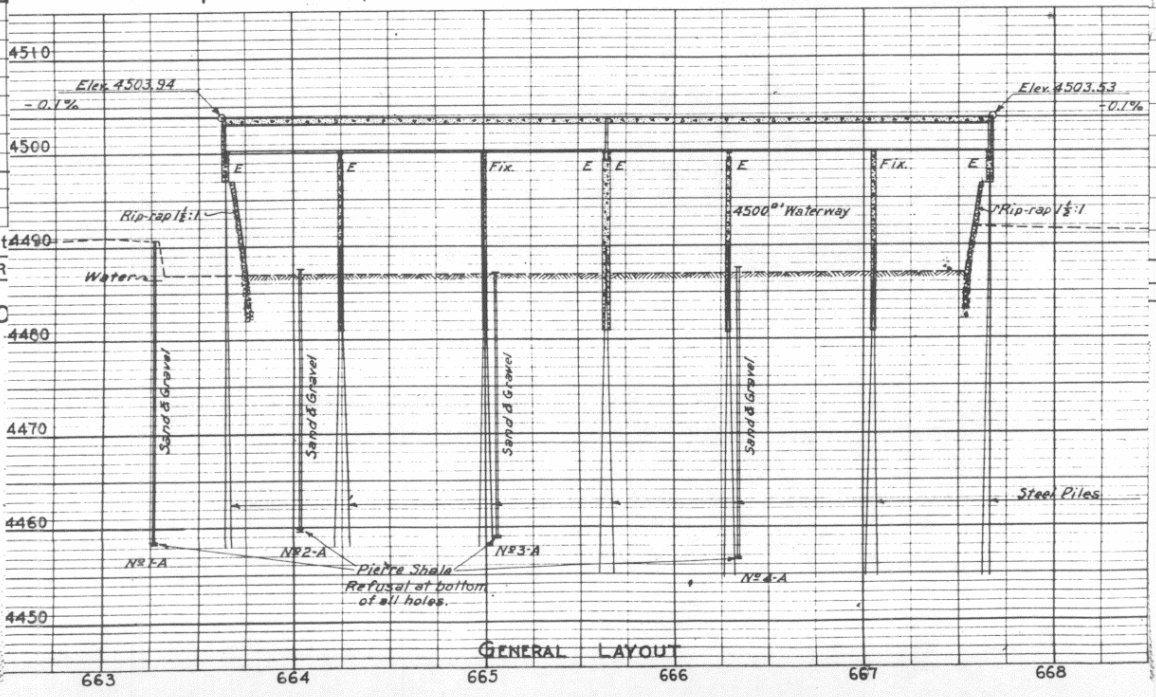
Remarks 1'-11" high.

I-BEAM GIRDERS Size					Spacing		
PLATE GIRDERS Depth	Web	Flange Ls	Cover Plates		Bearing Stiffeners	Interior Stiffeners	C to C bearing
FLOOR BEAMS End			Interior		Spacing		
Floor Beam Connections							
Remarks							



LAT.
LONG.
Rd. Sect.
Br. Letter

State Hwy 18
L-19-H



GENERAL LAYOUT

Traffic Survey Dat

STR. NO.	PR
L-19-H	FOC

Third Bridg

CLEARANCE			
-12	12-14	14-	O

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made H 2-42

Location Sec. 18 Township 21S Range 61W Photo. Neg. No. PS-7869 Checked Date

Bridge over Huerfano River Station 817+17.6 to 821+97.8 No. and Type of Spans 5-CA Total length Tip of Wingwalls 480'-2"

Rating H-20 Member Rating Unit Stress Design Live Load Required Live Load H 20 S 30 Posted Live Load Year built 1921

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	tan	+.58 + -.58 200' VC	210	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy	
Rear approach	14° R to tan	0.0 to +3.5	351	Between Rail	33'-0"			
Forward approach	tan to 6° L	+5.233 to -1.3 200' VC	210			Minimum	Forward approach pavement and Rdwy	
				Sidewalks	none			

F.A.P. 92(2)

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 92

Contract No. Contractor J.H. & N. Monaghan & Assoc. Fabricator Contract price 114307.57

WATERWAY Area of Br. opening 5350 □' Area of opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4468.90
Low bridge	4465.7
Low water	4448.0
Normal high water	4452.0
Maximum high water	

Drainage area (size and character) 550 □ Mi. Rolling to mountainous, adobe

Drift and Ice Heavy drift medice Dams Orlando, Cucharas

Channel width Depth Elevation of Stream bed

Nature of stream bottom Sandy

Remarks

RER/ROS OCOS(12), GD. RAIL TYPE-3
CONNECTED BY ROBERTS & ANDERSON INC.
(1976)

Widened 1948 to 30'-0" cl. Rdwy.

Roll No.

Sheet No.

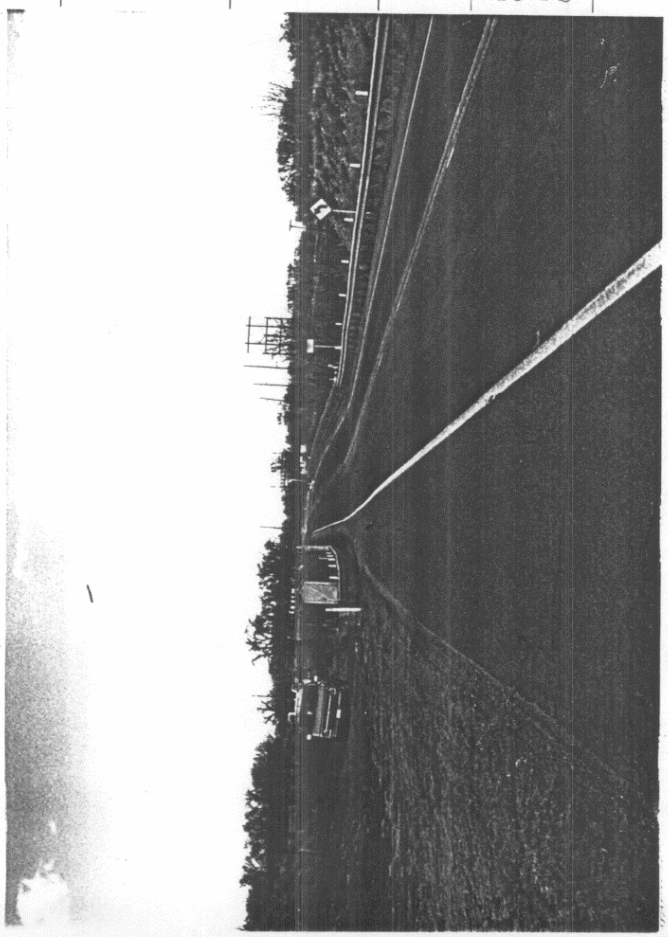
SUBSTRUCTURE

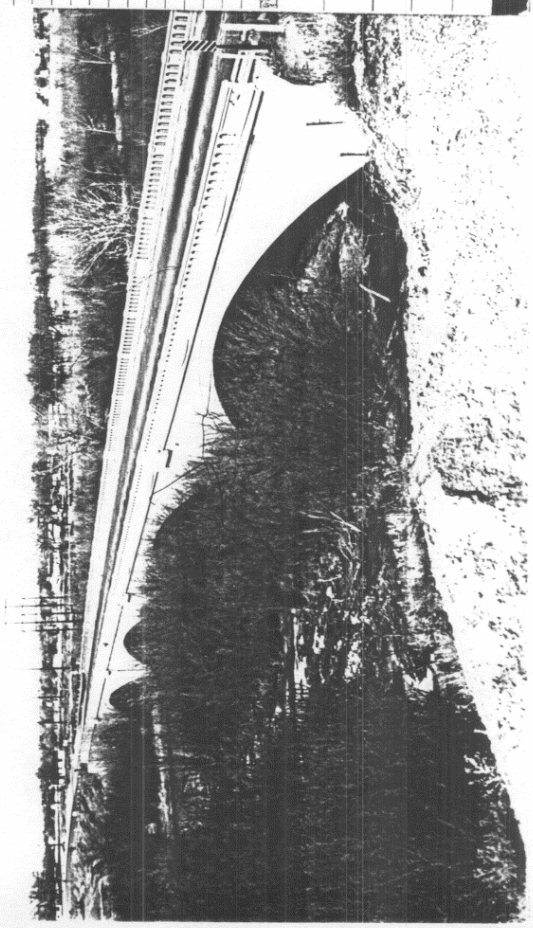
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CG	25'-1"		15' Conc 45°
Forward					CG	41'-1"		
Pier					CG	30'± to 39'-4"±		
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-19-B	FAP-92	Pueblo	50	B 335.86	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

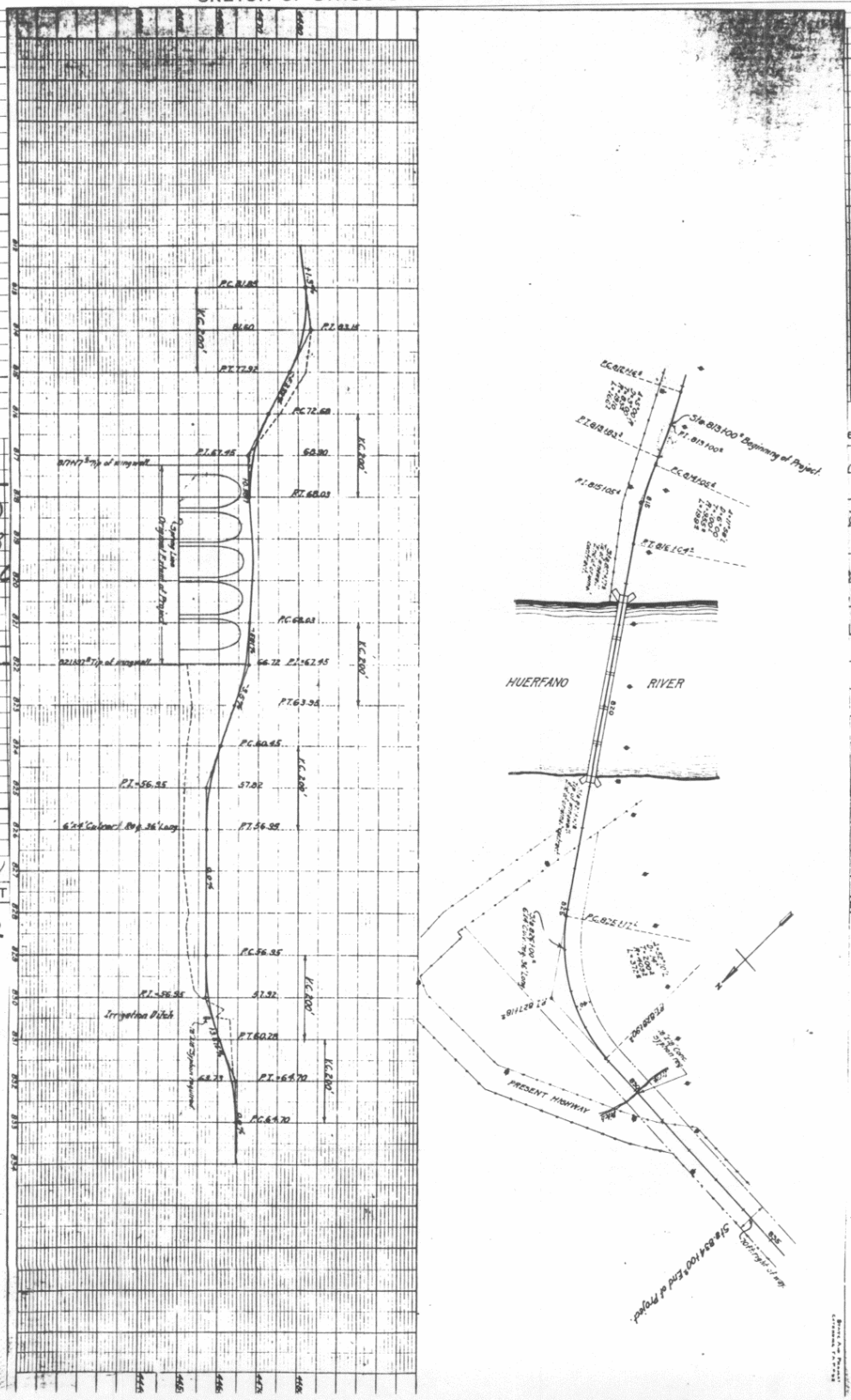




ARCHES:- Material Concrete Rise 15'-0" Shape Parabolic 69.5' rad.

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	
80'-0"		Spandrel Arch		2'-6"	5'-6" to 6'-0"	None	

SKETCH OF STRUCTURE SHOWING DIMENSIONS



DOD
LAT. 3
LONG. 10
Rd. Sect.
Br. Letter

Traffic Survey Data 31

STR. NO.	PROJECT
L-19-B	FAP-92

encil)

W. abut spalling
debris 63'
all & arch @ E. abut.
ne. Conc. starting to

Third Bridge

CLEARANCE						
0	40	50	—12	12-14	14—	Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made AF 2-42

Checked Date

Location Sec. 4 Township 22S Range 60W Photo. Neg. No. PS 7100

Bridge over Rocky Ford High Line Canal Station 327+36 to 328+29 No. and Type of Spans 1 - CA Total length 79'-6"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 1932

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 65° 55' L Superelevation
Bridge	tan	+0.2 to -2.0 (300' VC)	481'	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	+0.2	open	Between Rail			
Forward approach	tan	VC to -2.0	481			Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by Built by Maintained by CSHO Plans SP 819

Contract No. Contractor Phelps Bros. Fabricator Contract price

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation	Drainage area (size and character) Canal
Grade center of bridge	4413.0	
Low bridge	4410.0	Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed 4402.
Normal high water		Nature of stream bottom
Maximum high water		Remarks

PER/ROS 000S(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTS & ANDERSON INC. (1976)

Foll No.
Sheet No.

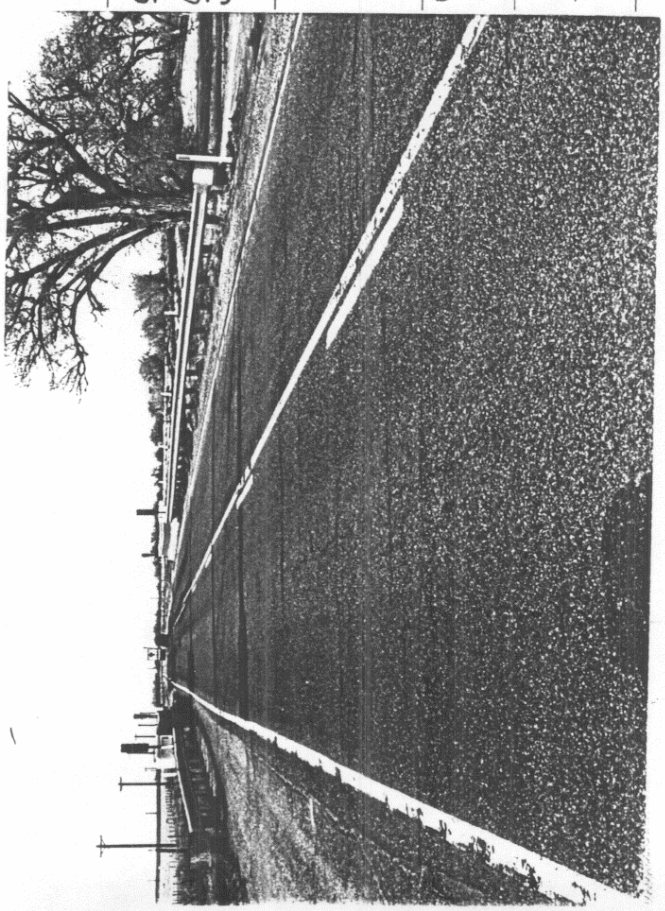
SUBSTRUCTURE

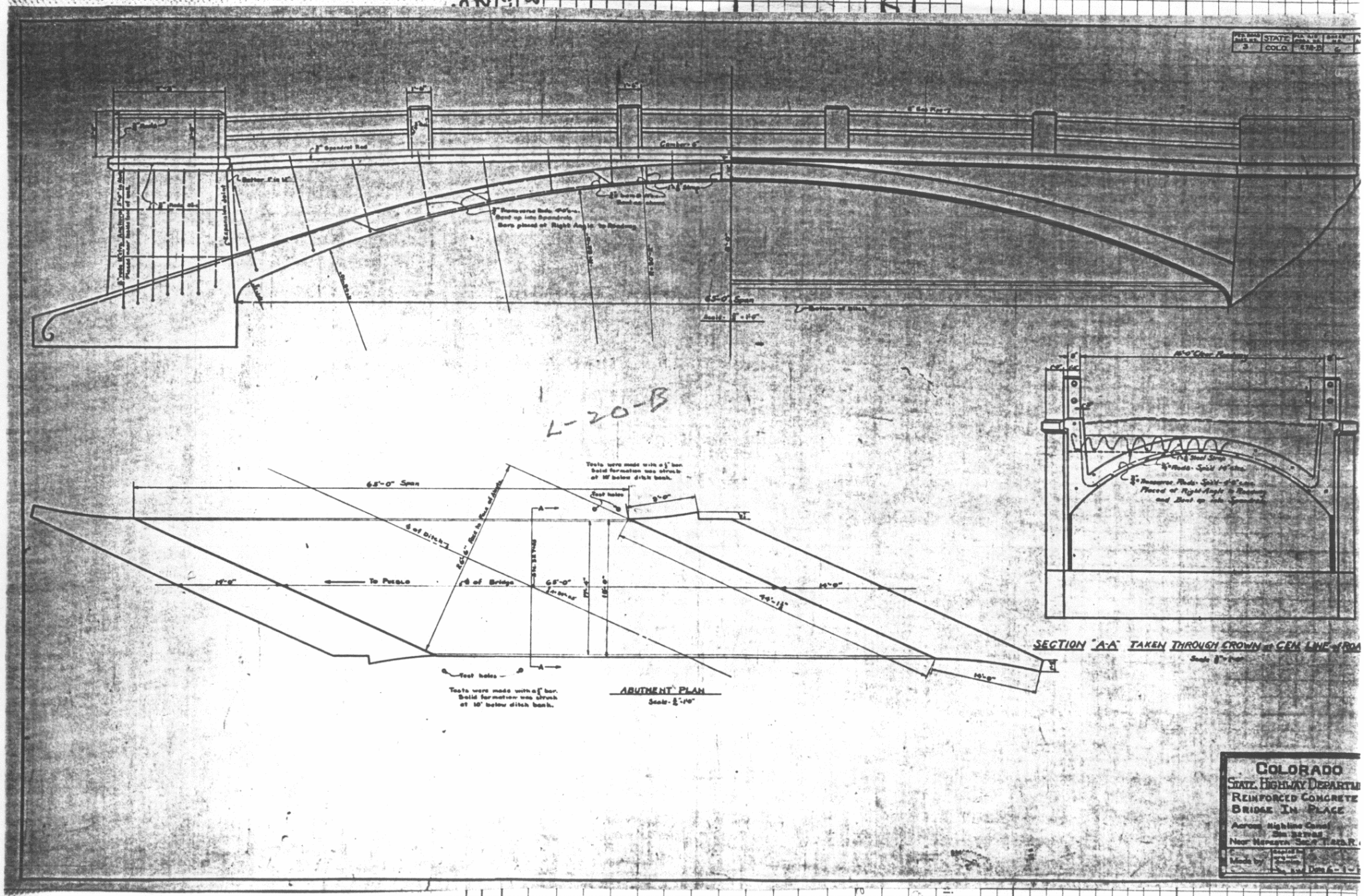
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CG	14'-3"		
Forward					CG	14'-3"		
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-20-B	FAP-272-B SP-819	Pueblo	50	344.65	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





STATE
COLO.
Spandrel Rod
Camber
65'-0" Span
Bottom of Ditch
L-20-B
65'-0" Span
Tests were made with a ½" bar. Solid formation was struck at 10' below ditch bank.
Test holes
To Pueblo
℄ of Bridge
14'-0"
65'-0"
44'-1½"
Test holes
Tests were made with a ½" bar. Solid formation was struck at 10' below ditch bank.
ABUTMENT PLAN
Scale - ¾"=1'-0"
16'-0" Clear Roadway
Steel Strap
Rods - Spd 14" ctrs.
Transverse Rods - Spd 4'-0" ctrs.
Placed at Right Angle to Roadway and Bent up into Spandrels
SECTION "A-A" TAKEN THROUGH CROWN at CEN. LINE of ROA
COLORADO
STATE HIGHWAY DEPARTM
REINFORCED CONCRETE
BRIDGE IN PLACE
Across Highline Canal
Sta. 327+85
Near Nepesta Sec. 4 T.23 R.
Made by
Date 6-1-

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made AF - 2-42

Checked Date

Location Sec. 11 Township 22S Range 60W Photo. Neg. No. B 4493

Bridge over Farmers Oxford Ditch Station 203+75.27 to 204+00 No. and Type of Spans 1 - TS Total length 24'-9"

Rating H-20-516 Member Rating Unit Stress Design Live Load H-15'35 Required Live Load H20S16'44 Posted Live Load Year built 1938

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° L	Superelevation
Bridge	tan	-2.2%	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy	
Rear approach	tan	-2.2	"	Between Rail	31'-0"			
Forward approach	tan	-2.2	"	C to C Truss		Minimum	Forward approach pavement and Rdwy	
				Sidewalks	none			

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 272 BR

Contract No. Contractor Garner Bros. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 5322.77

WATERWAY Area of Br. opening 120 sq ft 126' 70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation	
Grade center of bridge	4372.50	
Low bridge	4371.37	Drift and Ice
Low water	4362.61	Channel width Depth
Normal high water	4366.61	Nature of stream bottom
Maximum high water	4368.61	Remarks

Drainage area (size and character) Canal

Dams

Elevation of Stream bed

8" D.S. Int. Stringer Good for H20 = f_t = 1448 (H2C)

H20 @ f_s = 1620. PSI

Roll No.

Sheet No.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	1-10"x12" 1-10"x16"	TC	8	12"	24'-TP			10'x16' T 45°
Forward	1-18"x12" 1-10"x8"	TC	8	12"	24' TP			
Pier								
Pier								Swaybraces -
								Backing Plank 3"x8" T Sheet Piling

First Bridge Second Bridge Third Bridge

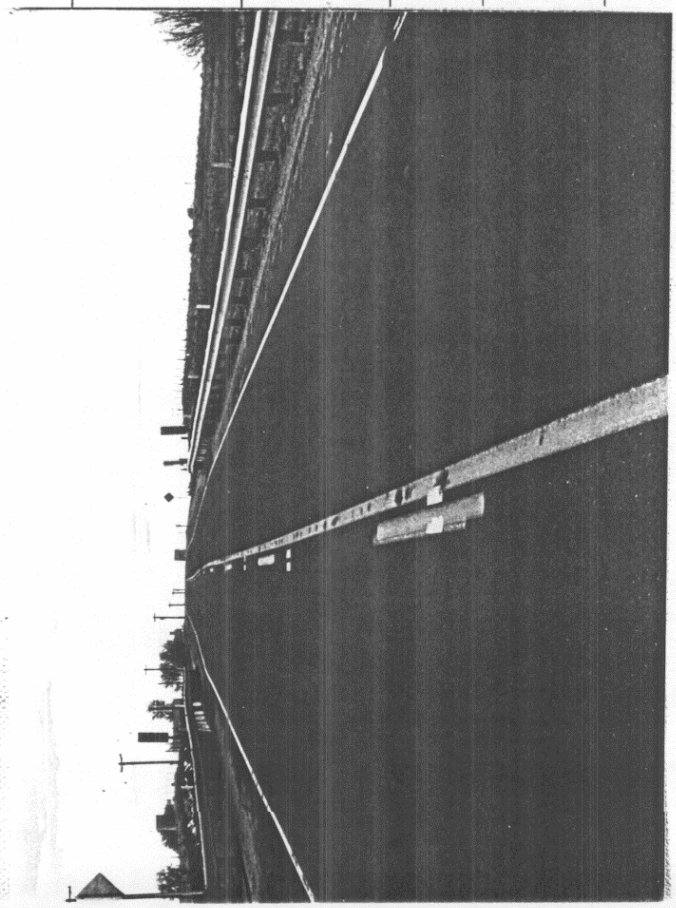
Traffic Survey Data 3100

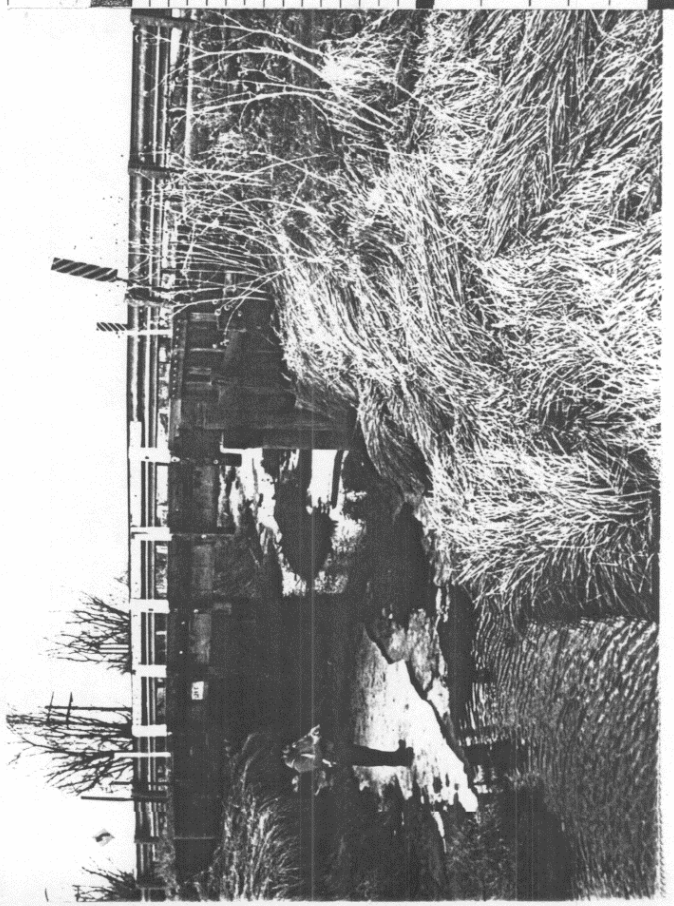
STR. NO.	PROJECT	COUNTY	Highway	LOG		
L-20-C	FAP-272-BR	Pueblo	50	D 347.07	FA	

H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open

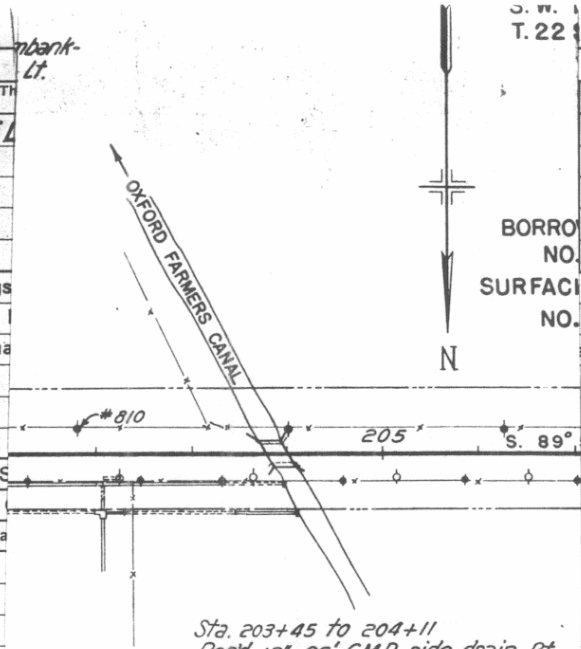




S. W. T. 22 STRUCTURE

Span No.	Th
A	6 π L
B	
C	
D	
E	

mbank- Lt.



BORRO NO.
SURFACI NO.

STRINGERS

Size	Material	Spacing	Allowable Stress
6"x 18"	π S	19 @ 1'-5 11/16" 1 @ 1-11 15/16"	1600

Fastenings
Stringers
Wheel gua
Remarks

Stringer to cap nonee.

and rail T -2'-5" hi.

This bridge widened 1938 FAP 272-BR

TRUSSES

Upper

Member	Materia
LU	
UU	
UU	
UU	

Truss bea
Connector
Remarks

Interior floor beam

nals		Verticals			Top Laterals
l	Size	Member	Material	Size	Bott. Laterals
		LU			Portals
		LU			Swaybrace
		LU			
		LU			C to C Chords

Bolts Pins

M.P. side
8 headwall, Rt
5' C.M.P., Rt.
ds. embank.
ach, Rt.
nnected to
box at Sta. 202+04.

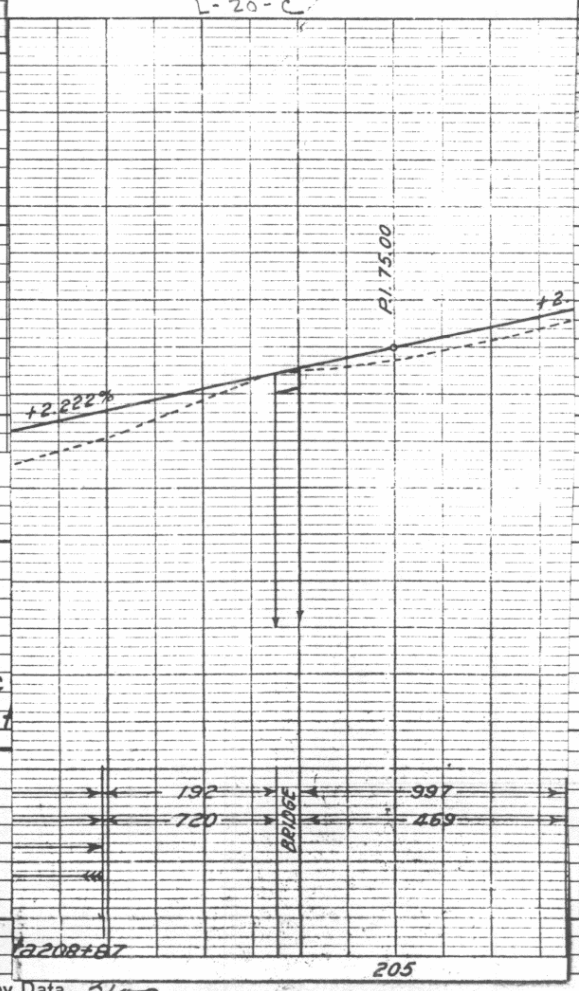
ision box, Rt.
No. 6.
checks

Sta. 203+45 to 204+11
Reqd. 12"x 66' C.M.P. side drain, Rt. in irrigation ditch and type "A" headwall at inlet.
Remove 10"x 65' tile pipe, Rt.

Sta. 203+75.3 to 204+00
Widen timber pile bridge as per details shown on Sheet No. 9. (1-Span @ 23').

S. H. 6
L-20-C

RE-SHOWING DIMENSIONS



LAT.
LONG.
Rd. Sec
Br. Let

REMARKS:-General condition of structure (in pencil)

H.W line 2'6" below str.
S.W. wing sheet piling splintered look like been hit. + 1 Broken stringer

2 BROKEN STRGRS. B.S. 1960

Strgrs repaired with new strgrs along side. B.S. 1960
Appr fills ok. Sheet piling on SW & SE wings repaired '68' '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG	
L-20-C	FAP-272-BR	Pueblo	50	D 347.07	FA

H - LOADING - RATED: —10 10 12½ 15 20
ROADWAY: 15-18 19-22 23-26 27-30 40 50
CLEARANCE: —12 12-14 14— Open

CONCRETE and STONE MASONRY BRIDGES

Made A M

Checked

Date

Location Sec. 11 Township 22 S Range 60 W Photo. Neg. No.

Bridge over CHICOSA CREEK Station 178+68.96 to 179+52.88 No. and Type of Spans 3 - CBC Total length 83.92'

Rating	Member	Rating Unit Stress	Design Live Load	Required Live Load	Posted Live Load	Year built
						'86

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge				Between Curbs	40'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach				Between Rail	40'-0"			
Forward approach				OUT TO OUT	42'-6"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by SINGH Built by Maintained by CDOH Plans BRF 050-4(13)

Contract No. Contractor T.L. PRINTZ CONST. Fabricator Contract price

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood

	Elevation	Drainage area (size and character)
Grade center of bridge		
Low bridge		Drift and Ice — Dams
Low water		Channel width — Depth — Elevation of Stream bed
Normal high water		Nature of stream bottom
Maximum high water		Remarks REPLACES STR. NO. L-20-D

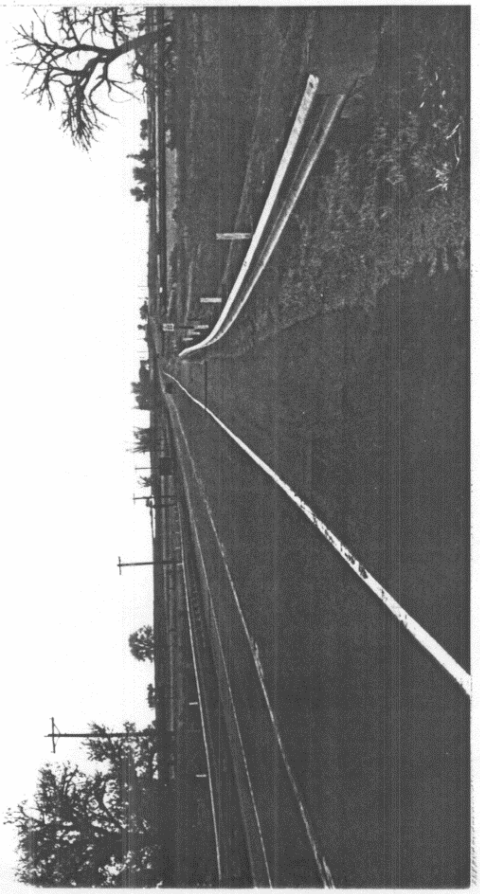
SUBSTRUCTURE

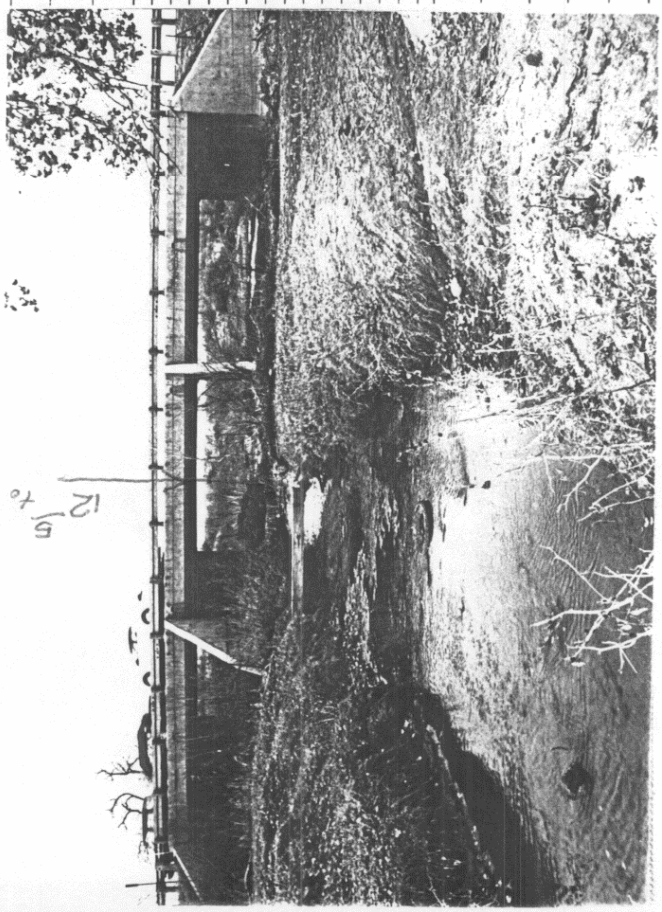
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

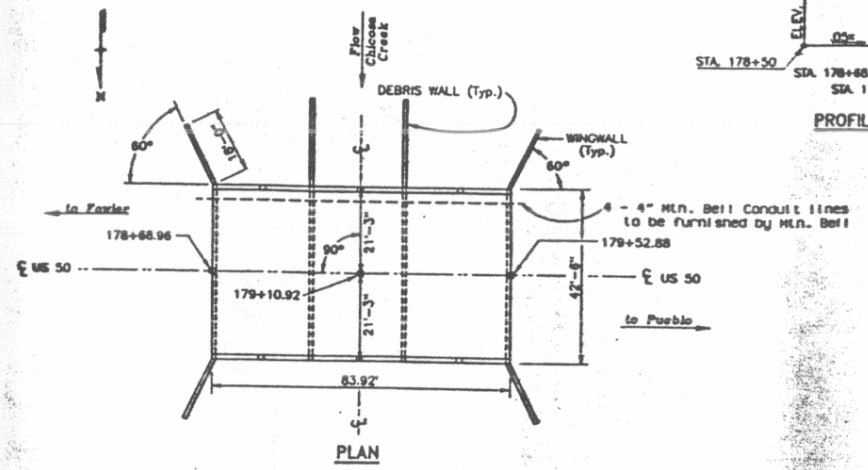
STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-20-AN	BRF 050-4(13)	PUEBLO	50	B 347.52	FAI															



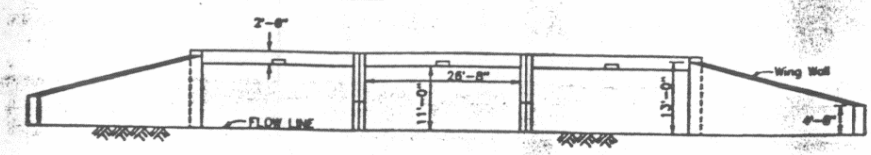


AS CONSTRUCTED	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS / REVISED 7-[illegible] / VOID	VIII	COLO.	BRF 050-4(13)	9	

REVISIONS

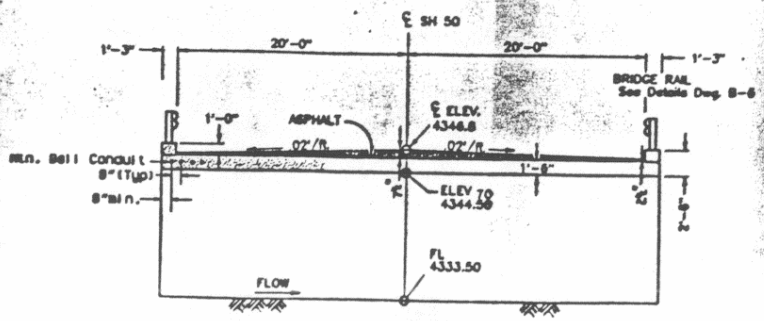


PLAN

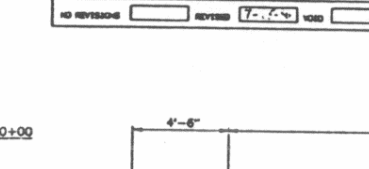


ELEVATION
(FROM INLET SIDE)

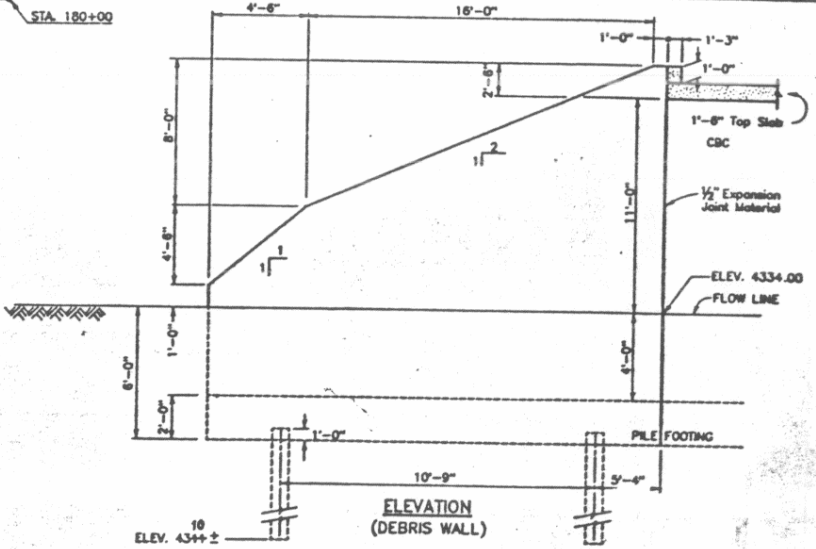
NOTE: For additional Details see Dwg. No. B4.



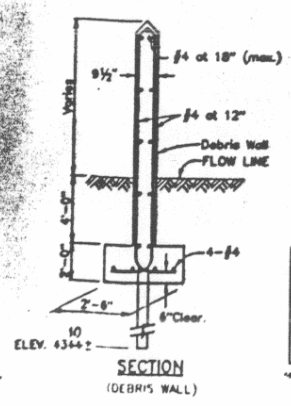
ELEVATION
179+10.92



PROFILE (SH 50)

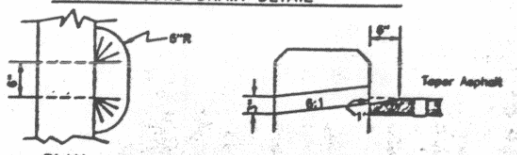


ELEVATION
(DEBRIS WALL)



SECTION
(DEBRIS WALL)

CURB DRAIN DETAIL



PLAN ELEVATION

NOTE: A minimum of 6 Curb Drains shall be required and shall be centered over each cell of the CBC at the outside edges of roadway. Curb Drain placement shall not conflict with Guard Rail Post placement. The cost of constructing Curb Drains shall not be paid for separately but shall be included in the work.

QUANTITIES (For 2 Debris Walls)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
208	STRUCTURAL EXCAVATION	CU.YD.	110
208	STRUCTURAL BACKFILL	CU.YD.	97
502	STEEL PILING (HP10x42)	LIN.FT.	72
601	CONC. CLASS S (BOX)	CU.YD.	23.6
602	REINF. STEEL	LB	1727 *

* Includes 2% for splice, etc.

DIVISION OF HIGHWAYS

GENERAL LAYOUT (ELEVATION AND DEBRIS WALL DETAILS)

DESIGNED Singh	BRIDGE NUMBER	L-20-AN
DETAILED Boomer		
DRAWING NUMBER B-2	OF 6	DRAWING

SKETCH OF STRUCTURE SHOWING DIMENSIONS

Bridge Dept.

Location Sec. 15 22 Township 22 S Range 59 W Photo. Neg. No. PS 715 Checked Date

Bridge over Hungerford Hollow Station 83+88.845 to 85+41.155 No. and Type of Spans 5 - CI Total length 152 '3¾"

Rating H-20 S16 Member Rating Unit Stress Design Live Load H-15 '28 Required Live Load H 20 S16 Posted Live Load Year built 1933

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° R Superelevation
Bridge	tan	0.0	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	0.0	"	Between Rail	31'-2"		
Forward approach	tan	0.0 to +1.04 200' VC	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD V-9815 Plans FAP 272 G

Contract No. Contractor Driscoll Constr. Co. Fabricator Virginia Bridge & Iron Co. Contract price

WATERWAY Area of Br. opening 480 □' 300 □' 68 Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4309.19
Low bridge	4306.58
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 40 □ Mi. Rolling grassland.

Drift and Ice light drift light ice Dams Hardesty

Channel width Depth Elevation of Stream bed 4303.0

Nature of stream bottom PER/ROS 0005(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTS & ANDERSON INC. (1976)

Remarks Raised rating to H20 S16 fs 19070
3" OS. Int. String. Mill test 4751
H16 @ fs = 15145 psi.

Roll No. T 210

Sheet No.

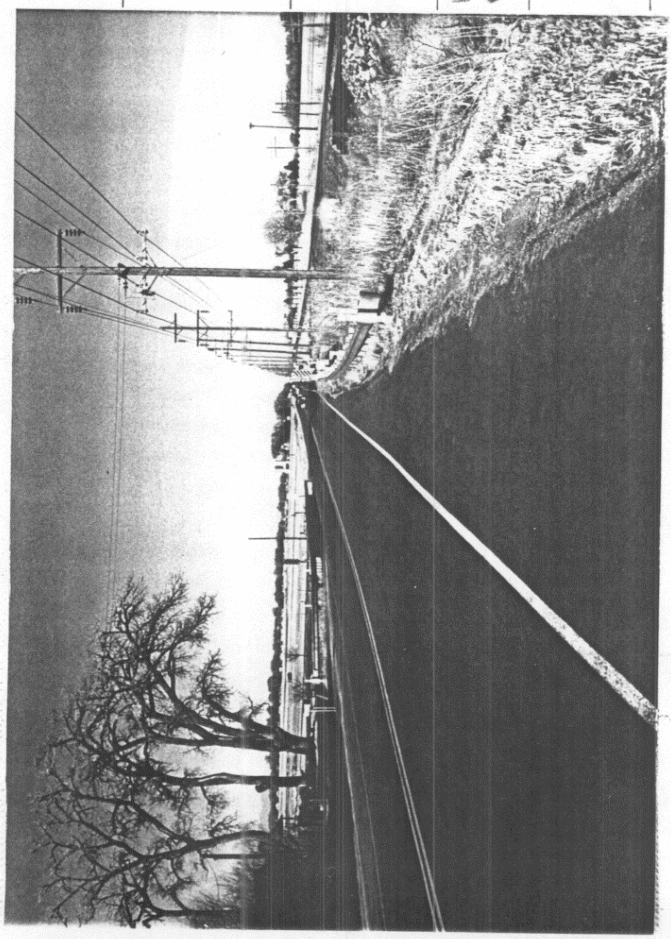
SUBSTRUCTURE

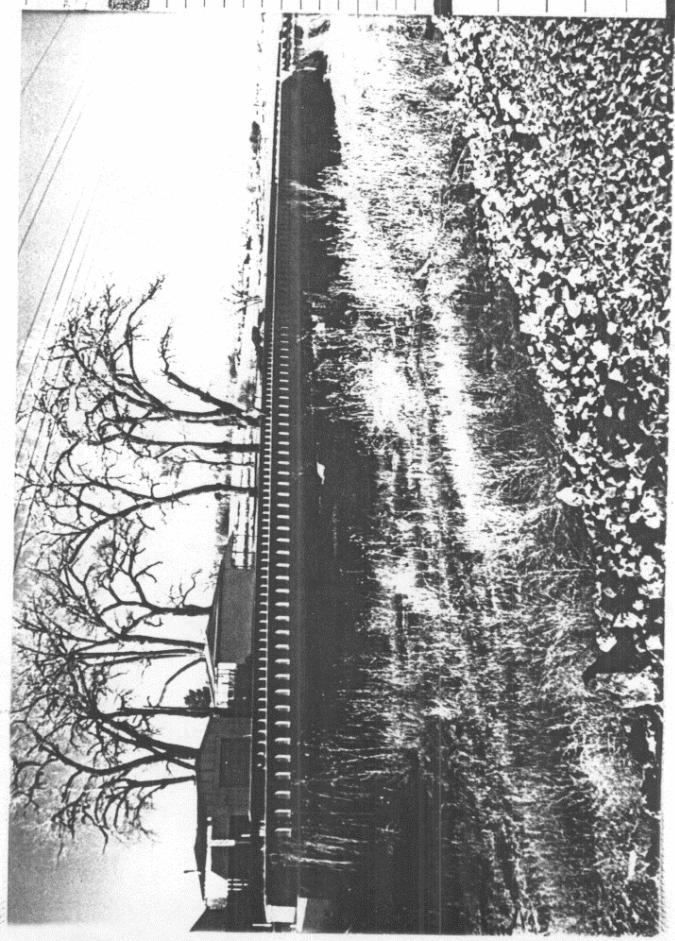
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'-0"x2'-0"	CONC	7	14 □	20' CP			No Wings
Forward	2'-0"x2'-0"	CONC	7	14 □	20' CP			
Pier	2'-0"x2'-0"	CONC	7	14 □	20' CP			
Pier								Swaybraces
								Backing Plank

First Bridge ✓ Second Bridge Third Bridge

Traffic Survey Data 3400

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-W	FAP-272-G;	otero	50	B 352.60	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Span No.	FLOOR		STRINGERS					
	Thickness - Type and Material	Wearing Surface	Effective Span	Number	Size	Material	Spacing	Allowable Stress
A	CS 8"	3/4" Conc Mono	28'-6 3/4"	7	21" WF @ 67#	SS	5'-0"	
B		3' O.S.	3 { 28'-8 1/4"					
C			28'-8 1/4"					
D			28'-6 3/4"					
E								

Fastenings:- Floor to stringer Top flange conc. in Stringer to cap Anchor bolts

Stringers Lapped or butted butted

Wheel guard conc 6"x 9" Hand rail conc - 2'-0" hi

Remarks

I-BEAM GIRDERS Size Spacing

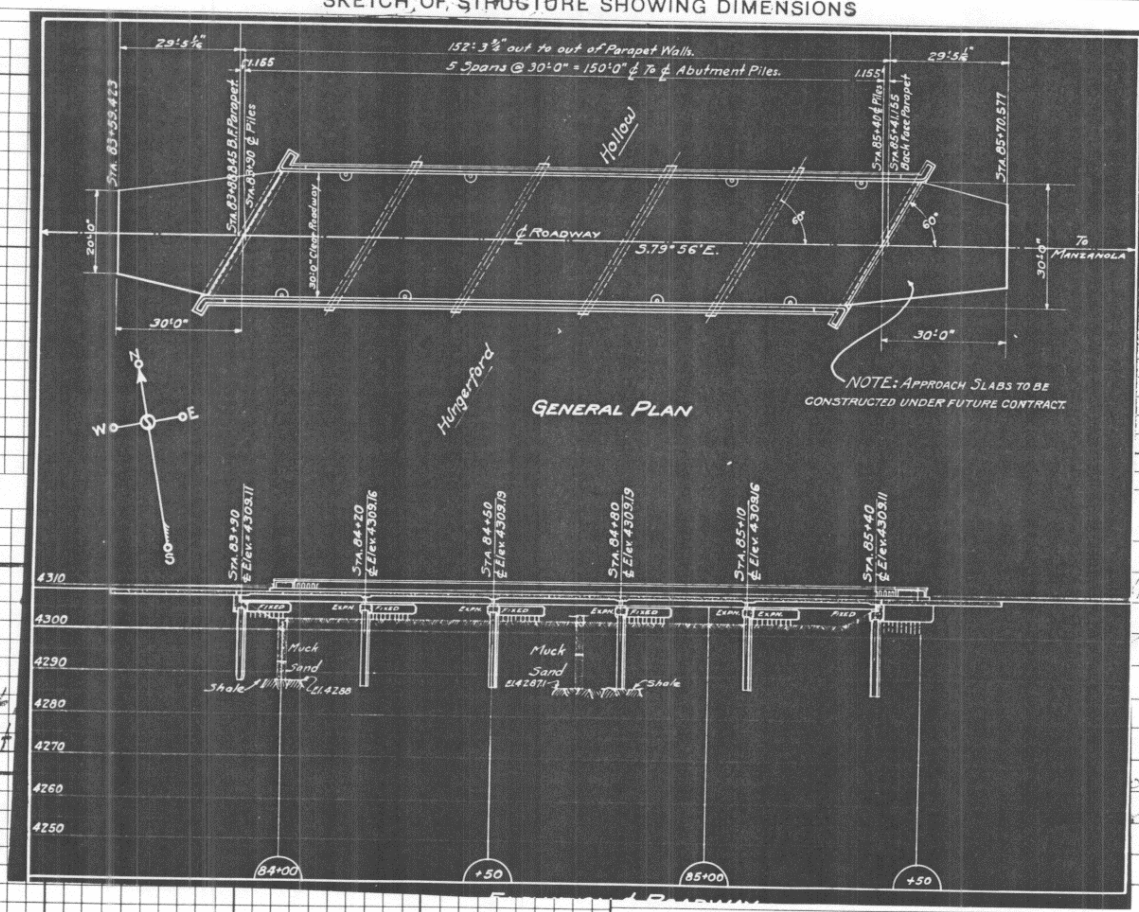
PLATE GIRDERS Depth Web Flange Ls Cover Plates Bearing Stiffeners Interior Stiffeners C to C bearing

FLOOR BEAMS End Interior Spacing

Floor Beam Connections

Remarks

SKETCH, OF STRUCTURE SHOWING DIMENSIONS



LAT.
LONG.
Rd Sect
Br. Left

Traffic Survey Data 3400

First Bridge ✓ Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-W	FAP-272-G;	otero	50	B 352.60	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Bridge Dept.

Location Sec. 24 Township 22 S Range 59 W Photo. Neg. No. B-449-5 Checked C.L.S. Date 11-3-48

Bridge over OTERO CANAL Station 180+99.0 to 181+25.667 No. and Type of Spans ~~1-CS~~ 1-CRF Total length 26'-8"

Rating H-20 Member Rating Unit Stress fs18000 fc833 Design Live Load H-20-44 Required Live Load Posted Live Load Year built 1947

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	Tan	-0.46%	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	do	-0.92%	do	Between Rail	34'-0"		
Forward approach	do	-0.46%	do			Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'-0"		

Design by C.S.H.D. Built by C.S.H.D. Maintained by C.S.H.D. Plans F.A.P. 272 (12)

Contract No. Contractor John A. DeAngelo & Assoc. Fabricator Contract price [illegible]

WATERWAY Area of Br. opening 145 □' Area of Inlet opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4299.381
Low bridge	4297.80
Low water	
Normal high water	
Maximum high water	4295.0

Drainage area (size and character) Canal

Drift and Ice

Channel width Depth

Nature of stream bottom

Remarks

PER/ROS OOOS(12), GD. RAIL TYPE-3
CONNECTED BY ROBERTS & ANDERSON INC.
(1976)

Dams

Elevation of Stream bed 4288.0 91.0?

Roll No.

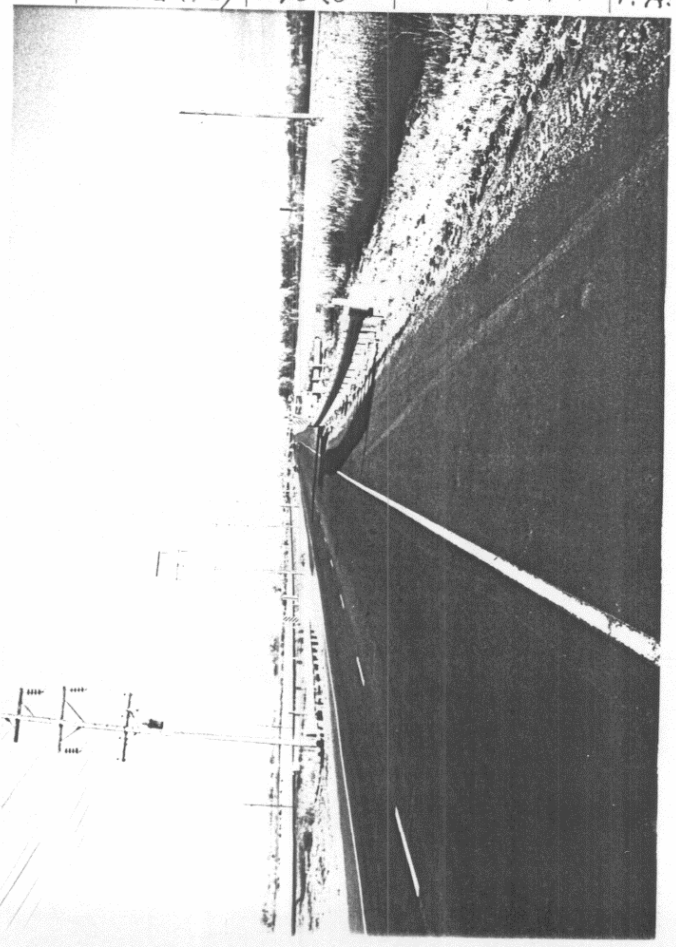
Sheet No.

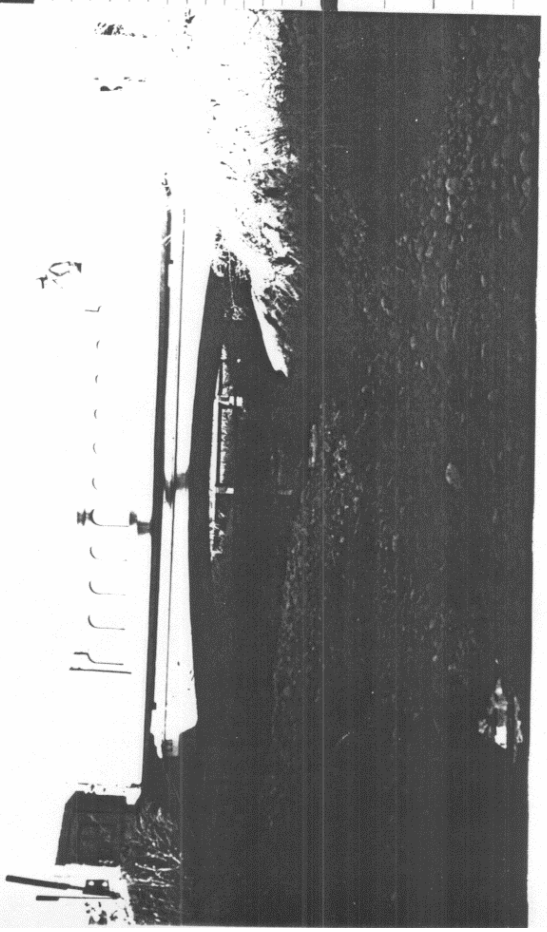
SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CC	18'-0"	Rock	4 wings 7'-0" @ 45°
Forward					do	18'-0"		
Pier								
Pier								

Traffic Survey Date 3400 First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-A	F.A.P. 272 (12)	OTERO	50	354.42	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Curbs 9" Conc. Hand rail Conc. 2'-10"

Wearing Surface 3/4" Conc. Mono. 2" o.s.

CONCRETE SLAB - Clear Span 24'-0" Thickness 1'-5"

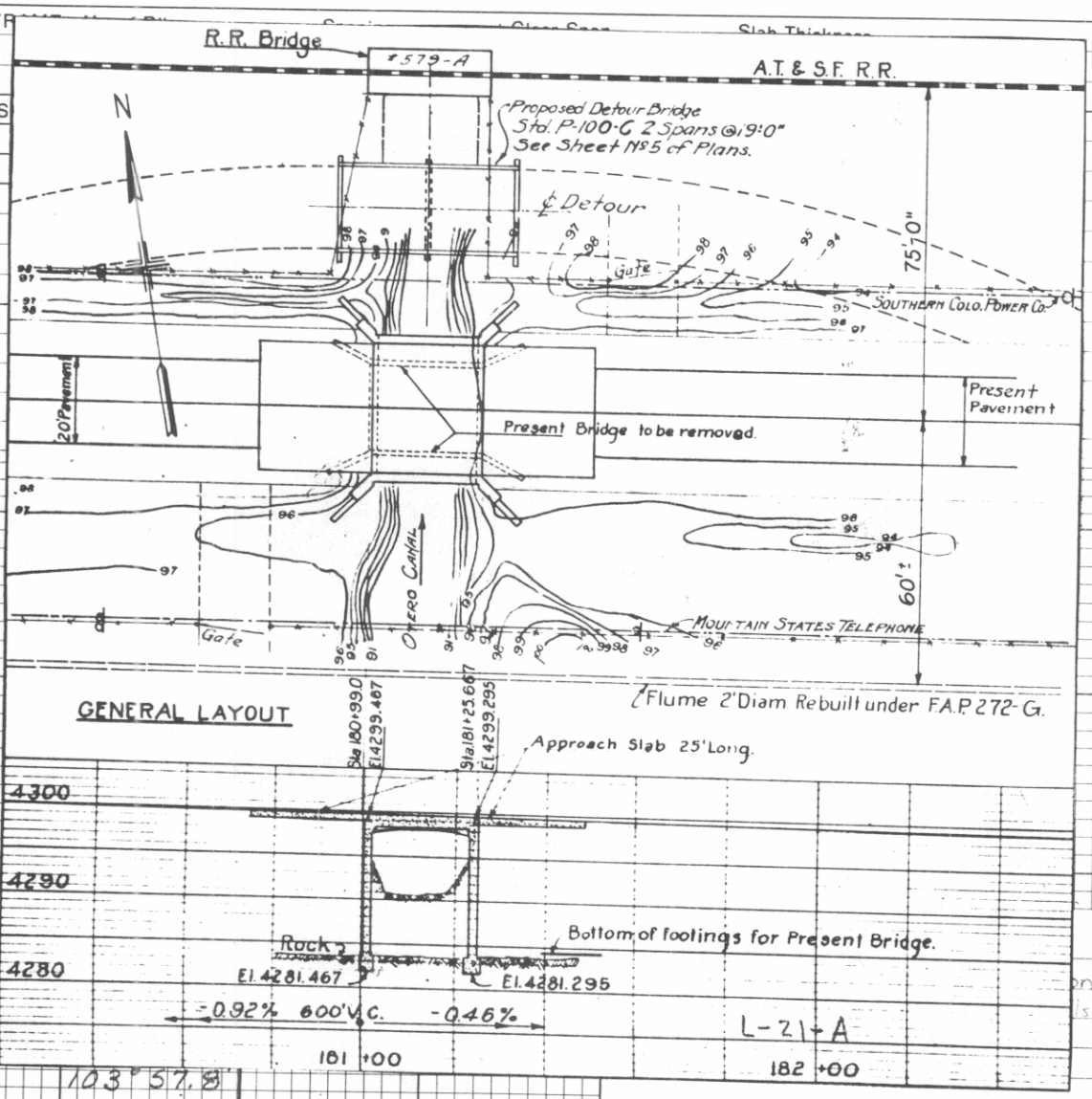
CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FR

ARCHES

Clear Span



LAT.	
LONG.	103° 57.8'
Rd. Sect.	114
Br. Letter	AF

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3400

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-A	F.A.P. 272 (16)	Otero	50	B 354 H2	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway
Bridge Dept.

STEEL BEAM and GIRDER BRIDGES

Made J.R.J. 2-April'56

Location Sec. 24 Township 22 S Range 59 W Photo. Neg. No. Checked Date

Bridge over Apishapa River Station 218+23.0 to 221+48.83 No. and Type of Spans 4-CSG & 2-SDG Total length 325'-10"

Rating H-20 S16 Member Rating Unit Stress fc 1200 fs 18000 Design Live Load H-20S16-44 Required Live Load H20S16 30 Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	Tangent	+0.41%	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	✓	200' V.C. to +0.41%		Between Rail	34'-0"			
Forward approach	✓	+0.41%		C to C Truss		Minimum	Forward approach pavement and Rdwy	
Bearing	S 83°01'E			Sidewalks	2@2'-0"			

Design by CDH Built by CDH. Maintained by CDH Plans C 09-0006-14

Contract No. 3490 68 Contractor M.C. Jacobs Const. Co. Fabricator Midwest Steel & Iron Wks. Co. Contract price 131061.07

WATERWAY Area of Br. opening 1000' to Elev. 4283.8 Area of Relief opening None Skew of flow (Normal) 56-1074,75 Flood

	Elevation	
Grade center of bridge	4298.57	Drainage area (size and character) 10.55 Sq. mi.
Low bridge	4292.23	Drift and Ice Dams
Low water	4276.00	Channel width Depth Elevation of Stream bed 4275.0
Normal high water		Nature of stream bottom
Maximum high water	4283.8	Remarks THIS STRUCT. IS IN THE EAST BOUND LANE AND PARALLEL TO L-21-B.

* See L-21-B for 1964

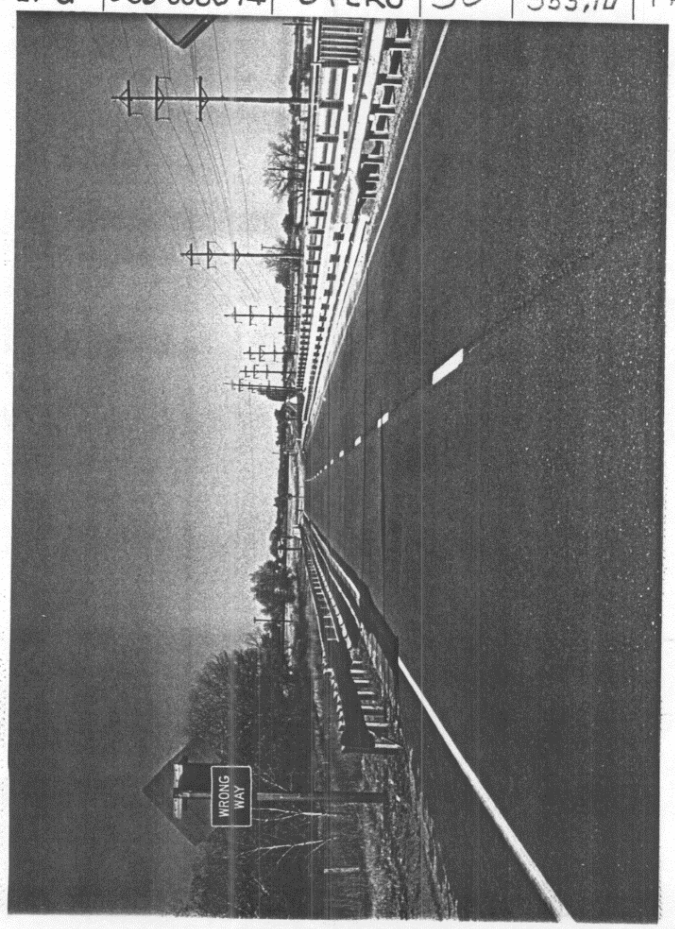
PER/ROS 0005(12), GD. RAIL TYPE-3
CONNECTED BY ROBERTS & ANDERSON INC.
(1976)

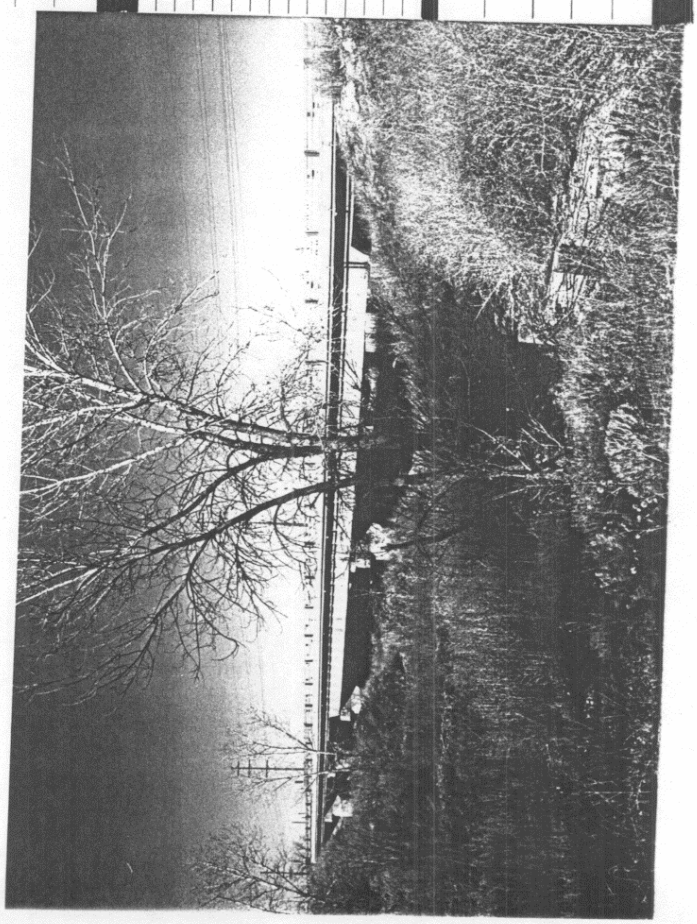
SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear 1	2'-6"x4'-7 11/16"	Conc.	8	12" BP @ 53#	40'-0" Long.			No wings.
Forward 7	✓	✓	✓		✓ 35'-0" ✓			
Pier 2&3	2'-6"x2'-7 9/16"	✓	2	CTC	7'-2" Dia.	2-44'-6" 3-44'-6"		
Pier 4&6	2'-8"x2'-8"	✓	2	CTC	7'-2" Dia.	4-38'-7 1/2" 6-37'-4 1/2"		Swaybraces
5	2'-11"x2'-11"	✓	2	CTC	7'-2" Dia.	5-37'-6 5/8"		Backing Plank

Traffic Survey Data 3400 First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED (10, 10, 12½, 15, 20)	ROADWAY (15-18, 19-22, 23-26, 27-30, 40, 50)	CLEARANCE (12, 12-14, 14, Open)
L-21-G	C09-0006-14	OTERO	50	B 355.10	FA			





SUPERSTRUCTURE

Span No.	FLOOR: Thickness - Type and Material	FLOOR: Wearing Surface	STRINGERS: Effective Span	STRINGERS: Number	STRINGERS: Size	STRINGERS: Material	Spacing	Allowable Stress
A 1	7½" C.S.	½" Conc. Mono.	42'-0"	4	See Below	Conc. Girder	8'-8"	
B 2	✓	✓	✓	✓	✓	✓	✓	
C 3	✓	✓	✓	✓	✓	✓	✓	
D 4&5	7" C.S.	✓	75'-0"	✓	✓	S.D.G.	9'-0"	
E 6	7½" C.S.	✓	42'-0"	✓	✓	Conc. Girder	8'-8"	

Fastenings:- Floor to stringer Top flange in Conc. Stringer to cap Anchor Bolts.

Stringers Lapped or butted Butted

Wheel guard 9" Conc. Hand rail Steel 3'-0" (Std. G-80-C)

Remarks

I-BEAM GIRDERS Size Spacing

PLATE GIRDERS Depth 66" Web ⅜" Flange Ls 6"x4"x⅝" Cover Plates 14"x⅝"x48'-0" Bearing Stiffeners ℓs 5"x3½"x 7/16 Interior Stiffeners ℓs 5"x3½"x 5/16 c to c bearing 75'-0"

FLOOR BEAMS End Interior Spacing

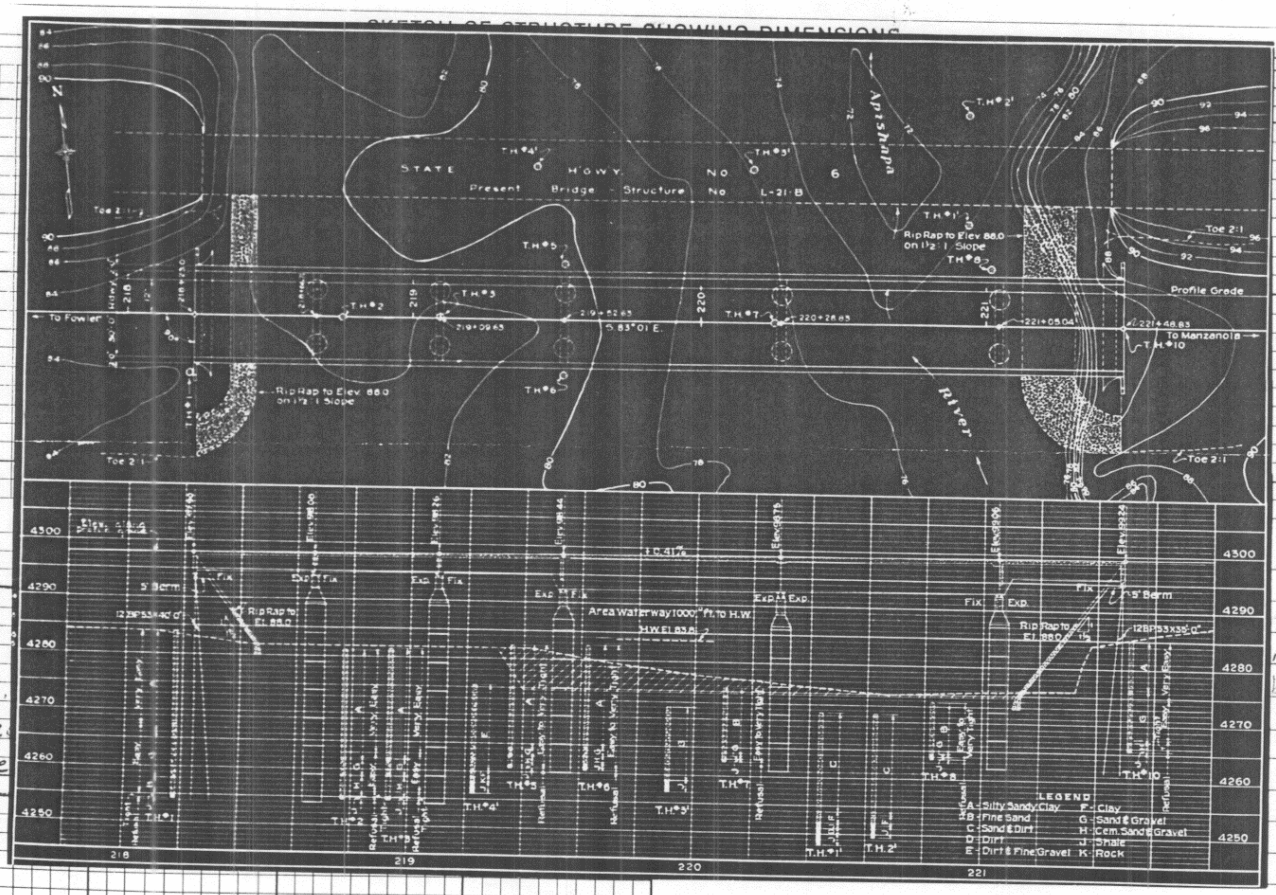
Floor Beam Connections

Remarks

Conc. Girders:

1'-4"x3'-5½" (depth includes slab)

SKETCH OF STRUCTURE SHOWING DIMENSIONS



Traffic Survey Data 3400

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-21-C																				

First Bridge Second Bridge Third Bridge

CONCRETE and STONE MASONRY BRIDGES

Made

Location Sec. 24 Township 22 S Range 59 W Photo. Neg. No. Checked Date 2-97

Bridge over Apishapa River Station STA 22+96.5 to 26+19.5 No. and Type of Spans 3-CPGC Total length 323'-0"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 1997

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge				Between Curbs	44'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach				Between Rail				
Forward approach				Out to Out	46'-6"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by J.F. SATO Built by Maintained by Plans BRF 050-4(17)

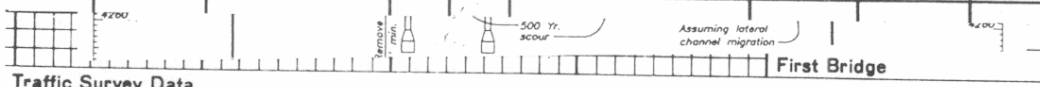
Contract No. 91067 Contractor Fabricator Contract price

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood
	Elevation	Drainage area (size and character)		
Grade center of bridge				
Low bridge		Drift and Ice	Dams	
Low water		Channel width Depth	Elevation of Stream bed	
Normal high water		Nature of stream bottom		
Maximum high water		Remarks		

Replaces L-21-B

SUBSTRUCTURE

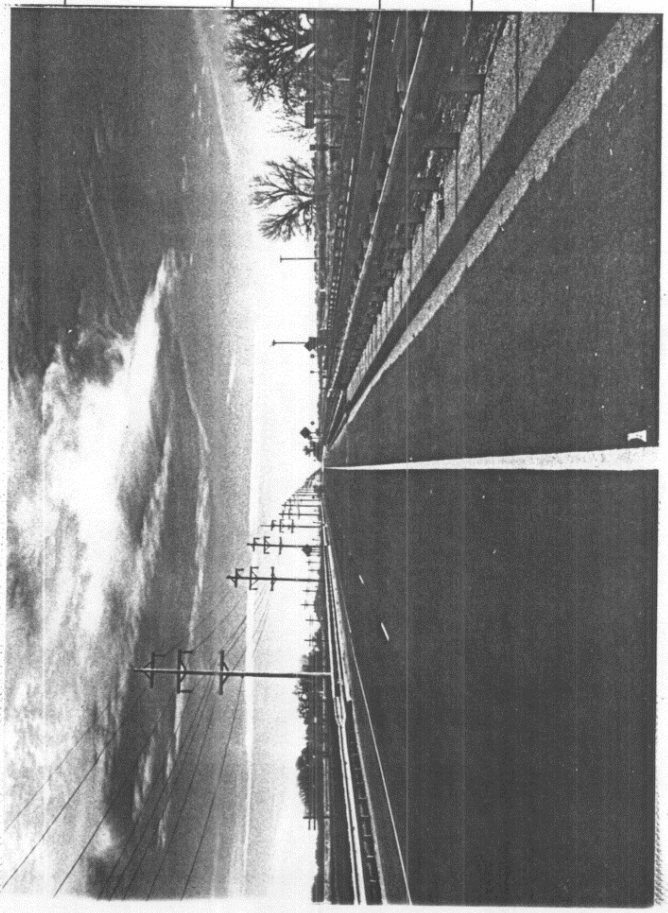
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

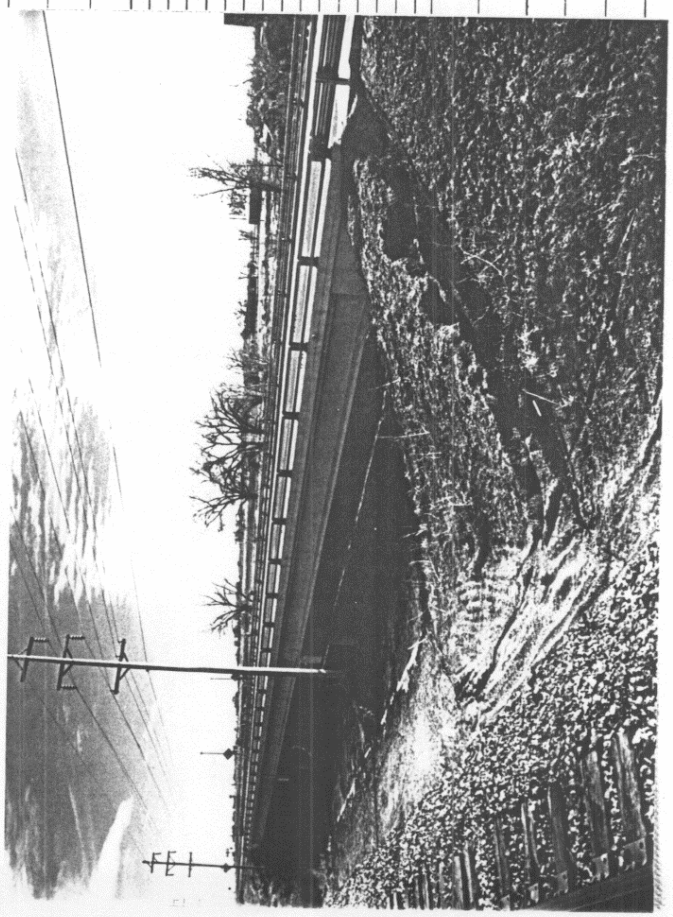


First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-DA	BRF 050-4(17)	OTERO	50	355.11	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open



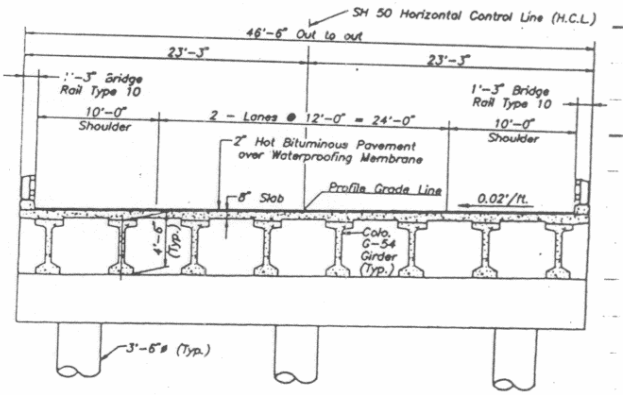


ear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs Spacing Clear Span

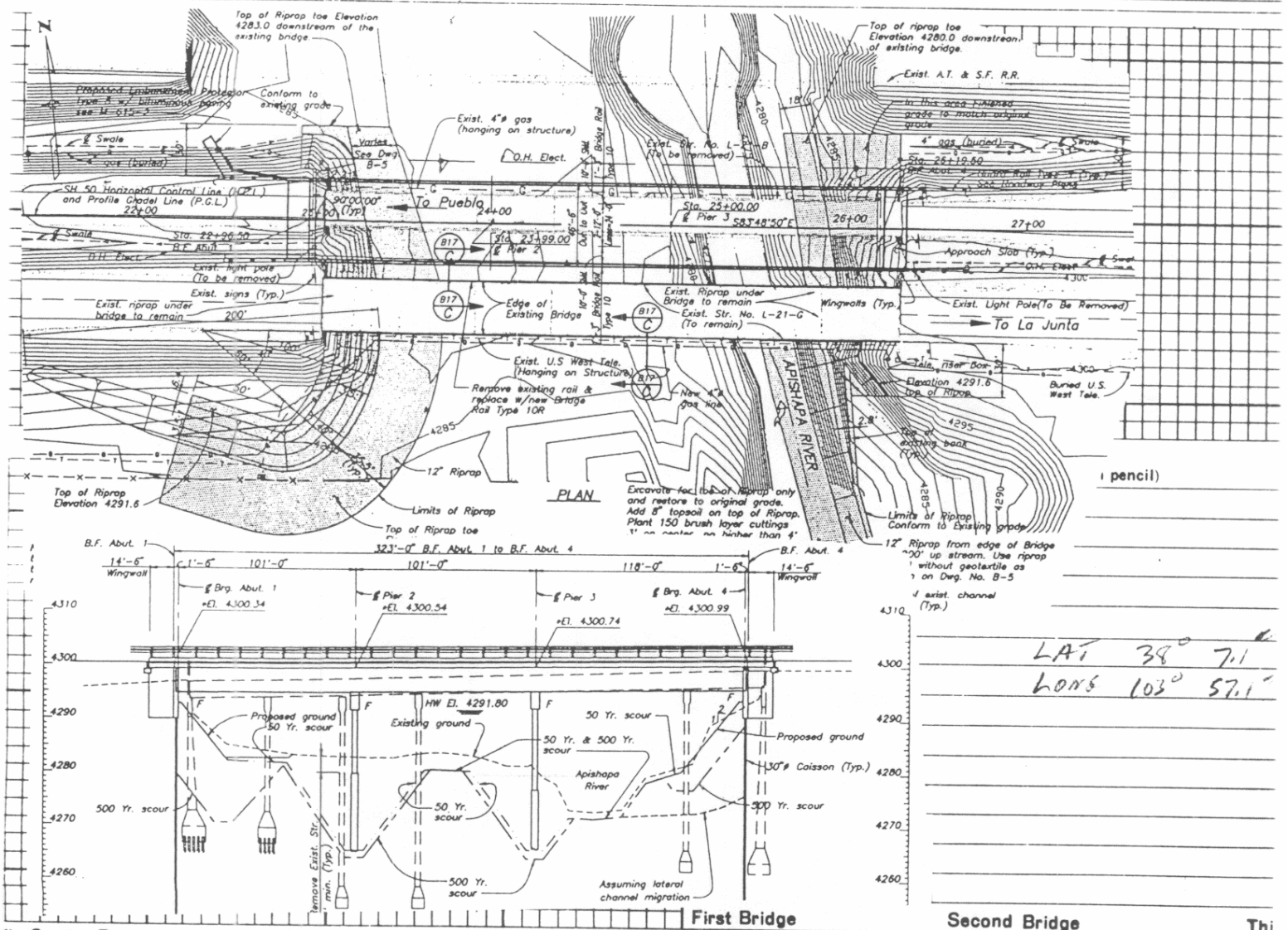
ARCHES:- Material Rise

ear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



TYPICAL SECTION

SKETCH OF STRUCTURE SHOWING DIMENSIONS



First Bridge Second Bridge

LAT 38° 7.1'
LONG 103° 57.1'

fic Survey Data

. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED					ROADWAY						CL
					—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12
1-DA	BRF 050-4(17)	OTERO	50	355.11 8												

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 2-56

Location Sec. 19 Township 22 S Range 58 W Photo. Neg. No. Checked Date

Bridge over Otero Canal Station 223+11.9 to 223+45.8 No. and Type of Spans 1-CSG Total length 34'-1"

Rating H-20 S16 Member Rating Unit Stress 20000 Design Live Load H20S16-44 Required Live Load H20S16-44 Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 15° Rt. Superelevation
Bridge	Tangent	+0.41%	Open	Between Curbs	36'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	✓	✓		Between Rail	40'-0"		
Forward approach	✓	✓				Minimum	Forward approach pavement and Rdwy
Bearing	S 83° 01' E			Sidewalks	2@2'0"		

Design by CDH. Built by CDH. Maintained by CDH. Plans C 09-0006-14

Contract No. Contractor M.C. Jacobs Const. Co. Fabricator Midwest Steel & Iron Works Co. Contract price 70330.25

WATERWAY Area of Br. opening 243 Sq Ft Sec L-21-C Area of Relief opening None Skew of flow (Normal) ; Flood

	Elevation
Grade center of bridge	4299.798
Low bridge	4297.340
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) Canal 56-1074.75

Drift and Ice Dams

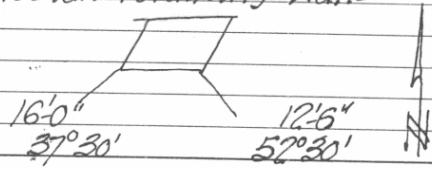
Channel width Depth Elevation of Stream bed 4289.6

Nature of stream bottom

Remarks THIS STRUCT. IS IN THE EAST BOUND LANE AND PARALLEL TO L-21-C. PER/ROS 0005(12), GD. RAIL TYPE-3 CONNECTED BY ANDERSON & ROBERTS INC. (1976)

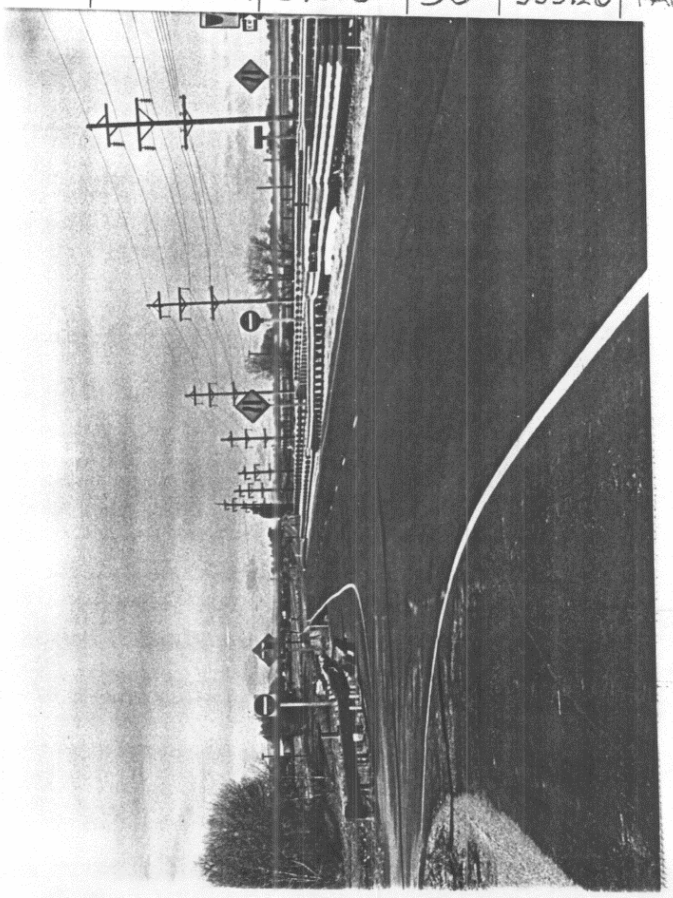
SUBSTRUCTURE

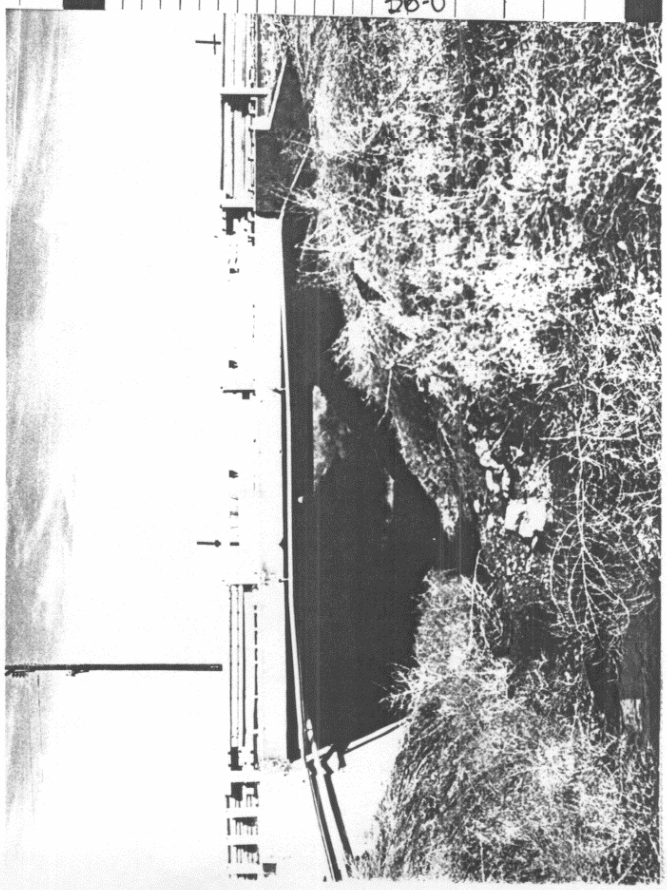
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'0"x3'5½"	Conc.	7	10¾"	0.02x.188" wall	36'-0"		Median retaining walls
Forward	✓	✓	✓		✓	✓		
Pier								
Pier								



Traffic Survey Data 3200 First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-I	C09-0006-14	Otero	50	B 355.20	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50 (36'-0")	—12 12-14 14— Open





CONCRETE and STONE MASONRY BRIDGES

Made

Location Sec. 24 Township 22S Range 59W Photo. Neg. No. Checked Date 1997

Bridge over Station 28+04.2 No. and Type of Spans 1-CDTPG Total length 33

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 1997

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0	Superelevation
Bridge				Between Curbs		Maximum	Rear approach pavement and Rdwy	
Rear approach				Between Rail	49.5			
Forward approach				out to out	51.5	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by J.F. SATO Built by Maintained by CDOT Plans BRF 050-4(017)

Contract No. Contractor Fabricator Contract price* 109,000.00

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood
	Elevation	Drainage area (size and character)		
Grade center of bridge				
Low bridge		Drift and Ice	Dams	
Low water		Channel width Depth	Elevation of Stream bed	
Normal high water		Nature of stream bottom		
Maximum high water		Remarks		

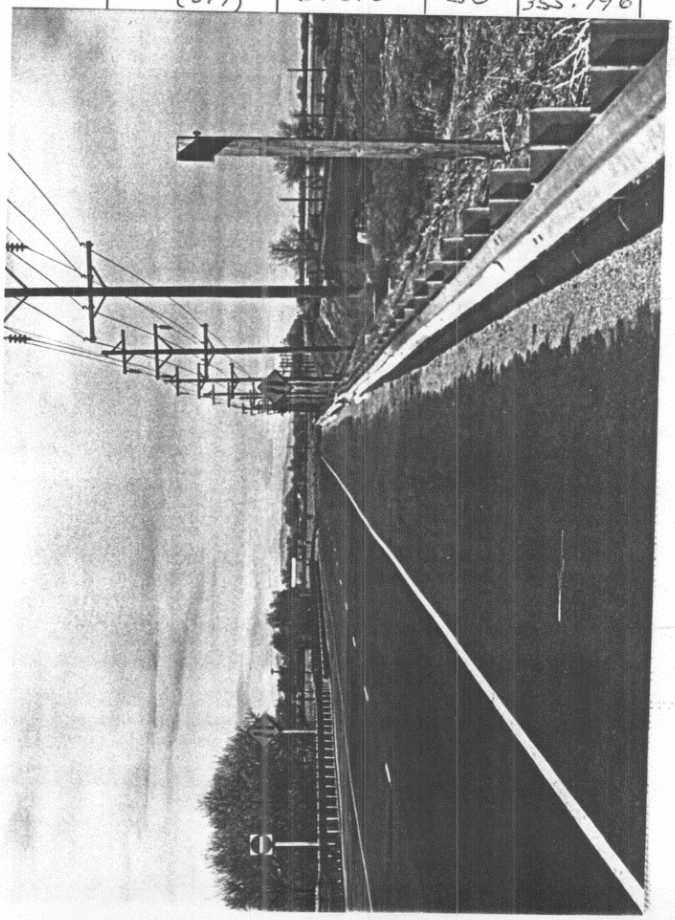
SUBSTRUCTURE

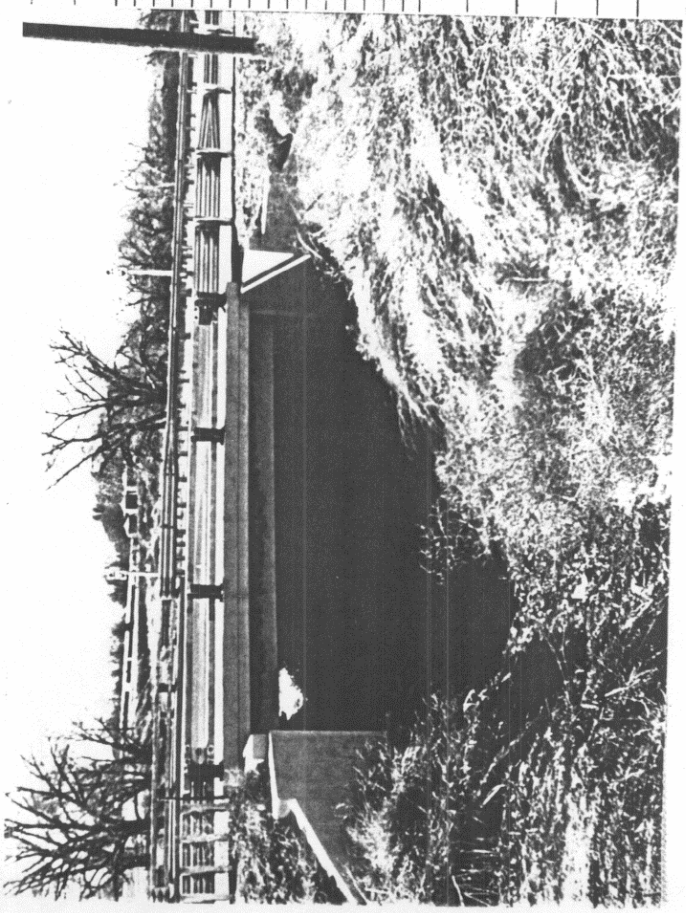
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

Traffic Survey Data First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG
L-21-DC	BRF 050-4 (017)	Otero	50 B	355.196

H - LOADING - RATED					ROADWAY						CLEARANCE			
–10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	–12	12-14	14–	Open





CONCRETE SLAB - Clear Span **Thickness**

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

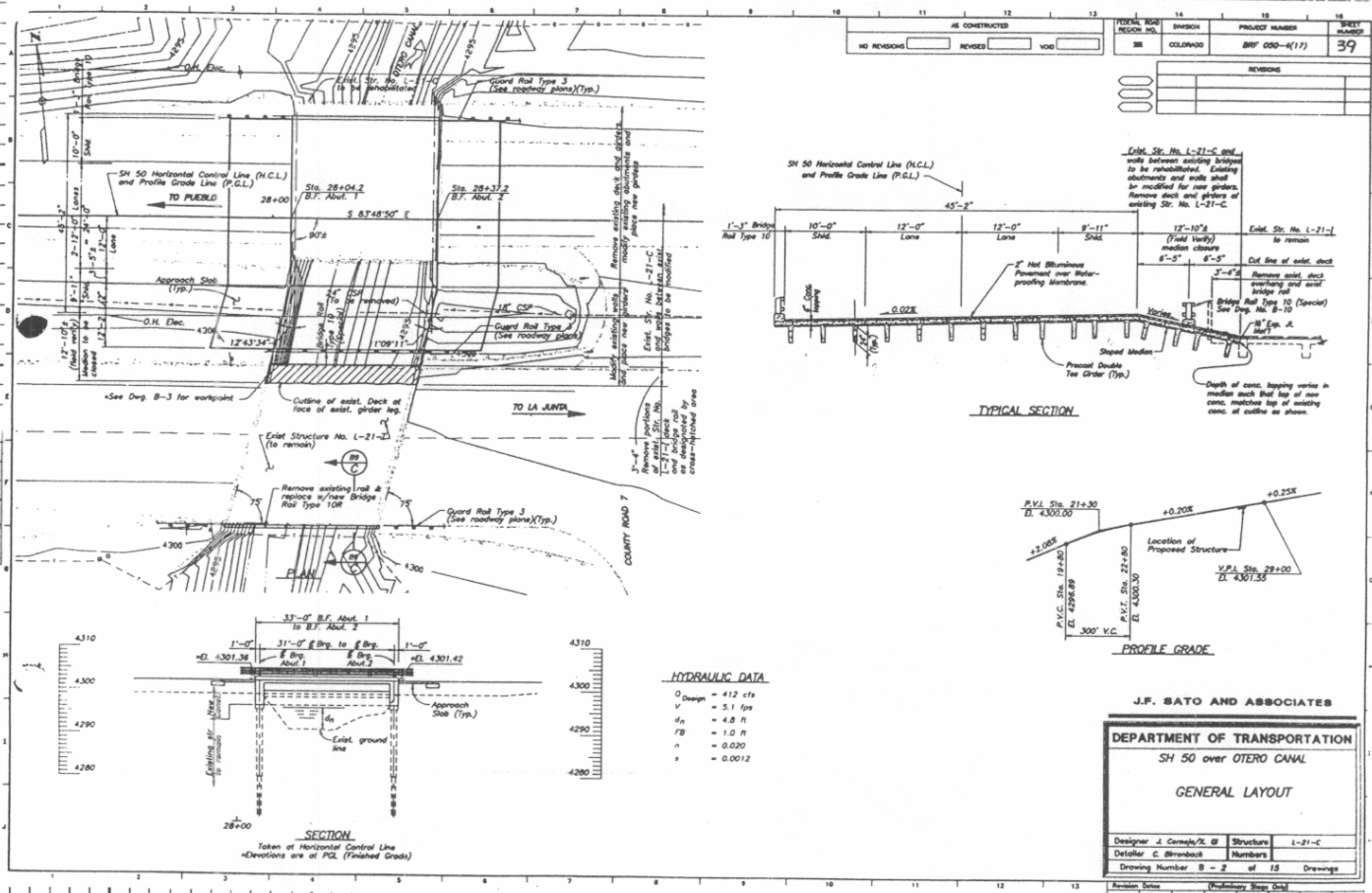
RIGID FRAME:- No. of Ribs **Spacing** **Clear Span** **Slab Thickness**

ARCHES:- Material **Rise** **Shape**

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

t 38.07.2
sm 9/103 56.7

SKETCH OF STRUCTURE SHOWING DIMENSIONS



First Bridge | Second Bridge | Third Bridge

Traffic Survey Data

BR. NO.	PROJECT	COUNTY	Highway	LOG
I-DC	BRF 050-4		B	

H - LOADING - RATED					ROADWAY						CLEARANCE			
-10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	-12	12-14	14-	16

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 5-60

Location Sec. 20 Township 22 S Range 58 W. Photo. Neg. No. Checked Date

Bridge over OTERO CANAL Station 300+50 No. and Type of Spans 1-CBC Total length 19'-9 5/8"

Rating H20 S16 * Member Rating Unit Stress fs 20000 Design Live Load H20 S16 Required Live Load H20 S16 '44 Posted Live Load Year built '60

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 45° Lt.	Superelevation
Bridge	TANGENT	EXISTING		Between Curbs		Maximum	Rear approach pavement and Rdwy	
Rear approach	✓			Between Rail				
Forward approach	✓			RDWY.	40'-0"	Minimum	Forward approach pavement and Rdwy	
BEARING	S82°41'30"E			Sidewalks				

Design by CDH. Built by CDH. Maintained by CDH. Plans C 09-0006-25

Contract No. Contractor PIONEER CONST. CO. Fabricator Contract price $ 11,760.28

WATERWAY Area of Br. opening 96 sq. ft. 68 sq. in. 70 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4294.25
Low bridge	4293.00
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) CANAL

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4285.00

Nature of stream bottom

Remarks

* INTERSTATE ALTERNATE LOADING.

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear			1-	12' x	8' x 63' CBC			2 @ 22°30' - 8'-8" LONG
Forward					TYPE 12-A.			2 @ 67°30' - 20'-10" ✓
Pier								
Pier								

First Bridge Second Bridge Third Bridge

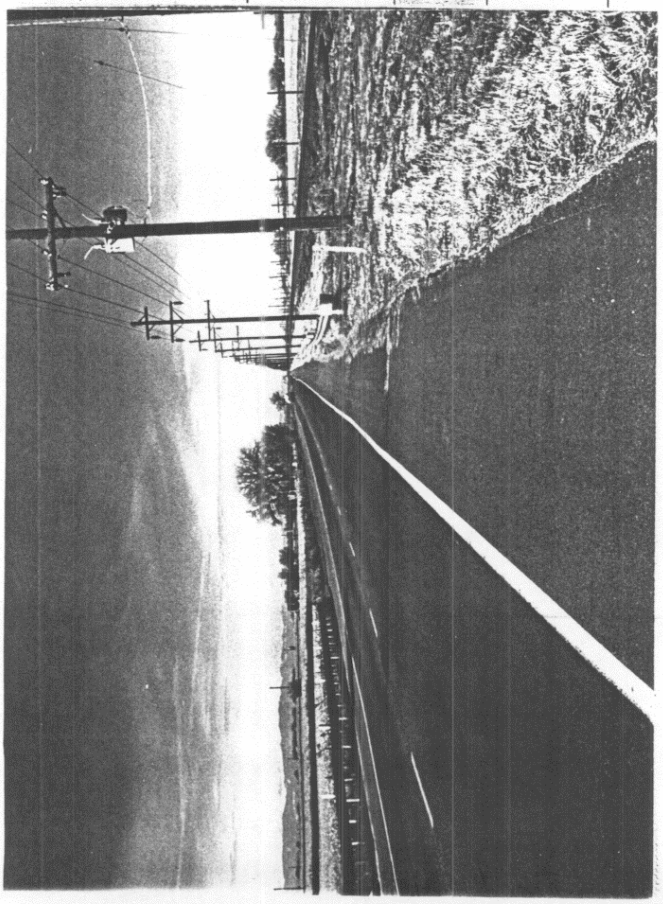
Traffic Survey Data 3200

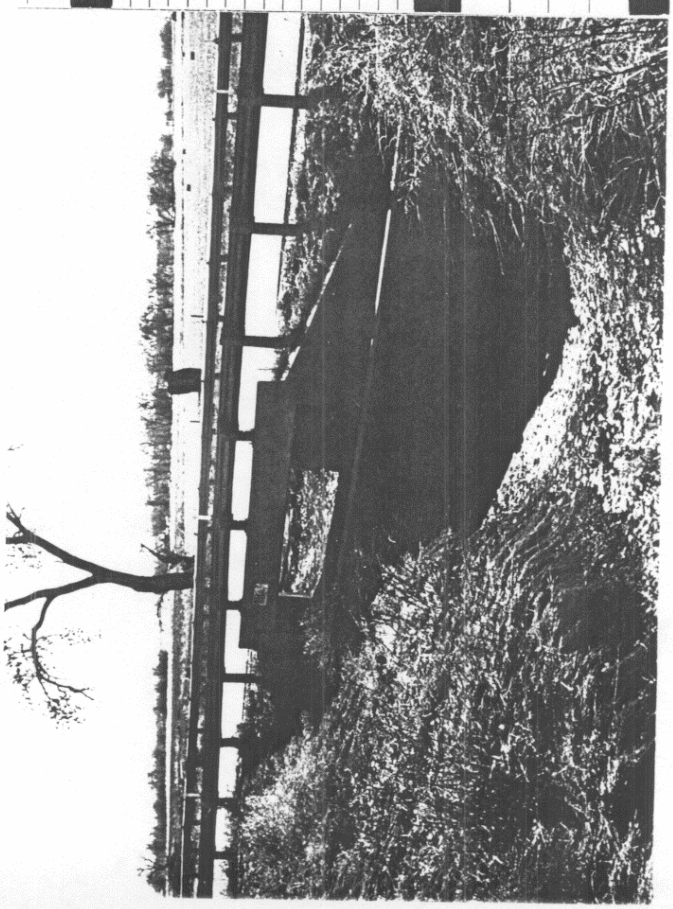
STR. NO.	PROJECT	COUNTY	Highway	LOG	
21-b	C09-0006-25	OTERO	50	356.67	FA

H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open





CONCRETE and STONE MASONRY BRIDGES

Made

Location Sec. 22 Township 22 S Range 58 W Photo. Neg. No. Checked Date 2-97

Bridge over Smith Hollow Station 213+20.61 to 214+17.64 No. and Type of Spans 1 - CPG Total length 117'-0½"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 45° Superelevation
Bridge				Between Curbs	44'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach				Between Rail			
Forward approach				Out to Out	46'-6"	Minimum	Forward approach pavement and Rdwy
				Sidewalks			

Design by J.F. SATO Built by Maintained by Plans BRF 050-4(17)

Contract No. 9067 Contractor Fabricator Contract price

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood

	Elevation	Drainage area (size and character)
Grade center of bridge	4284	
Low bridge		Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed 4268
Normal high water		Nature of stream bottom
Maximum high water		Remarks

Replaces 2-21-E

SUBSTRUCTURE

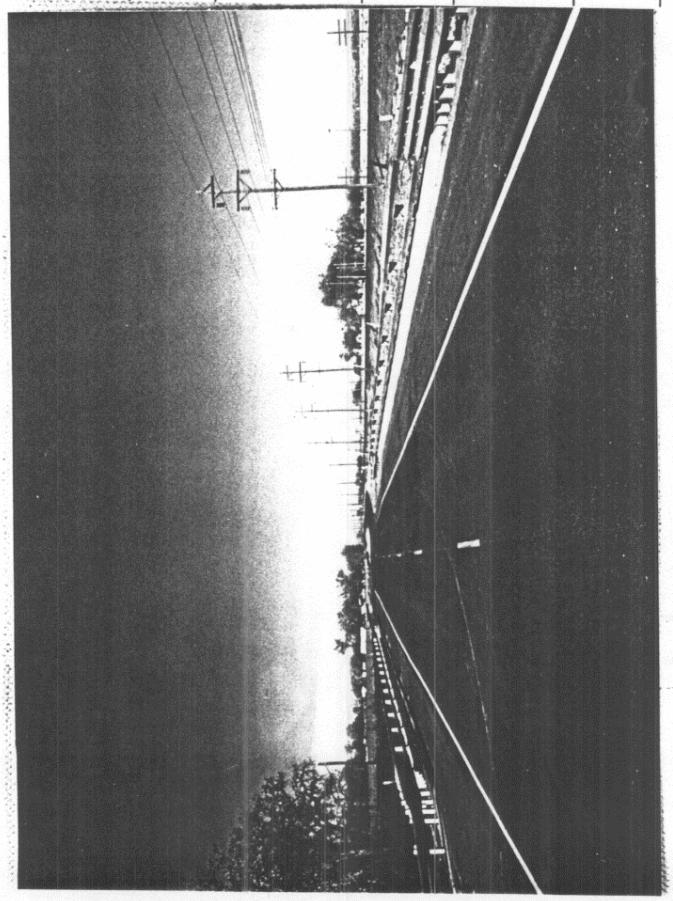
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

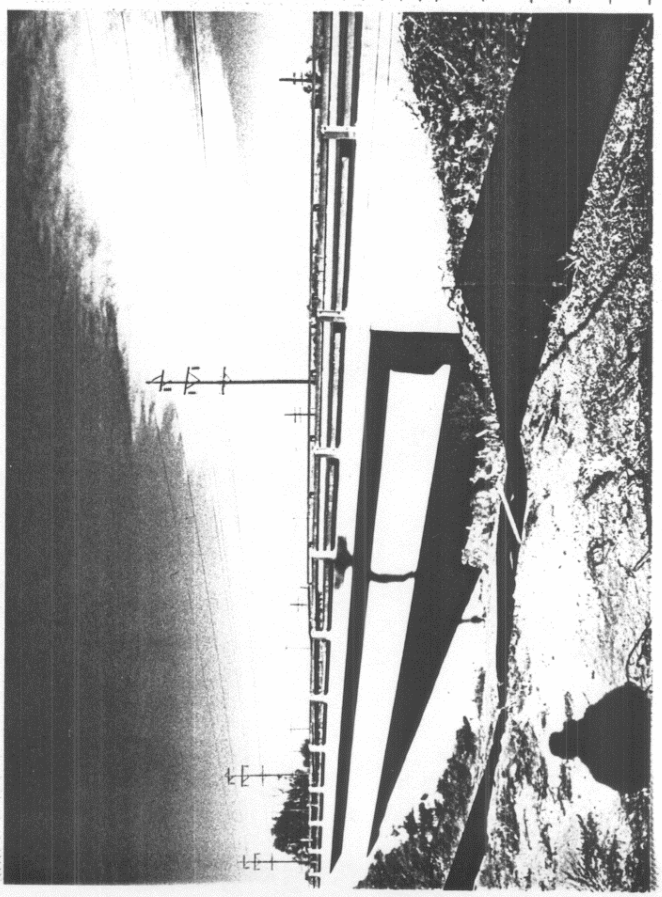
Taken at Horizontal Control Line
* Elevations are at PGL (Finished Grade)

Note: No scour in 50 year design flood

Traffic Survey Data	First Bridge	Second Bridge	Third Bridge

BR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
21-DB	BRF-050-4(17)	OTERO	50	358.455	13															





CONCRETE SLAB - Clear Span | Thickness

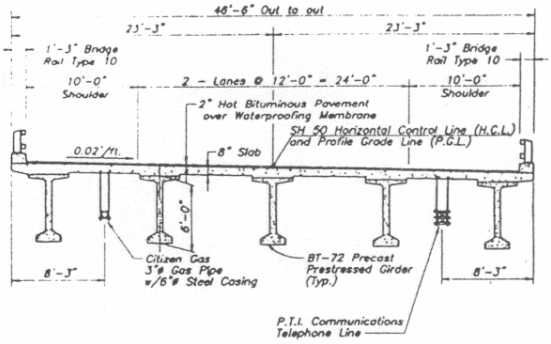
CONCRETE BEAM & SLAB

lear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs | Spacing | Clear Span

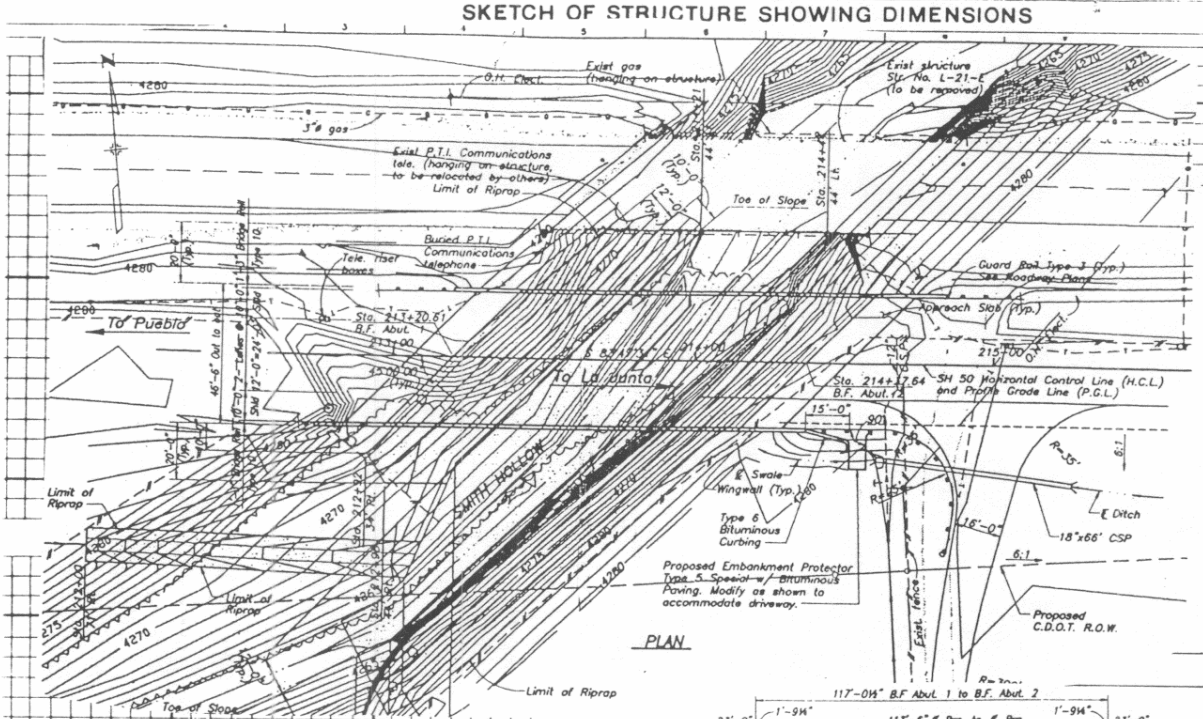
ARCHES:- Material | Rise

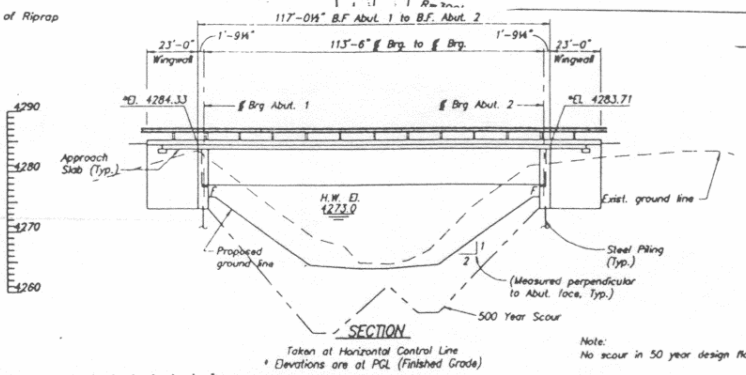
lear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



TYPICAL SECTION

SKETCH OF STRUCTURE SHOWING DIMENSIONS





pencil) LAT 38 6.8"
LONG 103° 53"

First Bridge | Second Bridge | Third Bridge

ffic Survey Data

R. NO.	PROJECT	COUNTY	Highway	LOG	
21-DB	BRF-050-	ATCHA	50	750 455	13

H - LOADING - RATED					ROADWAY					CLEARANCE			
—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open

(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made SCH

Checked

Date Dec.68

Location Sec. 25/26 Township 22 S Range 58 W Photo. Neg. No.

Bridge over Catlin Canal Station 141+19 No. and Type of Spans 1-CBC Total length 41'-6 3/16"

Rating HS 20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 69

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 58° Lt. to tang Superelevation
Bridge	2° curve Lt.	No V.C.		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	+ 0.289%		Between Rail			
Forward approach	Tangent	"		Rdwy	2@38'	Minimum	Forward approach pavement and Rdwy
PI	138+28.7	PI 4261.24		Sidewalks			

Design by D.O.H. (PA) Built by D.O.H. Maintained by D.O.H. Plans F 001-4(15)

Contract No. 120 sq' Contractor Goodell Bros. Inc. Fabricator Contract price $ 68315.90

WATERWAY Area of Br. opening 90" "70" Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4261.274
Low bridge	4257.00
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) Canal

Drift and Ice Dams

Channel width Depth Elevation of Stream bed FL 4251.0

Nature of stream bottom

Remarks

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward		One 20' x 6'	x 290'		CBC (Special)			N. End 1-74° @ 8'-9"
Pier								1-16° @ 30'-0"
Pier								S. End 2-74° @ 13'-6"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3700

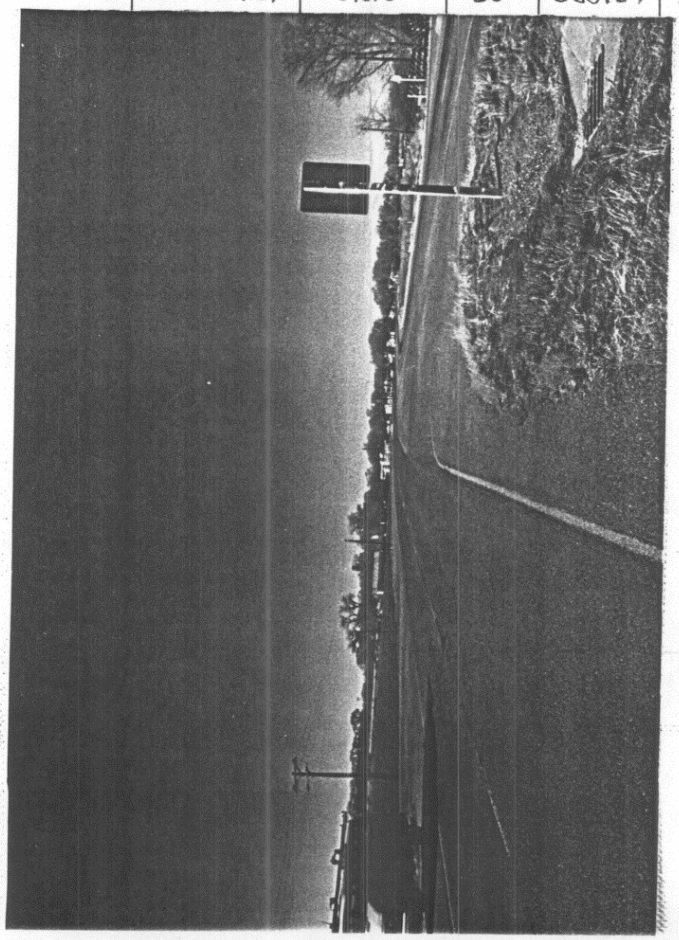
STR. NO.	PROJECT	COUNTY	Highway	LOG
L-21-K	F001-4(15)	Otero	50	360.34

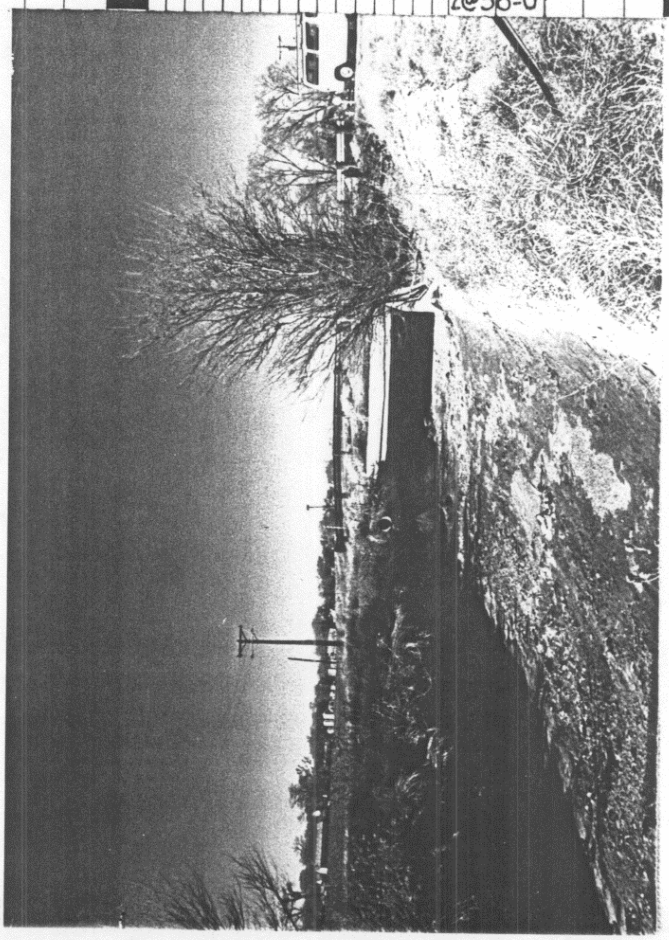
H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Ope

2@38'-0"





SUPERSTRUCTURE

Curbs | Hand rail

Wearing Surface Earth Fill 3'

CONCRETE

CONCRETE

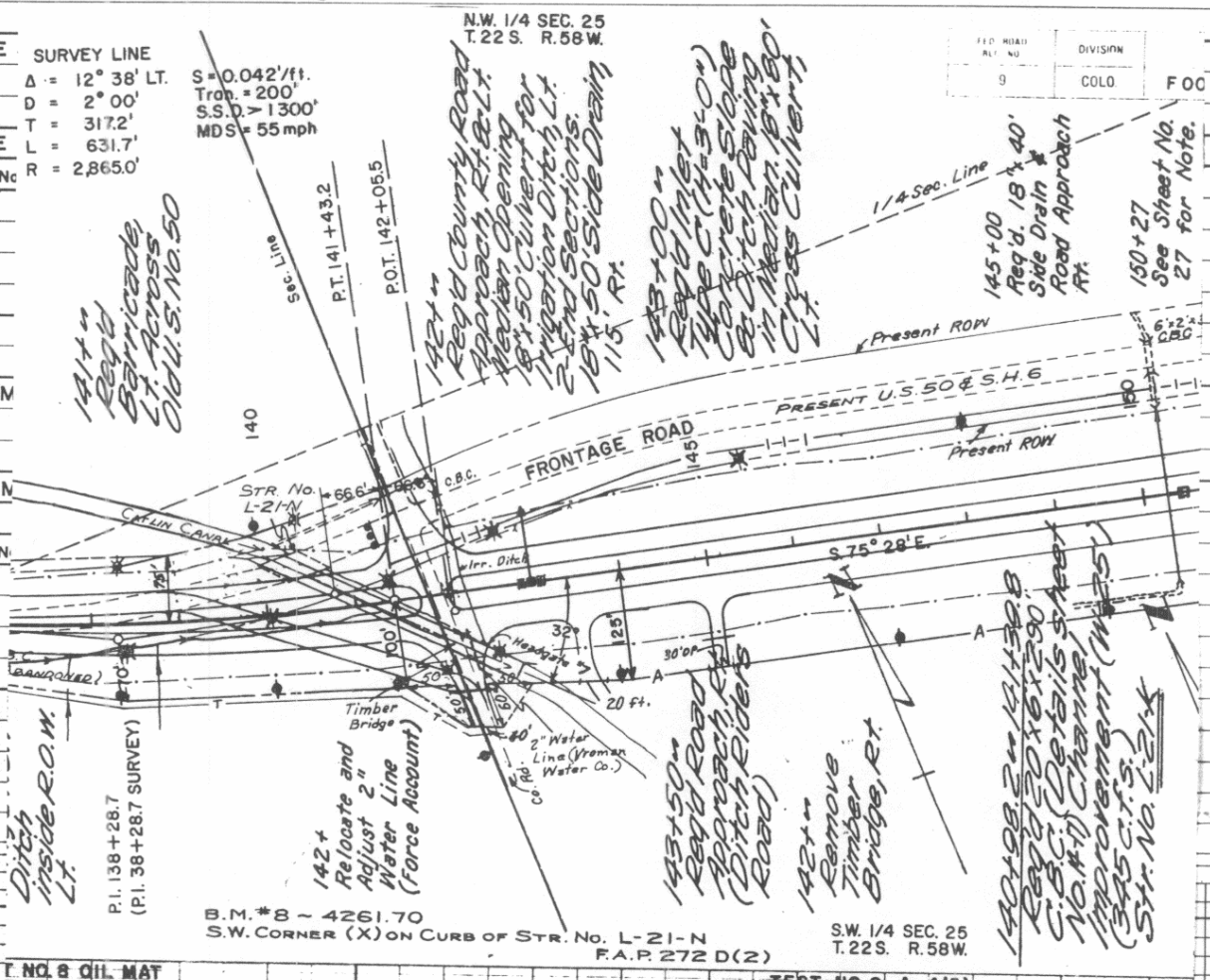
Clear Span | No

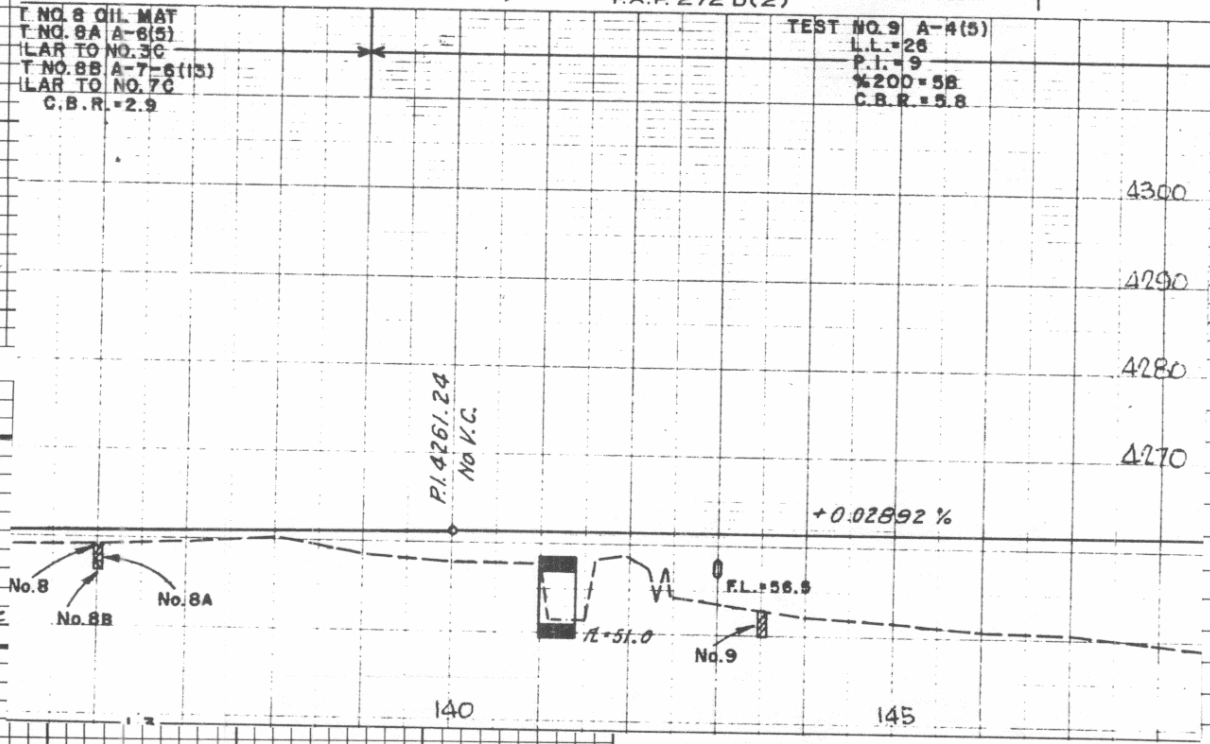
RIGID FRAM

ARCHES:- M

Clear Span

N





LAT.
LONG
Rd. Sect.
Br. Lette

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 3700

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						-10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	-12	12-14	14-	Ope
L-21-K	F001-4(15)	Otero	50	3 360.34																

Colorado State Highway Bridge Dept.

STEEL BEAM and GIRDER BRIDGES

Made S.C.H. Checked Date 3-67

Location Sec. 4 Township 23S Range 57W Photo. Neg. No.

Bridge over Patterson Hollow Station * No. and Type of Spans 4-CMP Arch Total length 34'-0"

Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 67

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	Tangent	0.0%		Between Curbs	2@30'	Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		C to C Truss	6'Med	Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'		

Design by CDOH Built by CDOH Maintained by CDOH Plans F001-4(13)

Contract No. Contractor Domenic Leone Const. Fabricator Contract price $ 18,052.21

WATERWAY Area of Br. opening 70 sq. ft. 1970 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4220.41
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 2 sq. mi. Rolling Grassland

Drift and Ice Dams

Channel width Depth Elevation of Stream bed FL. 4210.6

Nature of stream bottom

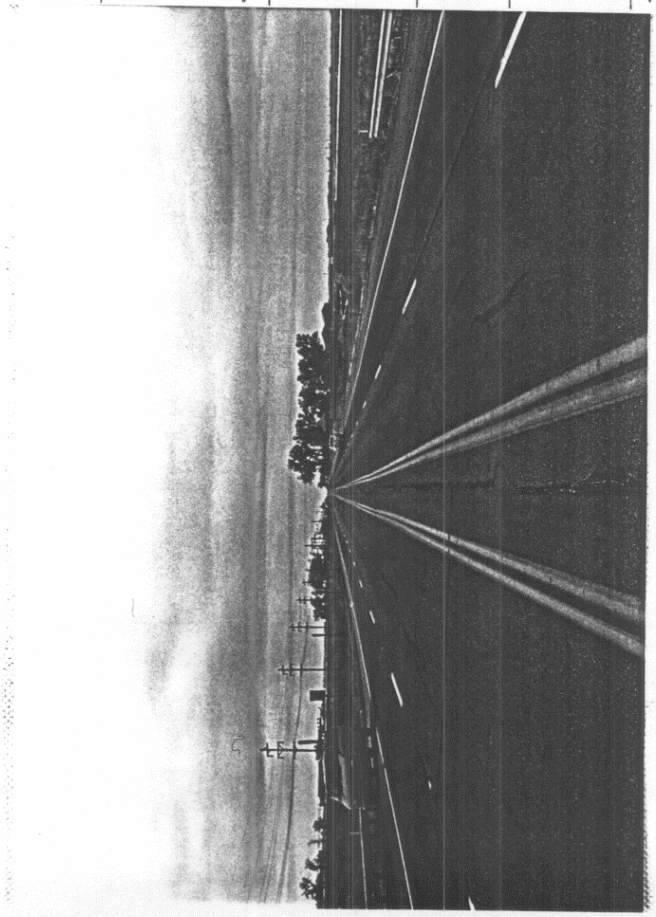
Remarks * Sta. 345 + 81.6 to 346+15.6

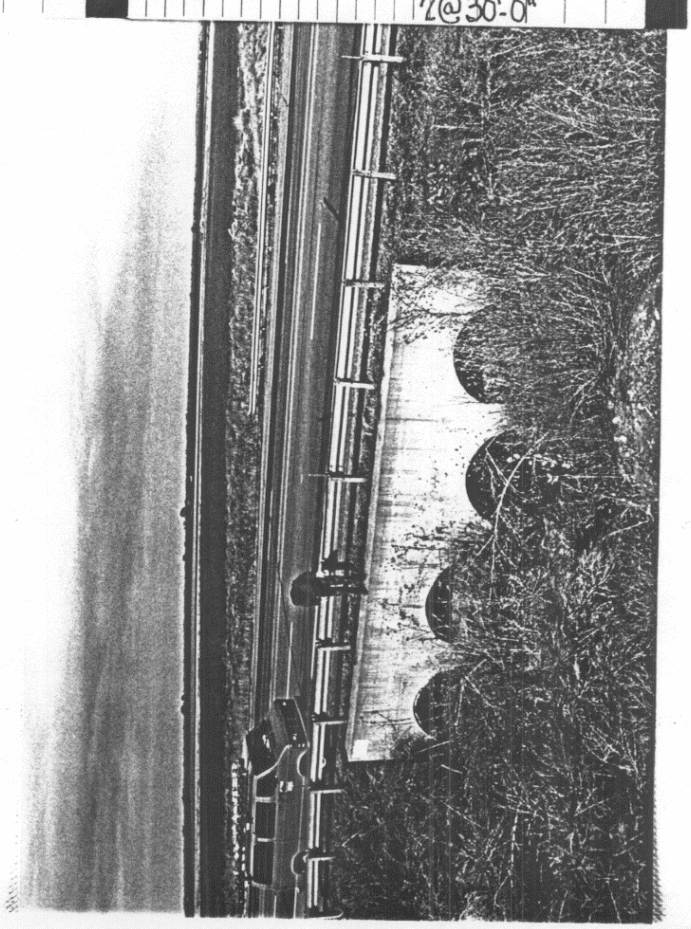
SUBSTRUCTURE

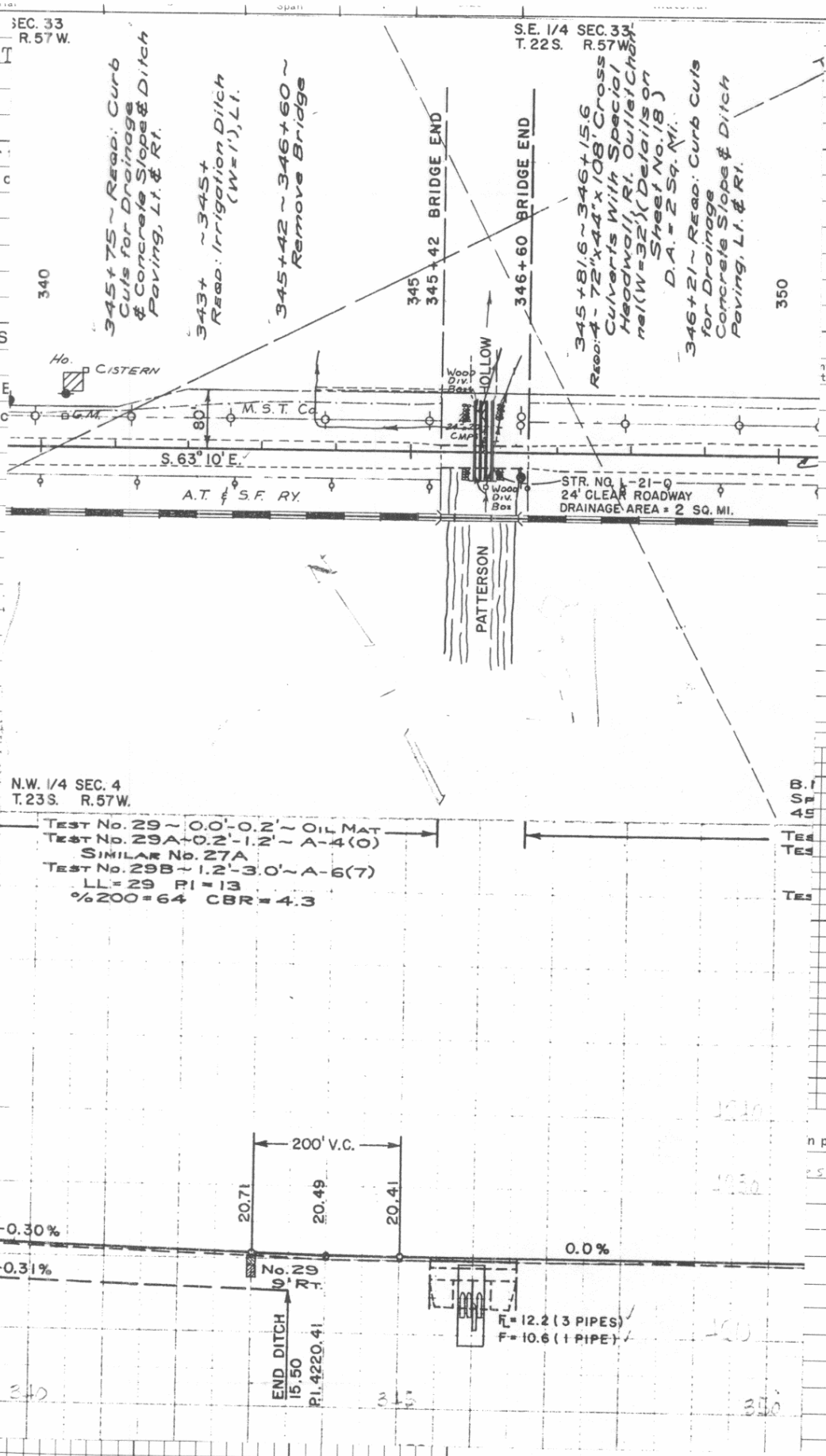
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward		4-72"x 44"x	108'	-0"	CMP Arch			
Pier								Conc. headwalls.
Pier								Swaybraces
								Backing Plank

Traffic Survey Data 3600 First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED	ROADWAY	CLEARANCE
L-21-Q	F001-4(13)	Otero	50	B 364.17 FAP	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open
						2@30'-0"	







A	SEC. 33 R. 57 W.
B	EART
C	
D	
E	
Fastenings:- Floor	
Stringers Lapped o	
Wheel guard	
Remarks	
I-BEAM GIRDERS	
PLATE GIRDERS	
FLOOR BEAMS E	
Floor Beam Connec	
Remarks	

Material | Span | Spacing | Stress

nterior tiffeners | C to C bearing

n pencil)

LAT.
LONG.
Rd. Sect
Br. Letter

Traffic Survey Data 3600

First Bridge	Second Bridge	Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG
-91-0	F001-1(13)	Otero	50	B 2/H 17 EAD

H - LOADING - RATED					ROADWAY						CLEARANCE			
—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Ope

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made 11- 2-42

Location Sec. 18 Township 23-S Range 56W Photo. Neg. No. PS 571 Checked Date

Bridge over Rocky Ford Canal Station 23+43 to 24+13 App Slab No. and Type of Spans 1-CS Total length 31'-8"

Rating H-20S16 Member Rating Unit Stress Design Live Load H-15'28 Required Live Load H20S16 44' Posted Live Load Year built 1934

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 53° L Superelevation
Bridge	tan	+0.46 to 0.0 100' VC	778	Between Curbs	44'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	+0.46 to 0.0 100' VC	open	Between Rail	54'-8"		
Forward approach	tan	0.0 to -1.04 100' VC	778			Minimum	Forward approach pavement and Rdwy
				Sidewalks	2 24'-0		

Design by CSHD Built by CSHD Maintained by Town of Rocky Ford Plans NRM 272 J

Contract No. Contractor Fabricator Contract price 11349.95

WATERWAY Area of Br. opening ~~50'~~ 58' 70' Area of Relief opening Skew of flow (Normal) Flood

	Elevation	
Grade center of bridge	4179.53	Drainage area (size and character) Canal
Low bridge	4177.70	Drift and Ice light drift Dams
Low water		Channel width Depth Elevation of Stream bed 4174.5
Normal high water		Nature of stream bottom
Maximum high water		Remarks

Raised rating to H20 S16 fc = 897

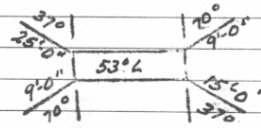
fs 17332

Roll No.

Sheet No.

SUBSTRUCTURE

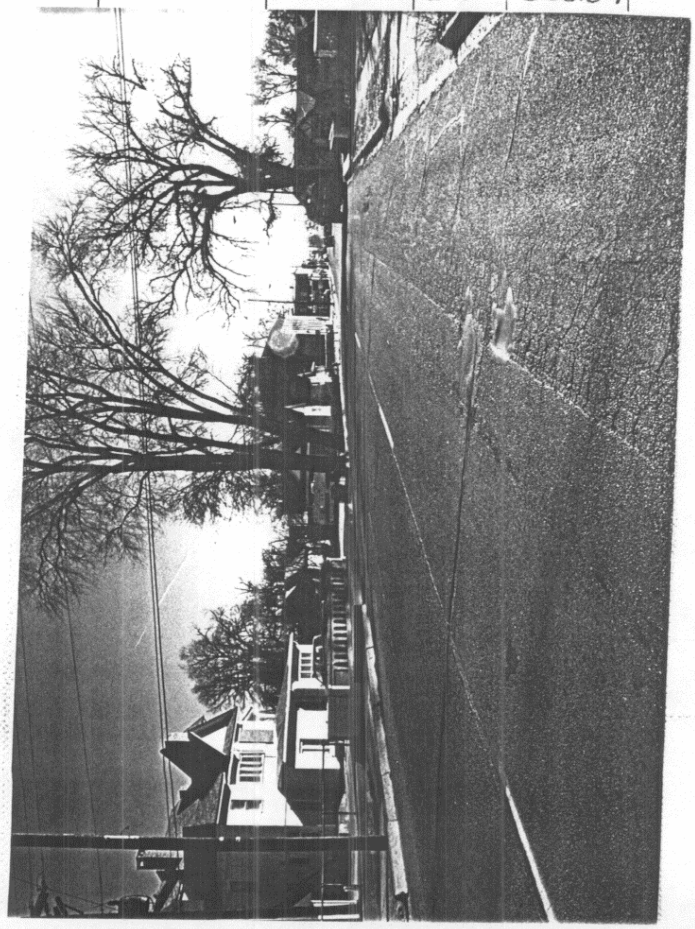
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.) Conc.
Rear					CC	15'-0		
Forward					CC	15'0		
Pier								
Pier								

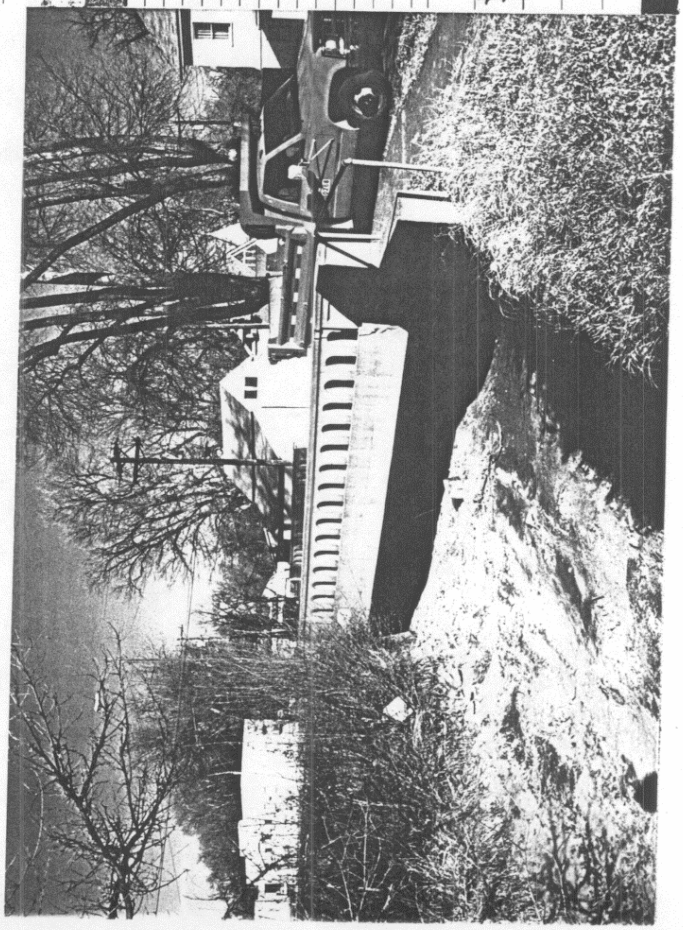


First Bridge Second Bridge ✓ Third Bridge

Traffic Survey Data In Rocky Ford 7800

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-22-I	NRM-272-J	Otero	50	B 368.54	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50 44'	—12 12-14 14— Open





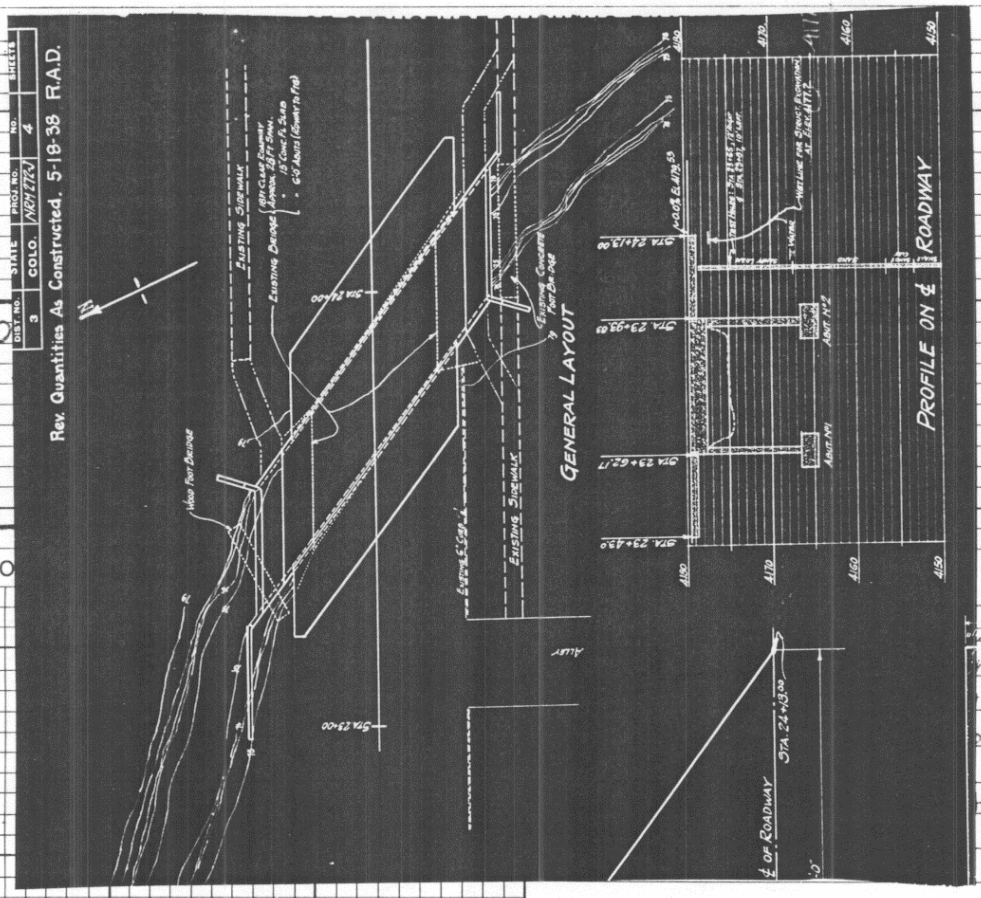
CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



DO

LAT.
LONG.
Rd. Sect.
Br. Letter

LO

(in pencil)

Can't get under

o end walls.

orner, Canal

has small vertical cra

First Bridge Second Bridge ✓ Third

raffic Survey Data In Rocky Ford 7800

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEAR	
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14
-22-T	NRM-272-1	Otero	50	B	FA													

Bridge Dept.

Location Sec. 26 Township 23 S Range 56 W Photo. Neg. No. Checked Date

Bridge over Timpas Creek Station 273+10.74 to 275+78.46 No. and Type of Spans 3-Prest'd. Spans. Total length 267'-8¾"

Rating H20S16 Member Rating Unit Stress fc 1200 fs 20000 Design Live Load H20S16-44 Required Live Load H20S16 30 Posted Live Load Year built 1958

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 20° Rt.	Superelevation
Bridge	Tangent	+0.12%	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	"	200' V.C. to +0.12%		Between Rail				
Forward approach	1° Curve	+0.12%		Rdwy.	2@2'-0"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by COH. Built by COH Maintained by CDH. Plans F001-4(5)

Contract No. Contractor Domenic Leone Const. Co. Fabricator Burkhardt Steel Company 5027 Contract price 95206.76

WATERWAY Area of Br. opening 1376 Sq. Ft. See L-22-A Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4118.24
Low bridge	4113.24
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 400 Sq. miles

PER/ROS OCOS(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTS & ANDERSON INC. (1976)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4096.0

Nature of stream bottom

Remarks This structure is in the EAST BOUND lane & parallel to L-22-A.

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	4'-9" x 2'-6¼"	Conc.	8	12¾	O.D. SPP 37'-0" long.			No Wings.
Forward	"	"						
Pier	3'-9" x 3'-9 3/16"	"	2 Col. C.		7'-2" ϕ Cassions 30'-0" long.			
Pier								

First Bridge Second Bridge Third Bridge

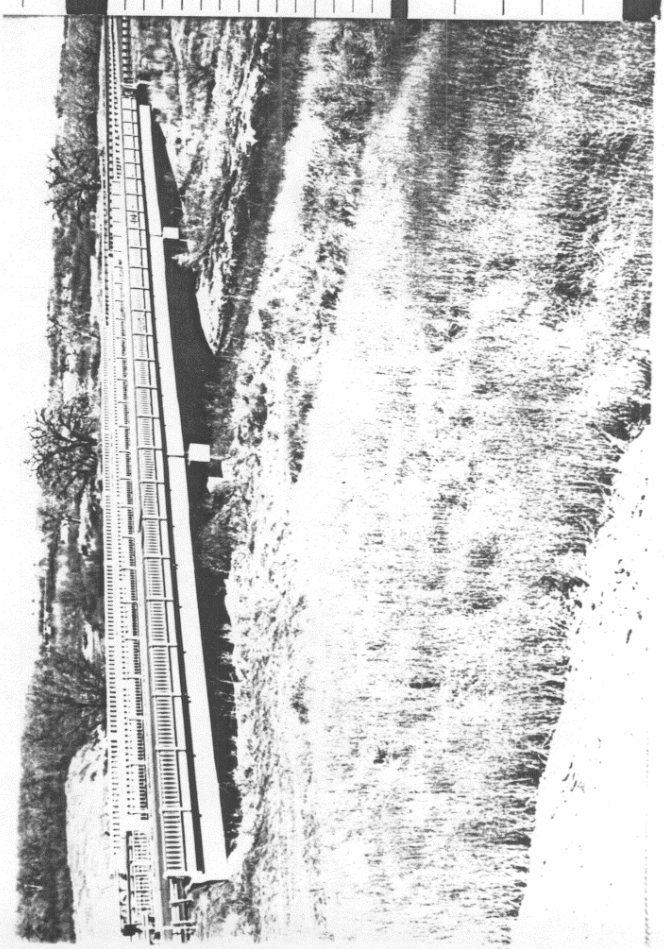
Traffic Survey Data 5350

STR. NO.	PROJECT	COUNTY	Highway	LOG		
L-22-AL	F001-4(5)	Otero	50	B 373.64		FA.

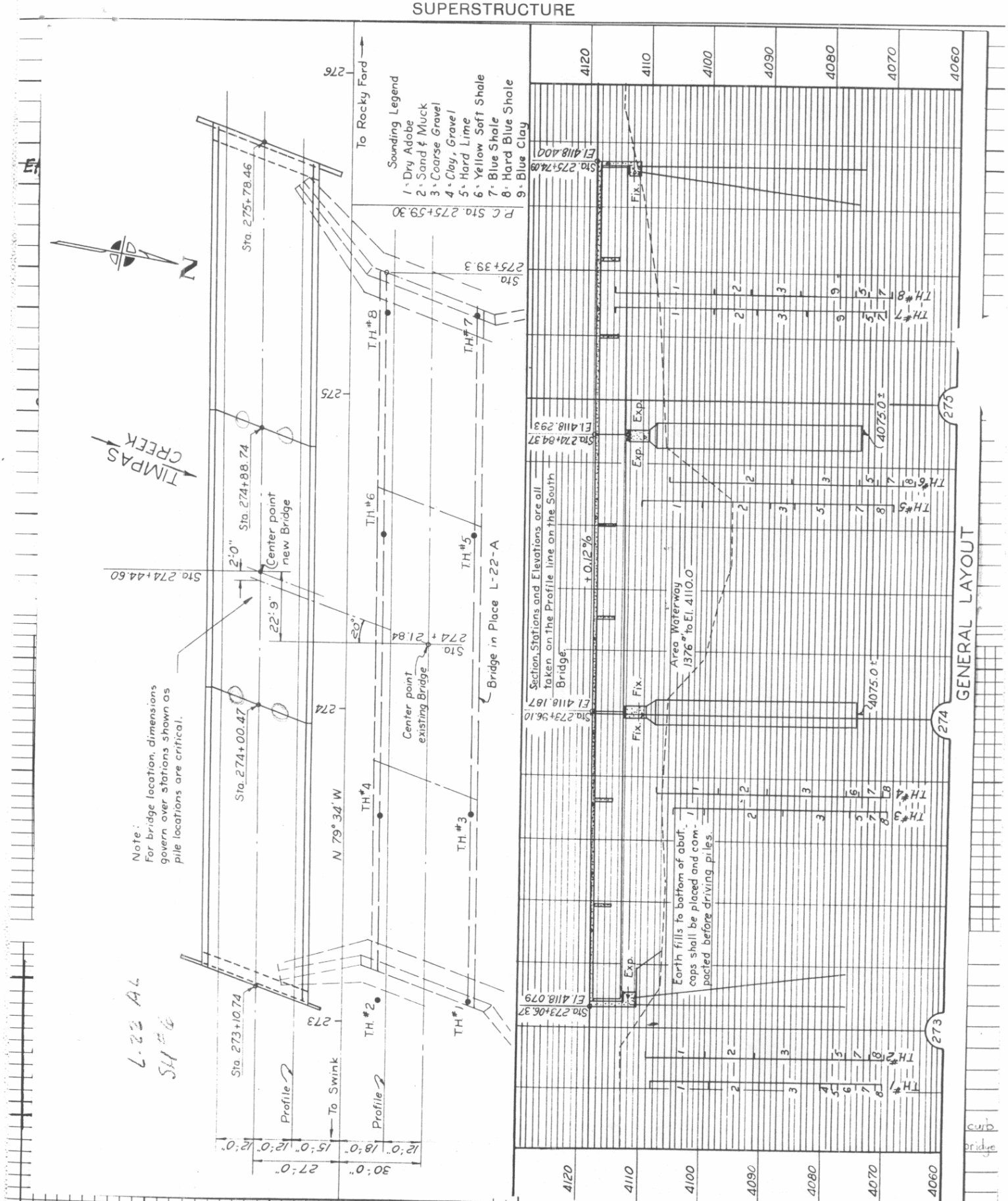
H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open



SUPERSTRUCTURE



First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 5350

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open

Bridge Dept.

Location Sec. 26 Township 23 S Range 56 W Photo. Neg. No. B-449-6 Checked G.R.B. Date 10-29-48

Bridge over Timpas Creek Station 273+20 to 275+44 No. and Type of Spans 3- Cont. Bm. CI Total length 224'-0"

Rating H-20 Member Rating Unit Stress fc 833 fs 18000 Design Live Load Class A 1941 H-20 Required Live Load H 20 S16 30 Posted Live Load Year built 1947

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 20° Rt. Superelevation
Bridge	Tan.	0.00 %	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	do	do	do	Between Rail	34'-0"		
Forward approach	do	do	do	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'-0"		

Design by C.S.H.D. Built by C.S.H.D. Maintained by C.S.H.D. Plans SNFAP 247(4)

Contract No. Contractor Brown Const Co. Fabricator Midwest Steel & Iron Wks. Contract price 122365.23

WATERWAY Area of Br. opening 2500 □' 2371 □' 70" Area of Relief opening Skew of flow (Normal) Flood

	Elevation	
Grade center of bridge	4118.0	Drainage area (size and character) 400 Square Miles
Low bridge	4114.292	Drift and Ice Drift Med. Dams
Low water	4099.	Channel width Depth Elevation of Stream bed 4096.5
Normal high water		Nature of stream bottom
Maximum high water	4113.6	Remarks

PER/ROS OCOS(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTS & ANDERSON INC. (1976)

This struct is in the West Bound lane & Parallel to L-22-AL

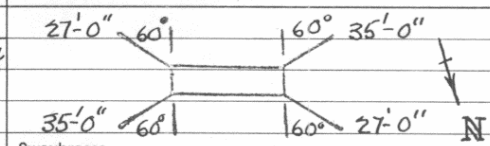
Roll No.

Sheet No.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material
Rear					C.C. on 18" π Piles	26'-0	Lime Rock
Forward					do		
Pier	2'-6"x3'-2 1/16"	Conc.	2	7'-2"	CTC	43'-0" ±	
Pier					do	do	

Wing (Lengths, angles, etc.)



Swaybraces

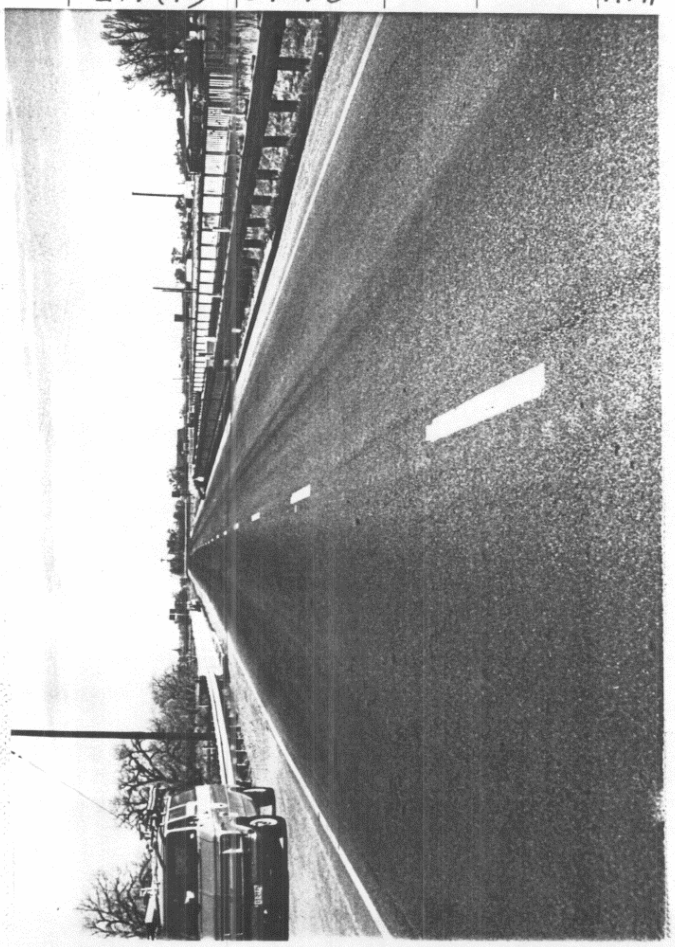
Backing Plank

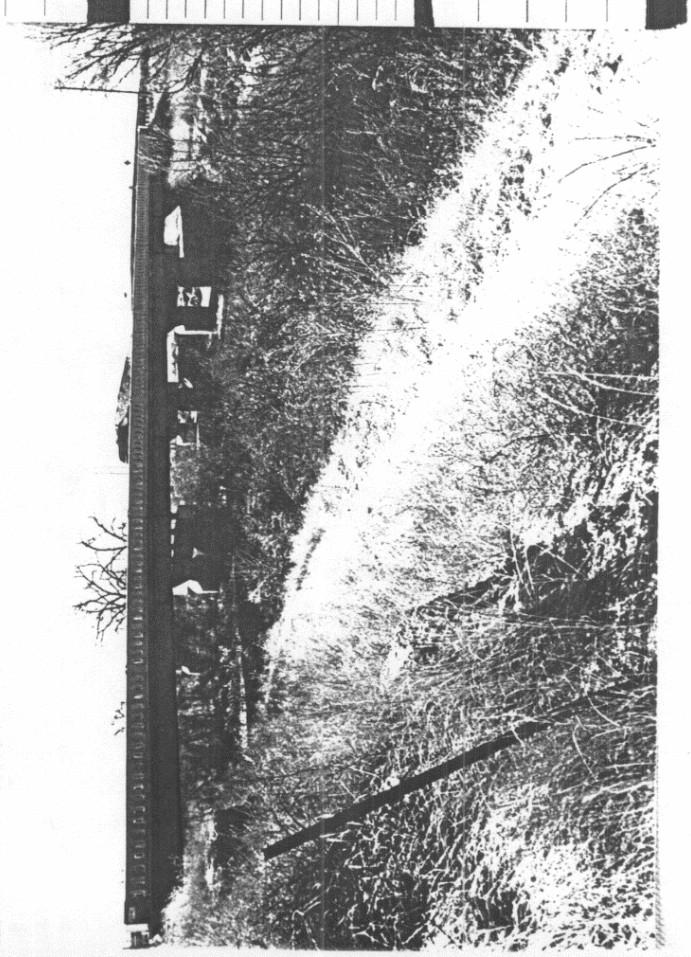
Unit. Riser cracked Roberts [illegible] tipped [illegible] Wings open 0'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 5350

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-22-A	SN. F.A.P. 247(4)	Otero	50	B 373.65	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





Material	Wearing Surface	Span					
7½" Conc. Slab	½ Mono.	66 88 66	6	36" WF @ 150#	Cont. Bm.	6'-0"	18000

Fastenings:- Floor to stringer Top flange Conc. in cont. Stringer to cap Anchor Bolts.

Stringers Lapped or butted

Wheel guard 9" Conc. Hand rail Conc. 2'-8"

Remarks

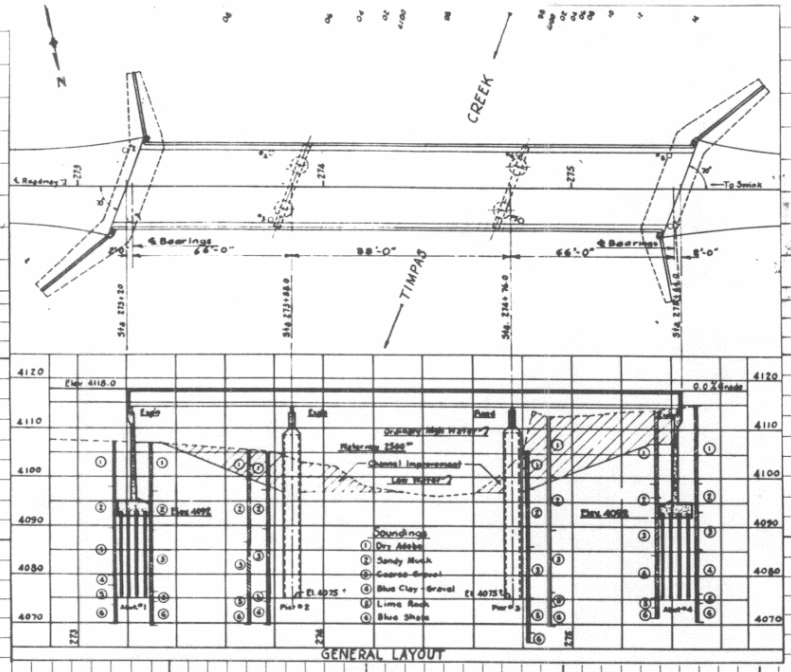
I-BEAM GIRDERS Size Spacing

PLATE GIRDERS Depth Web Flange Ls Cover Plates Bearing Stiffeners Interior Stiffeners C to C bearing

FLOOR BEAMS End Interior Spacing

Floor Beam Connections

Remarks



LOCATION SKETCH

	DOD
LAT.	38° 01.3'
LONG.	103° 37.5'
Rd. Sect.	114
Br. Letter	ANP

REMARKS:-General condition of structure (in pencil)

Hair Cracks in slab.
West Abut in ¾" East Abut in 1½"
Joint in HR not even with joint in deck and curb
so HR cracked No joint in bottom of rail

Slab badly cracked B.S. 1962
W. exp'n device covered with oil. B.S. 1964
2½" Gas pipe on North beam. 10-10-67 Citizens Util. Comp. letter
Deck very bad shape. SW corner of rail battered
So. h.r. has been hit from So. Appr fills low.
Brgrs rusting. Shoulders washing slightly 68'
Potholes in deck. Slab jts. leaking onto diaphragms. NW wing rail
hit. Risers cracked. Rockers (abut.) tipped & rusting. Wings open 70'

First Bridge Second Bridge Third Bridge

affic Survey Data 5350

TR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
[illegible]	SN. F.A.P. [illegible]	[illegible]	50	B 373.65	FA															

Location Sec. 25 Township 23 S Range 56 W Photo. Neg. No. Checked Date

Railroad Overpass Underpass A.T. & S.F. RR Station 250+59.2 No. and Type of Spans 5SM 1-E65 Total length 51'-2¼"

Rating E-65 Member Rating Unit Stress Design Live Load E-66 Required Live Load E65 44' Posted Live Load Year built 1958

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 63°21' & track to ℄ Rdwy. Superelevation
Bridge	3°45' Spiral Lt.	300' V.C.	550'	Between Curbs*	38'-0"	Truss	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		C to C Truss		Underpass	Forward approach pavement and Rdwy
	PT. 260+34.1	PT. 250+50.0		Sidewalks		~~18'0"~~	

Design by A.T. & S.F. RR. Built by C.O.H. Maintained by C.O.H. Plans F 001-4(5)

Contract No. Contractor Domenic Leone Const. Co. Fabricator Burkhardt Steel Co. #5027 Contract Price #90012.50

Apportionment Cost Blast Protection

Provision for RR Development Roll T1969&87

Drainage

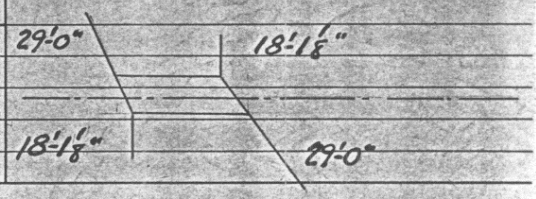
Lighting System Collision protection

* This structure is in the East bound Lane only. Parallel to L-22-H.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material
Rear					C.G.	28'-2⅜"	
Forward					"	"	
Pier							
Pier							

Wing (Lengths, angles, etc.)



E Bnd VERT CL W Bnd

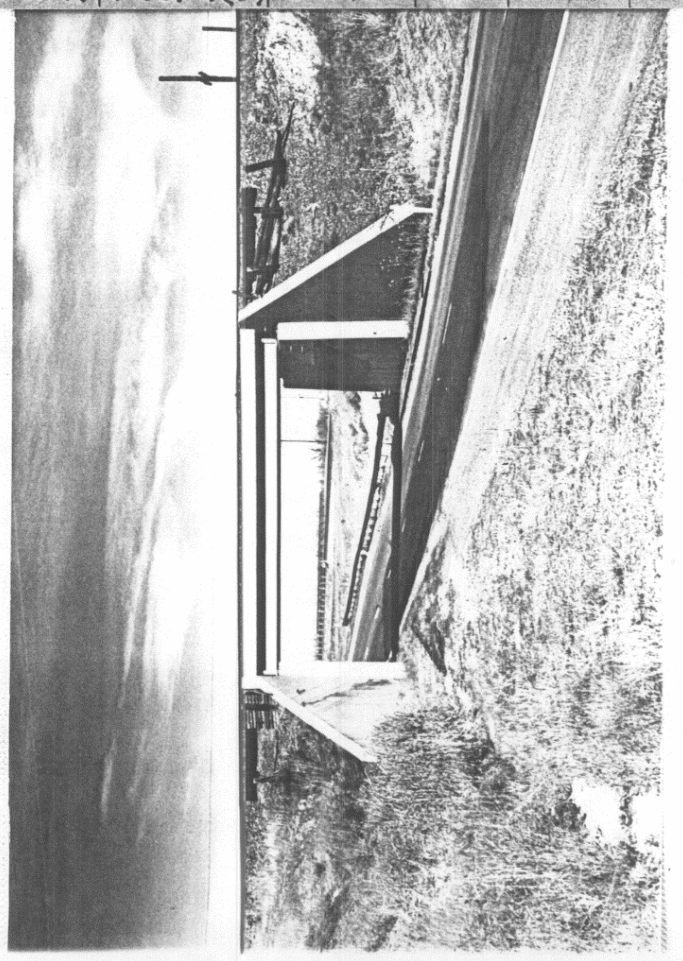
Max 16-02 Max 16-02

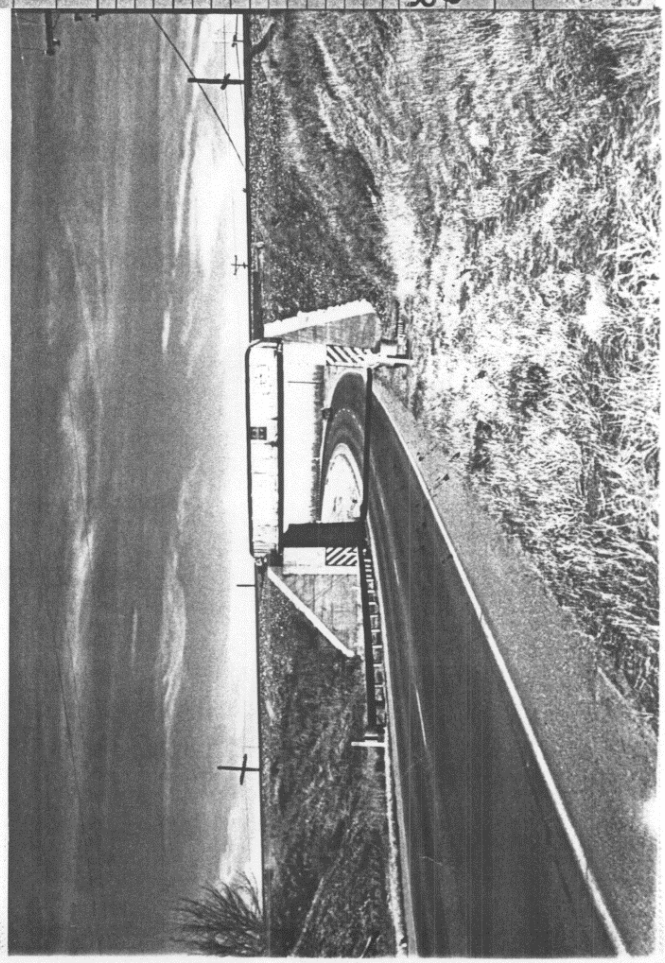
Min 16-02 Min 16-02

First Bridge Second Bridge Third Bridge

Traffic Survey Data 5350 Separation

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open
L-22-R	F 001-4(5)	Otero	50	B 374.12	FA		38'-0"	





Bridge Dept.

Location Sec. 32 Township 23 S Range 55 W Photo. Neg. No. B 449-3 Checked C.L.S. Date 11-1-48

Bridge over Crooked Arroyo Station 97+45.0 to 98+48.67 No. and Type of Spans #Plans 1 - SDG. Total length 103'-8"

Rating H-20 Member Rating Unit Stress fs 18000 fc 833 Design Live Load H-20-44 Required Live Load H 20 S16 30 Posted Live Load Year built 1941

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	Tan	0.00%	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	do	do	do	Between Rail	34'-0"		
Forward approach	do	do	do	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'-0"		

Design by C.S.H.D. Built by C.S.H.D. Maintained by C.S.H.D. Plans F.A.P 96(2)

Contract No. Contractor Lindstrom & Williams Fabricator Midwest Steel & Iron Wks. Contract price 70454.44

WATERWAY Area of Br. opening See M-22-K Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4092.00
Low bridge	4085.51
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 1 1/2 = M.

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4701.6 ±

Nature of stream bottom

Remarks This structure is in the Westbound lane, parallel to M-22-K

No Mill Tests

4 Pcs. Size H14 @ 89 = 1820 Pcs

Safety guard rail installed, project 209-0050-00, completed 5-18-71

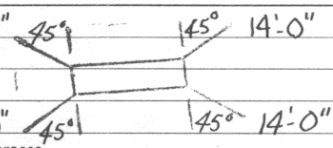
Roll No. BDN 58; T1953-75

Sheet No.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material
Rear					C.C.	25'-6"	22'-0" TP
Forward					do	do	do
Pier							
Pier							

Wing (Lengths, angles, etc.)



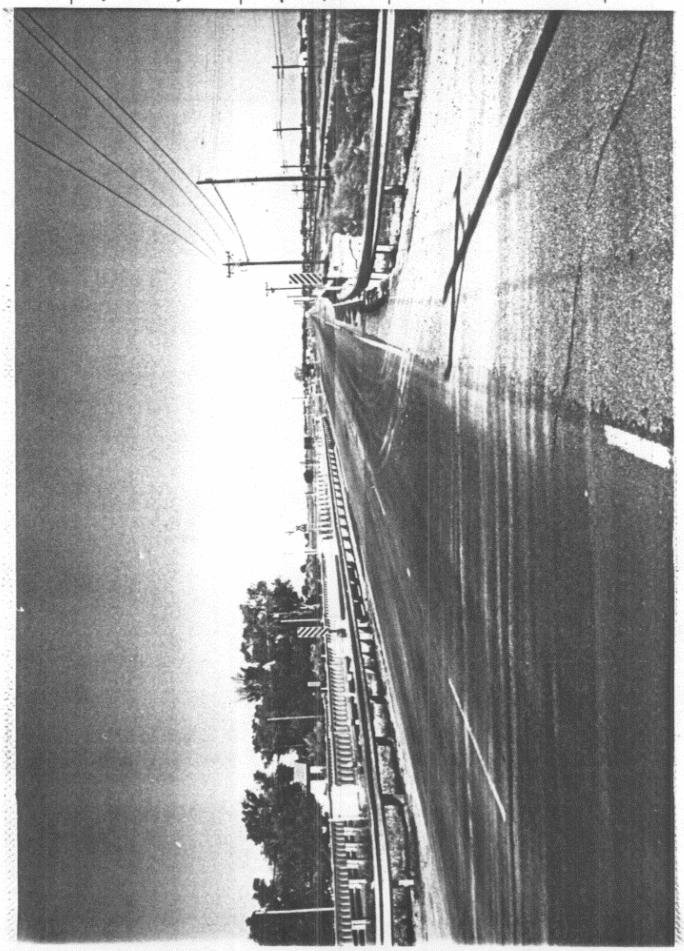
Swaybraces

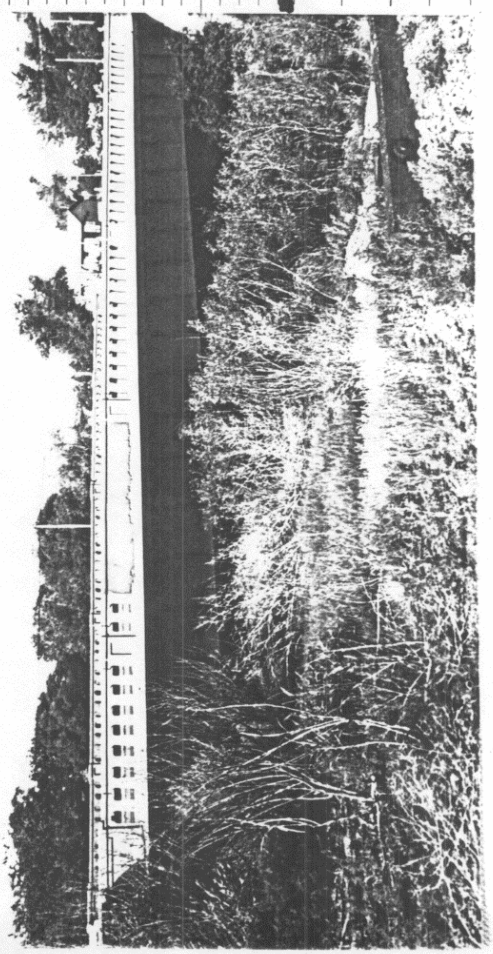
Backing Plank

First Bridge Second Bridge Third Bridge

Traffic Survey Data 5500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-22-A	F.A.P. 96(2)	OTERO	50	F 377.00	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open



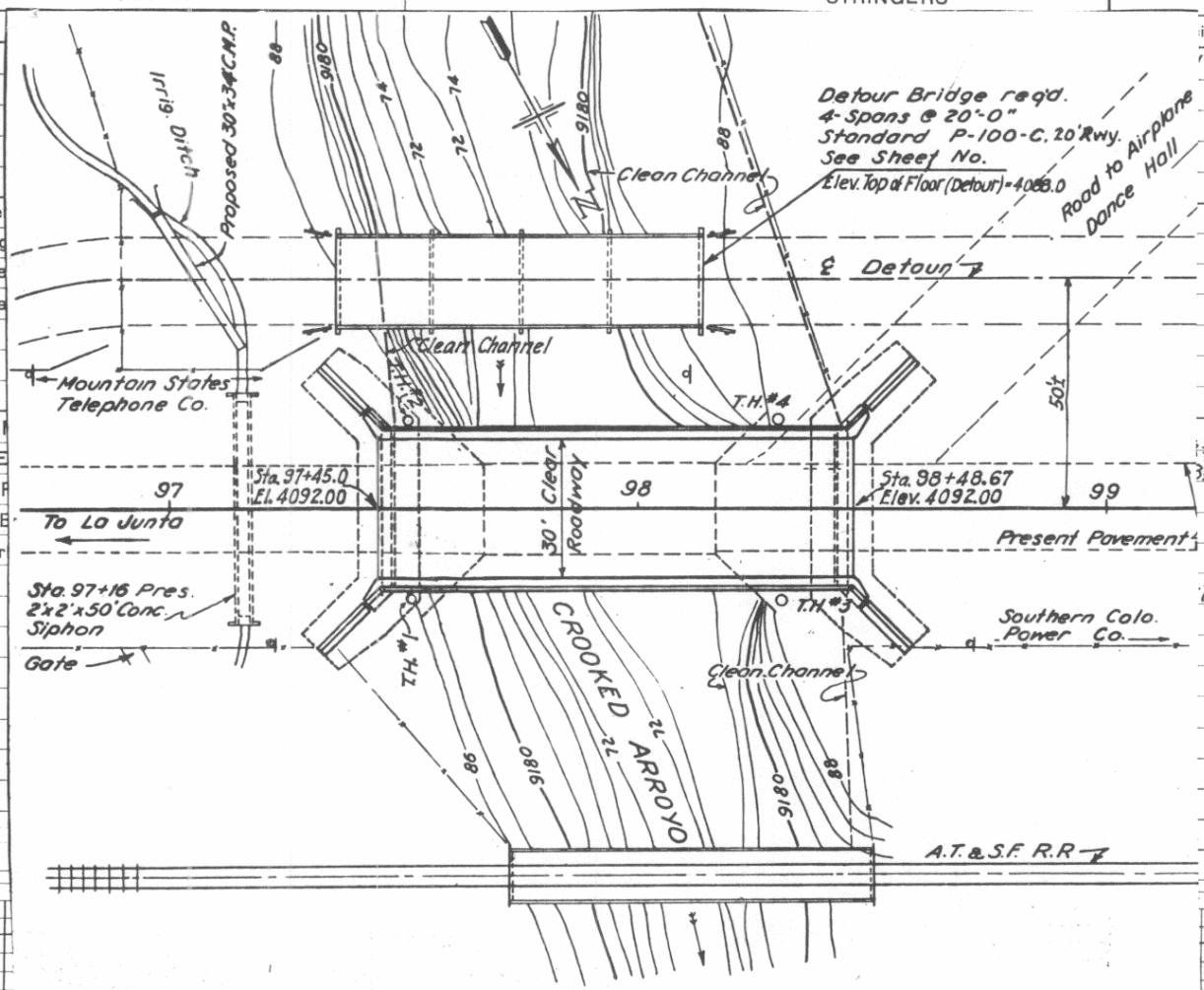


SUPERSTRUCTURE

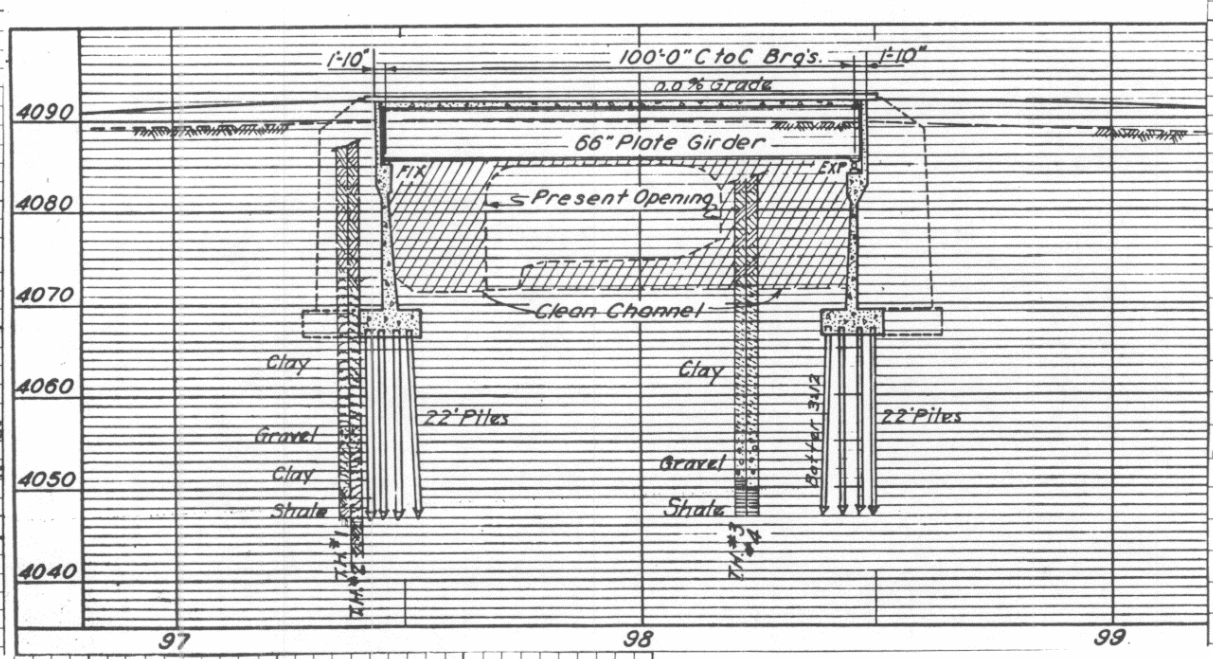
Span No.	FLOOR	STRINGERS	...ing	Allowable Stress
A				18000
B				
C				
D				
E				

Faste
String
Whee
Rema

I-BEA
PLATE
FLOOR
Floor B
Remar



GENERAL LAYOUT



C to C bearing 100'-0"

...tlom

B.S. '62

LAT.
LONG
Rd. Se
Br. L

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 5500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
155-A	F.A.P. 96(2)	OTERO	50	B 37700	EA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Bridge Dept.

Checked Date

Location Sec. 32 Township 23 S Range 55 W Photo. Neg. No.

Bridge over CROOKED ARROYO Station 97+45 to 98+48.67 No. and Type of Spans 4 Span 1-SDG Total length 103'-8"

Rating H-20 Member Rating Unit Stress fc 1000 fs 18000 Design Live Load H-20-44 Required Live Load H 20 S16 30' Posted Live Load Year built 1955

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	Tangent	0.00%	880'	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	–	300' V.C.		Between Rail			
Forward approach	–	300' V.C.		C to C Truss		Minimum	Forward approach pavement and Rdwy
Bearing N62°31'W		PT 95+50 PT 100+00		Sidewalks	2@2'-0"		55-832,34

Design by CDH Built by CDH Maintained by CDH Plans F001-4(1)

Contract No. Contractor Domenic Leone Fabricator Midwest Steel & Iron Wks. Co. Contract price 75911.71

WATERWAY Area of Br. opening 1130 sq ft 1012 sq ft 70 Area of Relief opening None Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3800.53
Low bridge	3794.708
Low water	
Normal high water	–
Maximum high water	–

Drainage area (size and character) 113 Sq. miles

Drift and Ice Medium Dams

Channel width Depth Elevation of Stream bed 3782

Nature of stream bottom

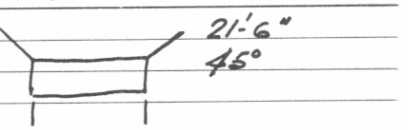
Remarks This structure is in the Eastbound lane, parallel to M-22-A SOUTH BRIDGE

Safety guardrail installed, project 302-0050-00 Completed 5-13-71

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material
Rear					CC ✓	25'-9 3/16" ✓	
Forward							
Pier							
Pier							

Wing (Lengths, angles, etc.)



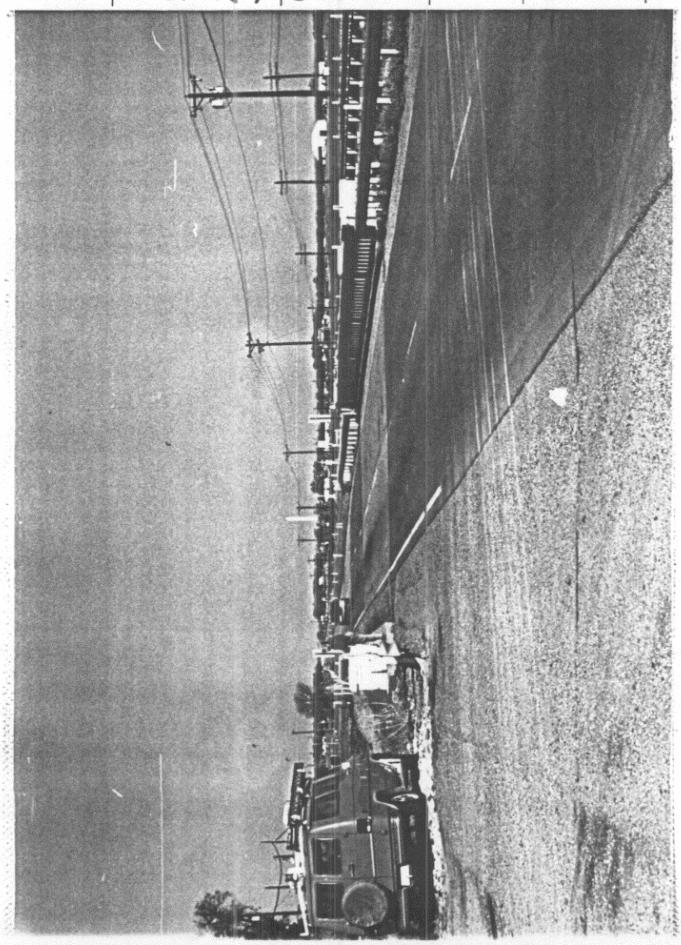
Swaybraces

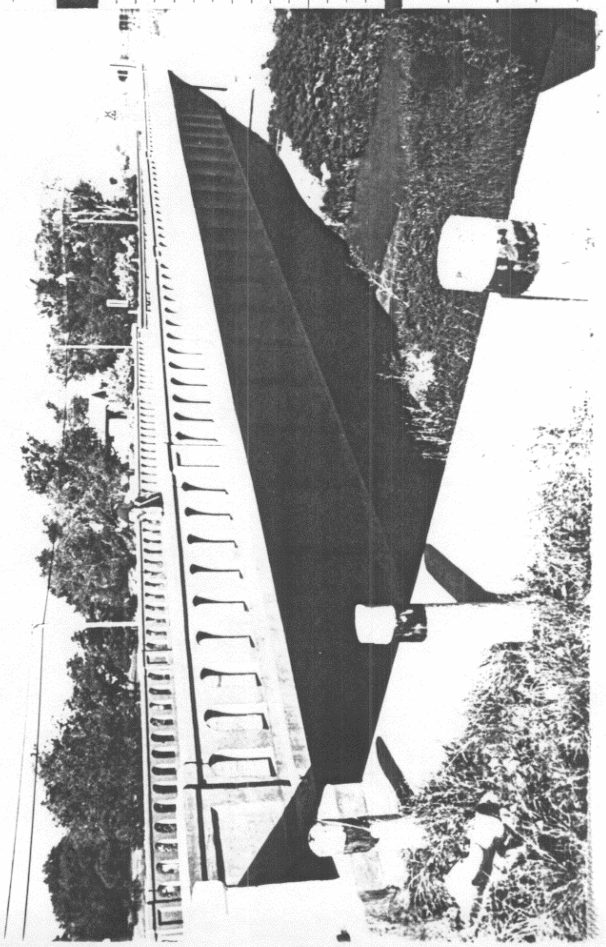
Backing Plank

First Bridge Second Bridge Third Bridge

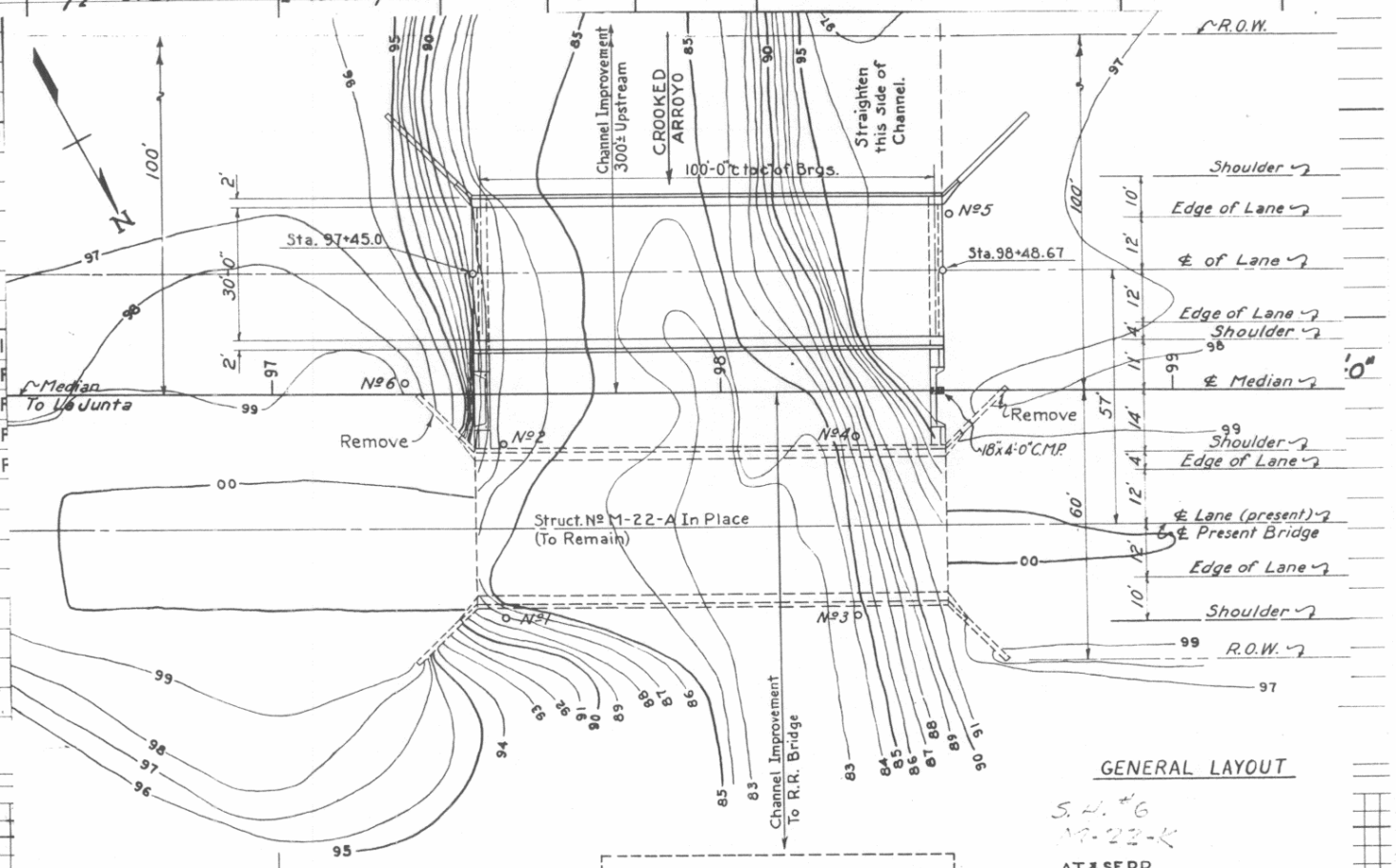
Traffic Survey Data 5500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-22-K	F001-4(1)	Otero	50	B 376.99	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Oper



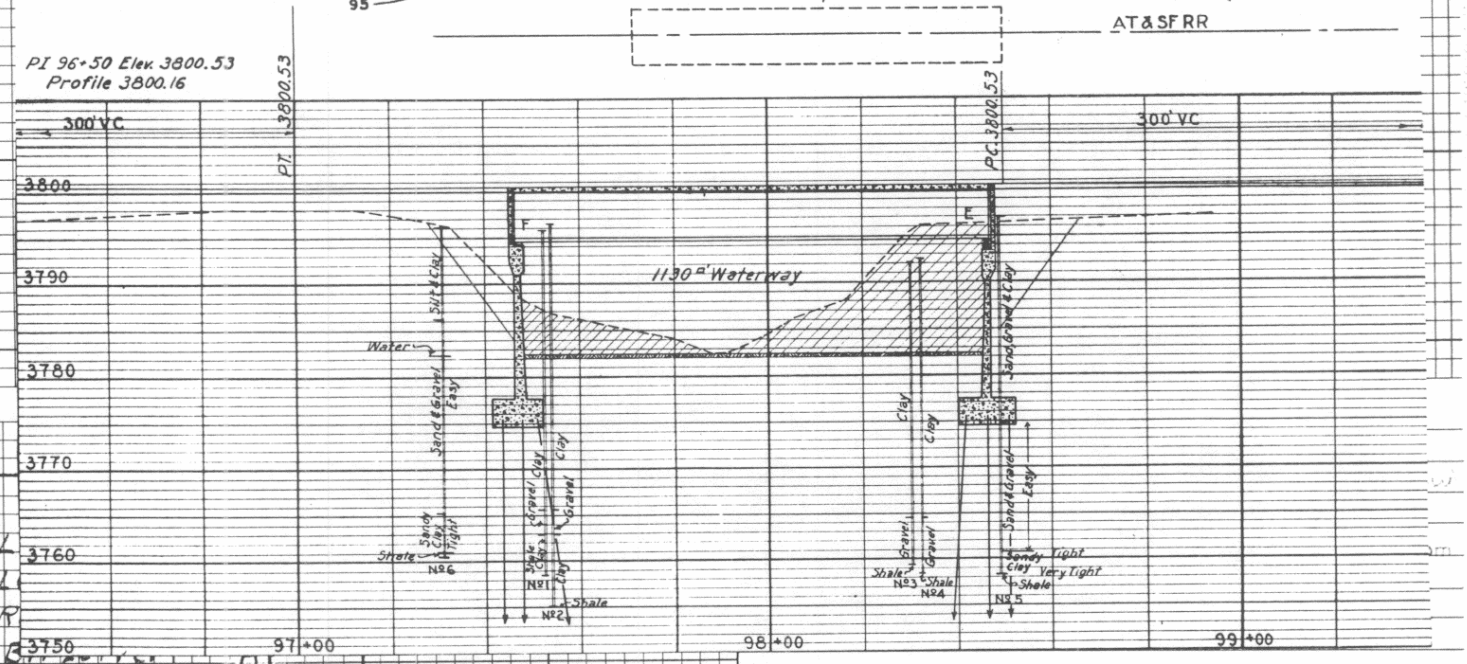


Span No.	FLOOR		STRINGERS					
	Thickness - Type and Material	Wearing Surface	Effective Span	Number	Size	Material	Spacing	Allowable Stress
A	7½" C.S.	½" Conc. Mono.	100'-0"	4			9'-0"	18000
B								
C								
D								
E								



GENERAL LAYOUT

S.H. #6
M-22-K



First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 5500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
M-22-K	F001-4(1)	Otero	50	B 376.99	FA					■				■						■

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 9-60

Checked Date

Location Sec. 3 Township 24 S Range 55 W. Photo. Neg. No.

Bridge over Andersons Arroyo Station 41+13.56 to 42+54.0 No. and Type of Spans 3-CSG. Total length 140'-5 5/16"

Rating H20 S16 Member Rating Unit Stress fs 20000 Design Live Load H20S16-44 Required Live Load H20 S16 30 Posted Live Load Year built 1961

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° Rt. to tang. Superelevation
Bridge	Spiral to tang.	500' V.C.	770'	Between Curbs	E.B. 28'-0" W.B. 46'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	Spiral	"		Between Rail			
Forward approach	Tang.	"				Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'-0"		

Design by CDH. Built by CDH. Maintained by CDH. Plans U 001-S(7)

Contract No. Contractor C. L. Hubner. Fabricator Burkhardt Steel Company. Contract price $20177.51

WATERWAY Area of Br. opening 1080 sq ft 814 sq ft 70 Area of Relief opening Skew of flow (Normal) / Flood

	Elevation
Grade center of bridge	4081.38
Low bridge	4078.33
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 4 sq mi

PER/ROS 0005(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTSON & ANDERSON INC. (1976)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4064.50

Nature of stream bottom

Remarks

Roll T1969-758

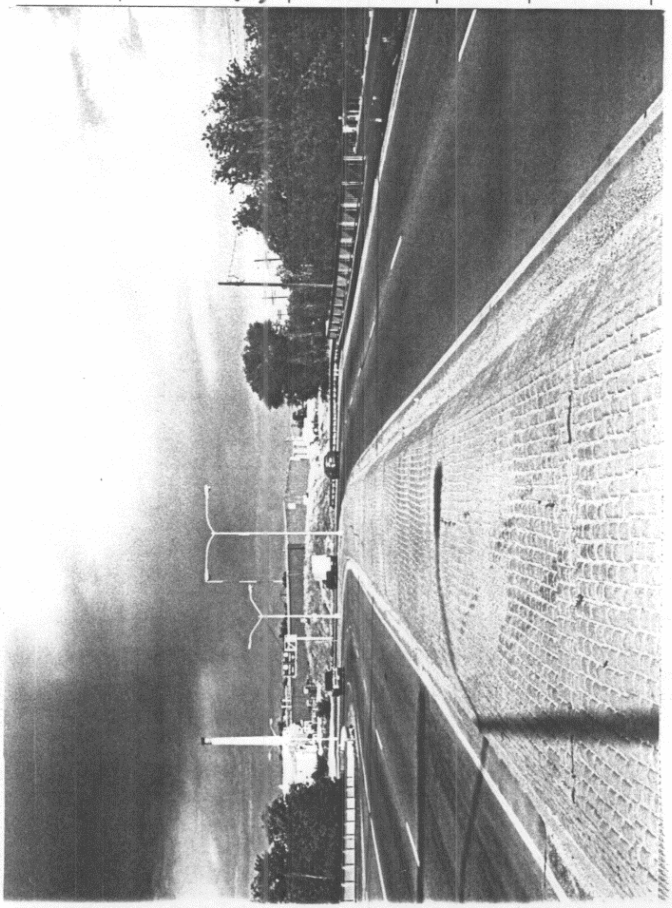
SUBSTRUCTURE

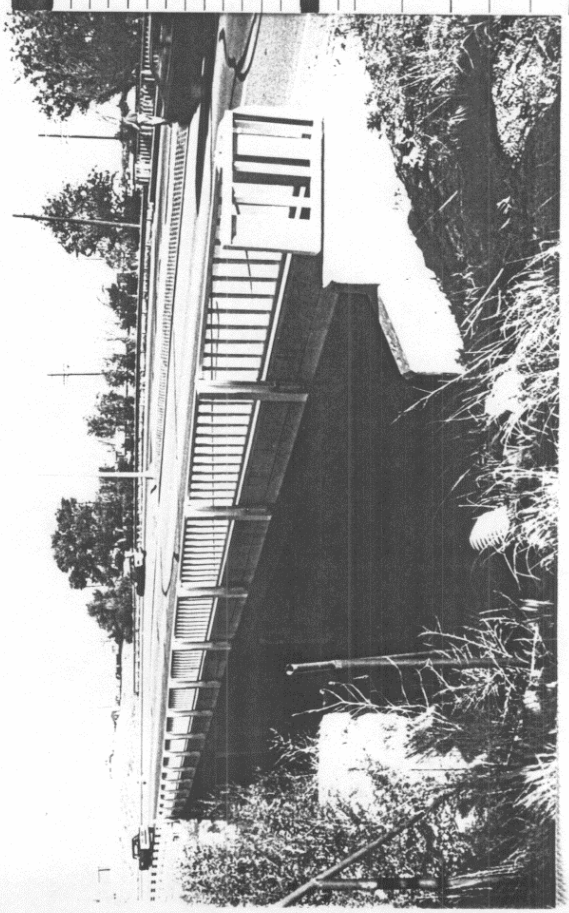
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'-0" x 4'-2"	Conc.	12	12" BP @ 53#	34'-0"			No Wings.
Forward	"	"						
Pier 2	2'-2" x 2'-0"	Conc.	Conc. Semi-Gravity on 18-12" BP @ 53#		18'-0"	19'-10 3/16		
Pier 3	"	"		"	"	"		

First Bridge Second Bridge Third Bridge

Traffic Survey Data 8250 Urban

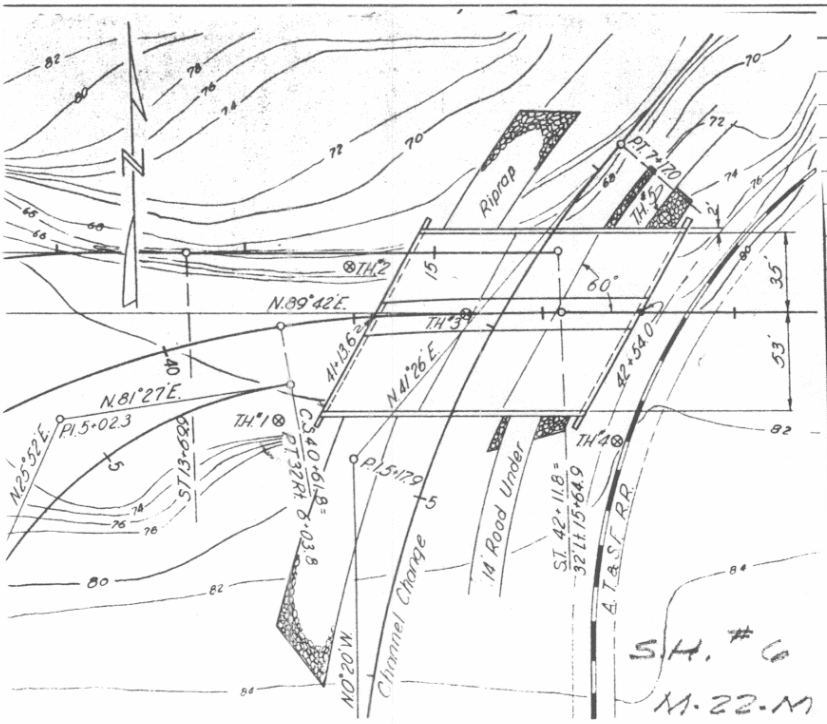
STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						-10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	-12 12-14 14- Open
M-22-M	U001-5(7)	Otero	50	B 379.14	FA			





CONCRETE SLAB - Clear Span

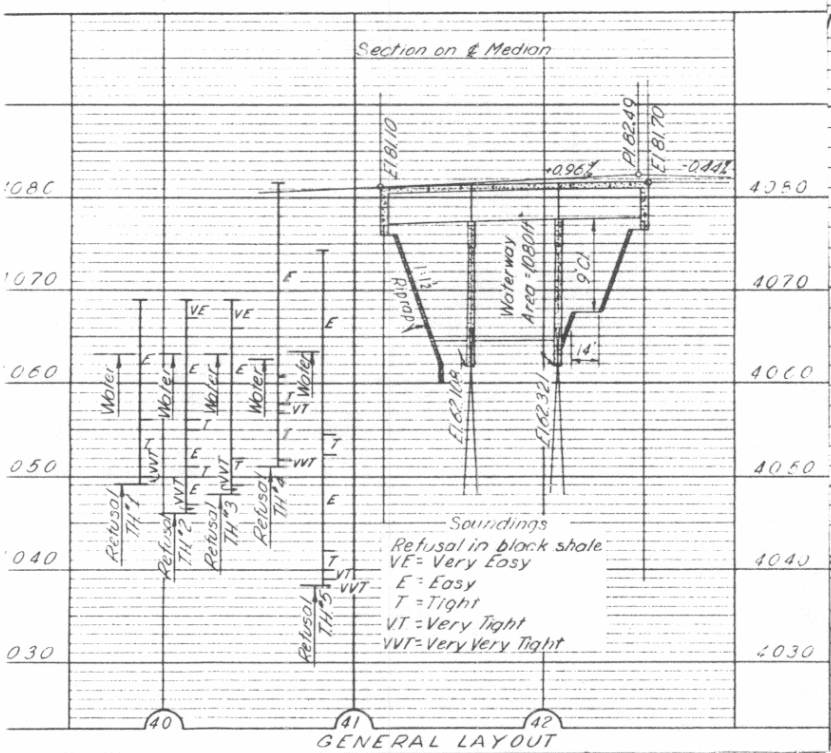
Thickness

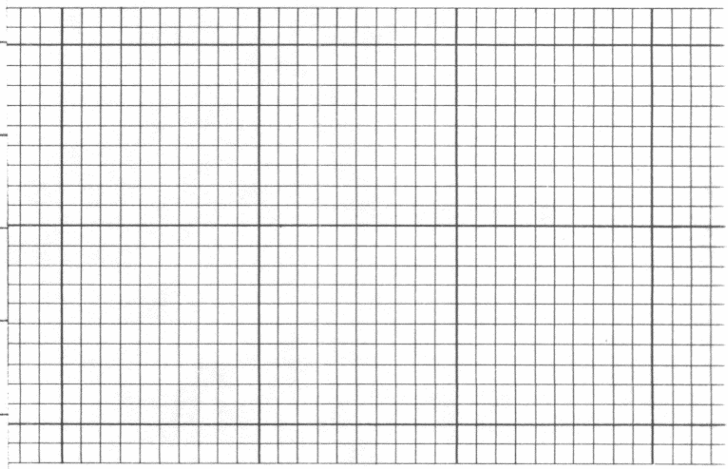


Slab Thickness

Shape

WING DIMENSIONS





EMARKS:-General condition of structure (in pencil)

Handrail joints not welded B.S. '62
1 surf. part way across bridge - E. bound
" to 0" halfway across bridge. - B.S. '64
ppr fills on E. low, both lanes. W bnd
1" constant depth entire length. R.p rap
@ both abuts. '68 '70

Rd. Sect. 1116

Br. Letter B

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 8250 Urban

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Op
1-22-M	D001-5(7)	OTERO	50	B 379.14	FA			

Location Sec. 2 Township 24 S Range 55 W. Photo. Neg. No. Checked Date

Bridge over King Arroyo. Station 953+14.85 to 954+96.00 No. and Type of Spans 3-CSG Total length 181'-1 3/8"

Rating H20S16 Member Rating Unit Stress fc 1200 fs 20000 Design Live Load H20S16-44 Required Live Load H20 S16, 30 Posted Live Load Year built 1961

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° Lt. to tang. Superelevation
Bridge	Tang. to Spiral	-1.90%		Between Curbs	W.B. 28'-6" E.B. 30'-9 1/2"	Maximum	Rear approach pavement and Rdwy
Rear approach	Tang.	"		Between Rail			
Forward approach	Spiral	"				Minimum	Forward approach pavement and Rdwy
				Sidewalks	2@2'-0"		

Design by CDH. Built by CDH. Maintained by CDH. Plans F001-5(12)

Contract No. Contractor C.L. Hubner Co. Fabricator Burkhardt Steel Company Contract price $110,597.51

WATERWAY Area of Br. opening 960 sq ft 1196 sq ft 170 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4068.355
Low bridge	4063.813
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 4 sq mi

PER/ROS 0005(12), GD. RAIL TYPE-3 CONNECTED BY ROBERTS & ANDERSON INC. (1976)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 4051.00

Nature of stream bottom

Remarks

ROLL No. 1969-7

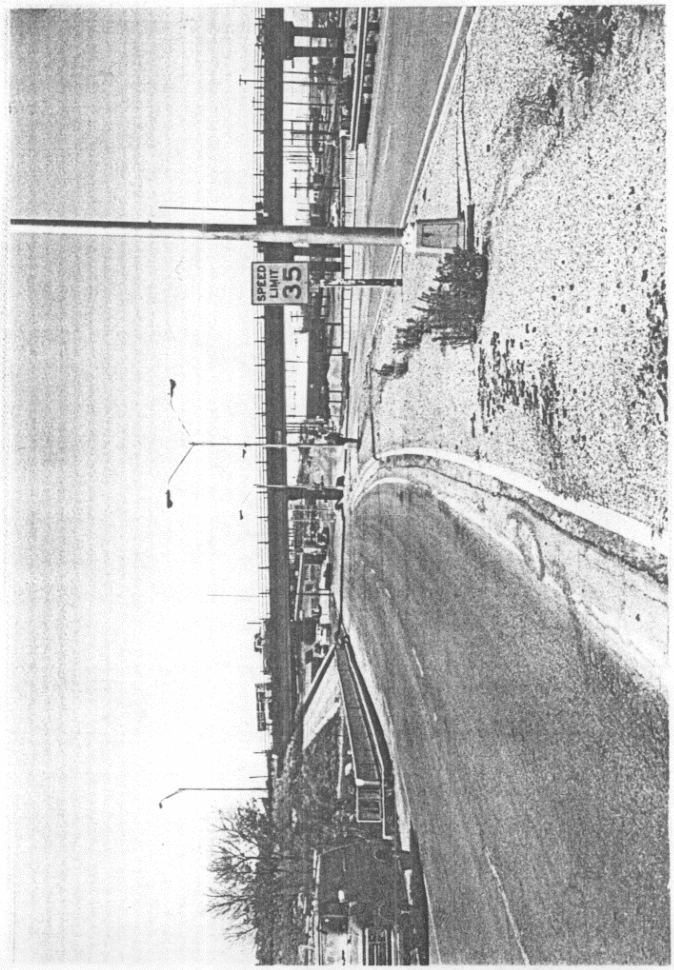
SUBSTRUCTURE

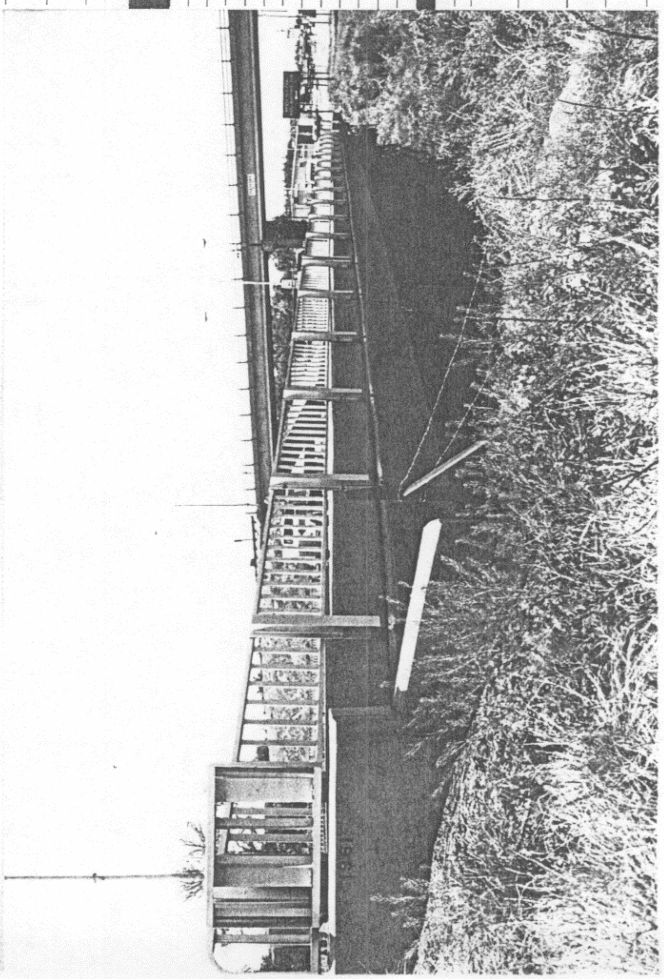
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'-0" x 5'-8"	Conc.	12	12 BP @ 53#	25'-0"			No Wings
Forward	2'-0" x 5'-5 1/4"	"	"	"	"			
Pier 2	3'-0" x 3'-0"	"	Conc. Semi-Gravity on 15-12" BP @ 53#		15'-0"	19'-9"		
Pier 3	"	"			"	19'-9"		

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3650 Urban

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-22-X	F001-5(12)	OTERO	50	B 380.56	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Curbs 12" Conc. Hand rail Std. Steel Cont. 2'-6" High.

Wearing Surface ½" Conc. 2" o.s.

CONCRETE SLAB - Clear Span Thickness

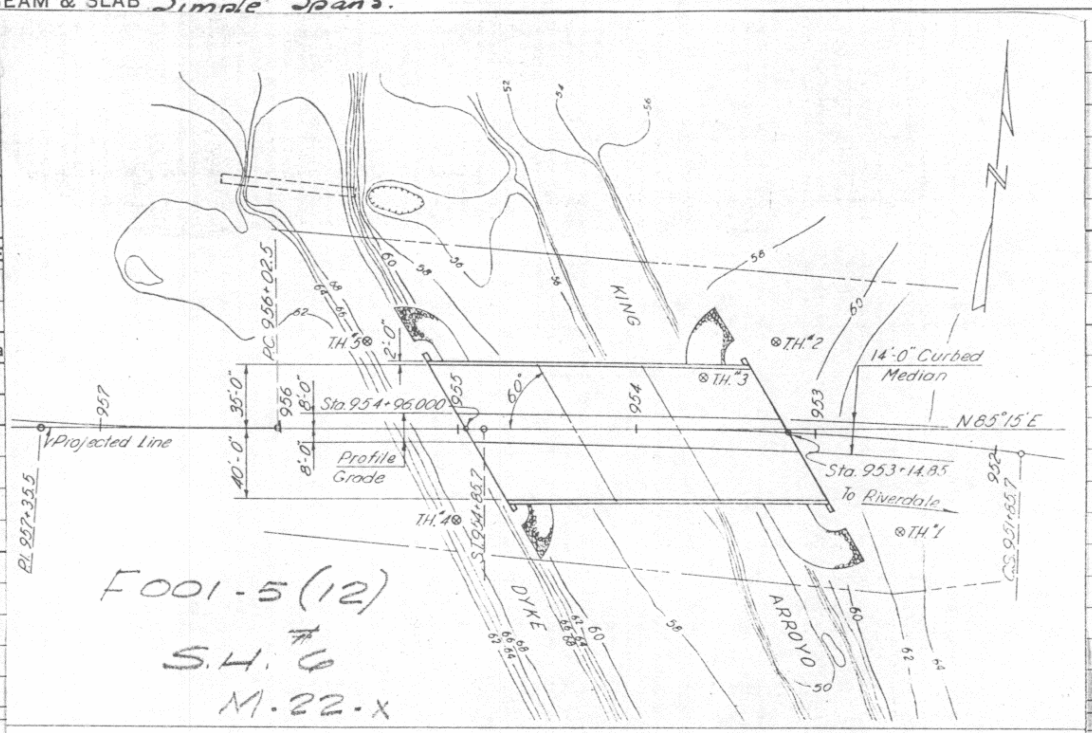
CONCRETE BEAM & SLAB Simple Spans.

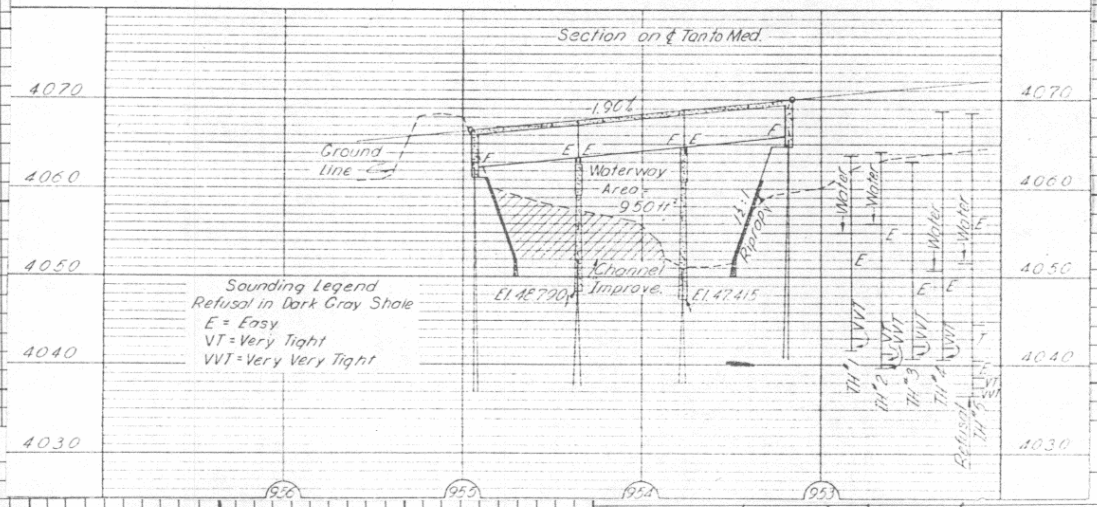
Clear Span	No.
58'-0"	1

RIGID FRAME

ARCHES:- Ma

Clear Span	No.





DOD

LAT. 37°59.0'

LONG. 103°32.8'

Rd. Sect. 116

Br. Letter F

Handrails joints not welded. B.S. '64
Handrail end P's bent at exp'n device on North side. - B.S. 1964
H.R. is out of alignment @ W. pier. Vert crack in cap W pier. Rockers tipped on piers. Both piers have vert cracks in ctr. thru caps & wall East, crack measures ⅛" wide. Rip rap slopes. '68' Paint ok. Appr fills fair '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3850 Urban

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-77-X	F001-5(12)	OTERO	50	B 380.56	F.A.	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 12-56

Checked Date

Location Sec. 6 Township 24 S Range 54 W Photo. Neg. No.

Bridge over OTERO CANAL Station 848+36° to 849+05° No. and Type of Spans 3-CSG Total length 69'-0"

Rating H-20 S16 Member Rating Unit Stress fc 1200 fs 20000 Design Live Load H-20 S16-44 Required Live Load H20-S16 Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	TANGENT	500' V.C.		Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"				Minimum	Forward approach pavement and Rdwy
BEARING	S 66°06' W	P.I. 849+00		Sidewalks	2@2'-0"		

Design by C.D.H. Built by C.D.H. Maintained by C.D.H. 56-4975 Plans F 001-5(4)

Contract No. Contractor DOMENIC LEONE CONST. CO. INC. Fabricator Midwest Steel & Iron Wks. Co. Contract price 175[illegible]

WATERWAY Area of Br. opening 264 sq ft Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4062.99
Low bridge	4060.93
Low water	4045.80
Normal high water	
Maximum high water	

Drainage area (size and character) CANAL

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks This struct. is in the East Bound Lane and is parallel to M-23-B.

Safety guarded [illegible] project [illegible]
completed 5-13-57

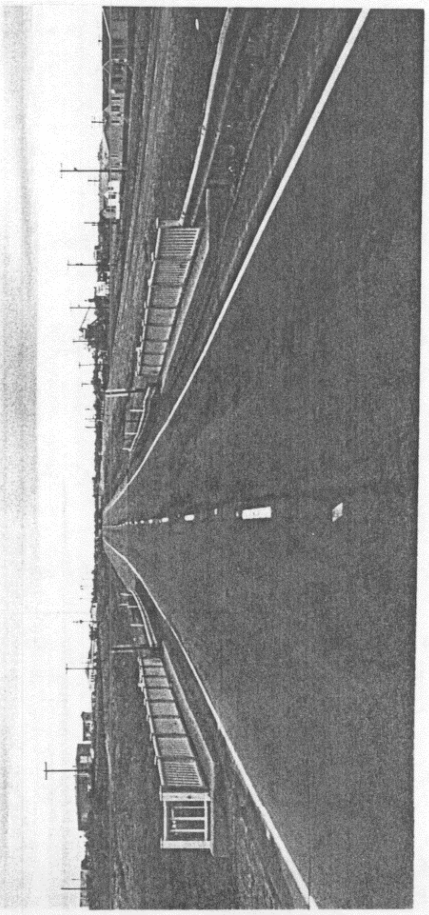
SUBSTRUCTURE

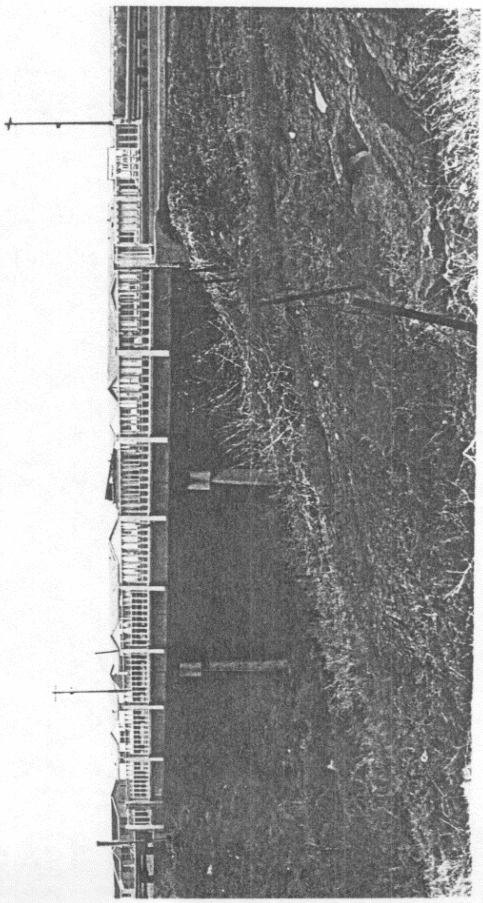
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	1'-6" x 3'-6"	CONC.	4	10 3/4" O.D.	SPP x 26'-0" LONG.			NO WINGS
Forward	"	"	"		"			
Pier	2'-0" x 2'-7 5/8"	CONC. SEMI-GRAVITY ON 6-10 3/4" O.D. SPP x 14'-0" LONG.						
Pier	"							

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-23-J	F 001-5(4)	OTERO	50	B 381.89	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





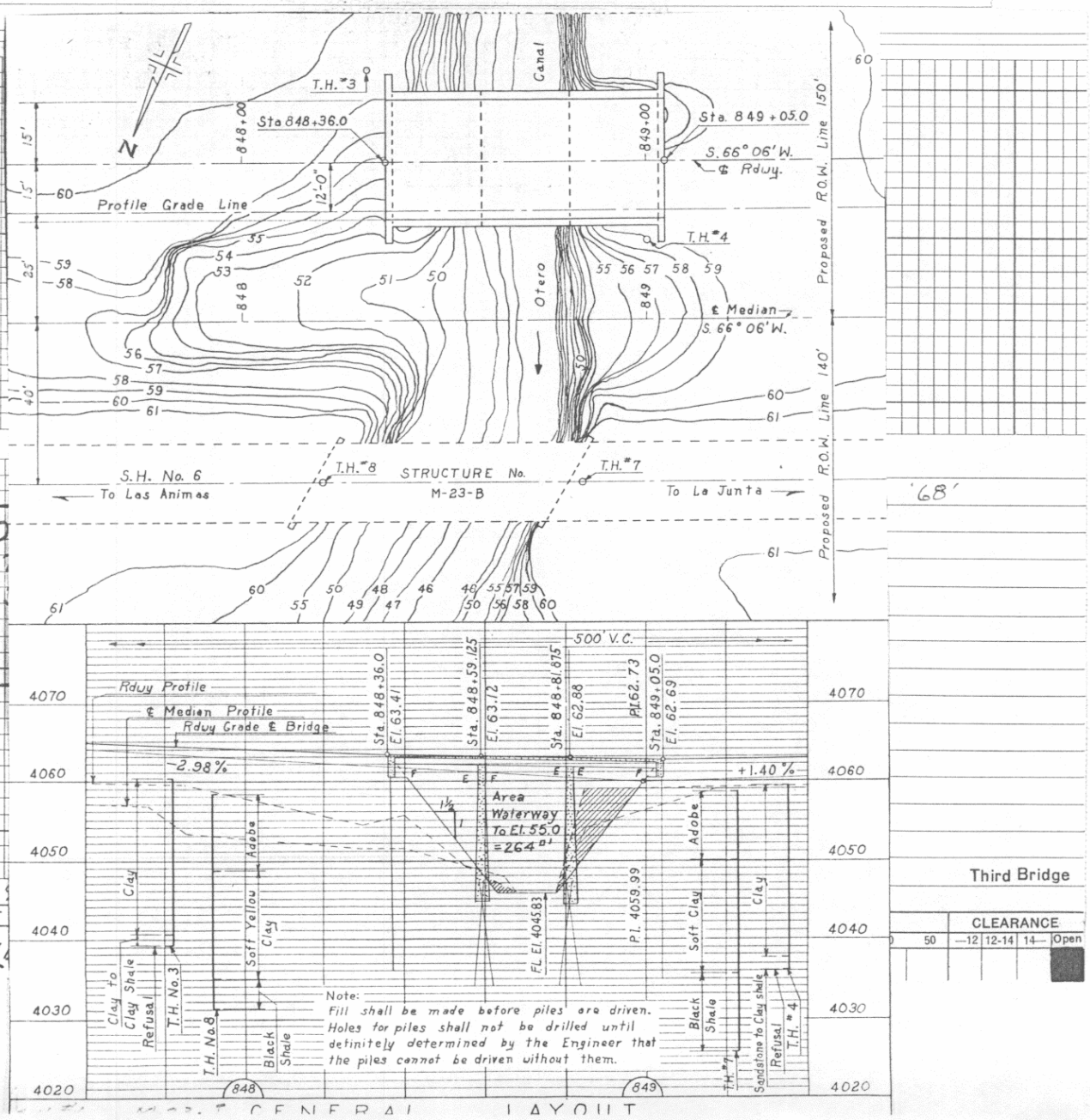
CONCRETE BEAM & SLAB

* Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks * 3 SPANS @ 22'-0" C. to c. OF BEARING.
20'-7½"	4	8'-6"	1'-4" x 1'-10½"	0'-7½"	
20'-9"					
20'-7½"					

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



GENERAL LAYOUT

DOD
LAT. 3
LONG. 10
Rd. Sect.
Br. Letter

'68'

Third Bridge

CLEARANCE
50 | -12 | 12-14 | 14- | Open

Traffic Survey Data 2

STR. NO.	PROJECT
M-23-J	F 001-5(

Location Sec. 6 Township 24S Range 54W Photo. Neg. No. PS 535 Checked Date

Bridge over Wash OTERO CANAL Station 848+22.51 to 848+85.21 No. and Type of Spans 1-CI Total length 62'-8"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '28 Required Live Load H 20 S16 Posted Live Load Year built 1931

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° R Superelevation
Bridge	tan	0.0 to 300' VC	open	Between Curbs	24'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	-1.7 to 0.0 200' VC	"	Between Rail	25'-2"		
Forward approach	tan	0.0 to +3.6 300' VC	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 245 C(1)

Contract No. Contractor A.S. Horner Fabricator Minn.-Moline Pwr. Imp. Co. Contract price 6956.47

WATERWAY Area of Br. opening 520 sq ft 385 sq ft 70 Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4061.20
Low bridge	4057.45
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 2.0 sq Mi Rolling grass land adobe

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 4043.0

Nature of stream bottom

Remarks This struct. is in the West Bound Lane & is parallel to M-23-J

Roll No.

Sheet No.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'-8"x2'-6"	Conc	7	14"	22' CP			
Forward	2'-8"x2'-6"	Conc	7	14"	22' CP			No Wings
Pier								
Pier								Swaybraces
								Backing Plank

Br. Letter H P

First Bridge ✓ Second Bridge Third Bridge

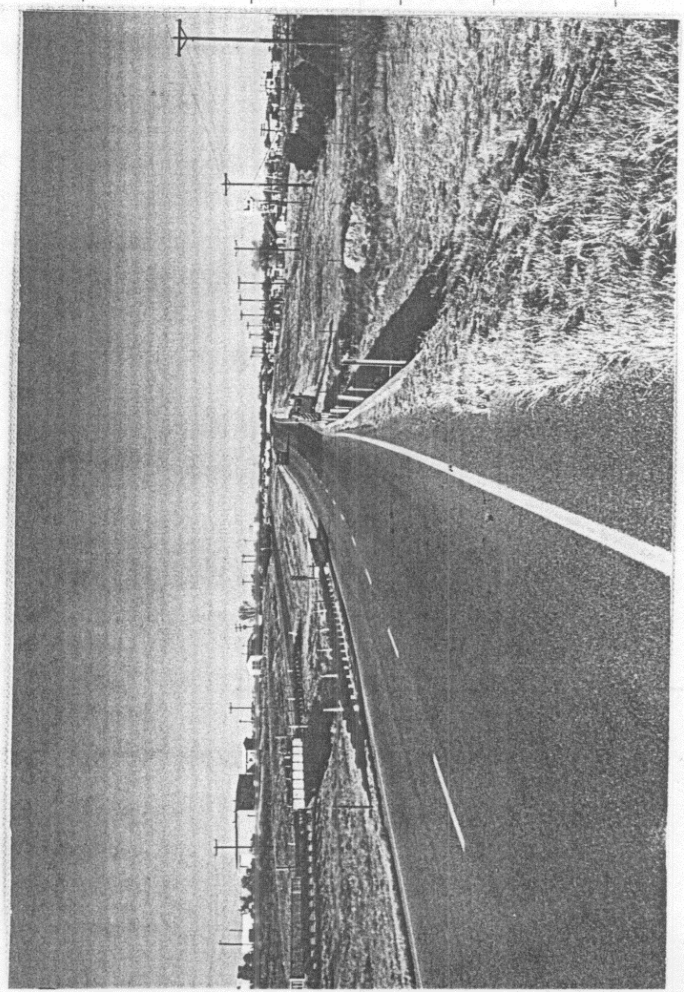
Traffic Survey Data 2900

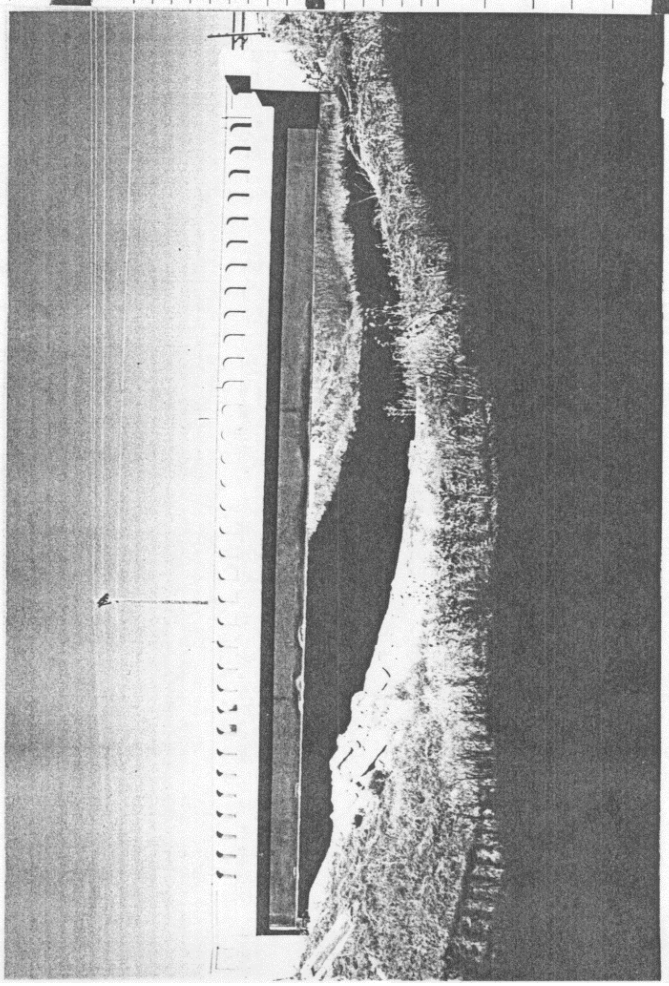
STR. NO.	PROJECT	COUNTY	Highway	LOG		
M-23-B	FAP-245-C1	otero	50	B 381.90	FA	

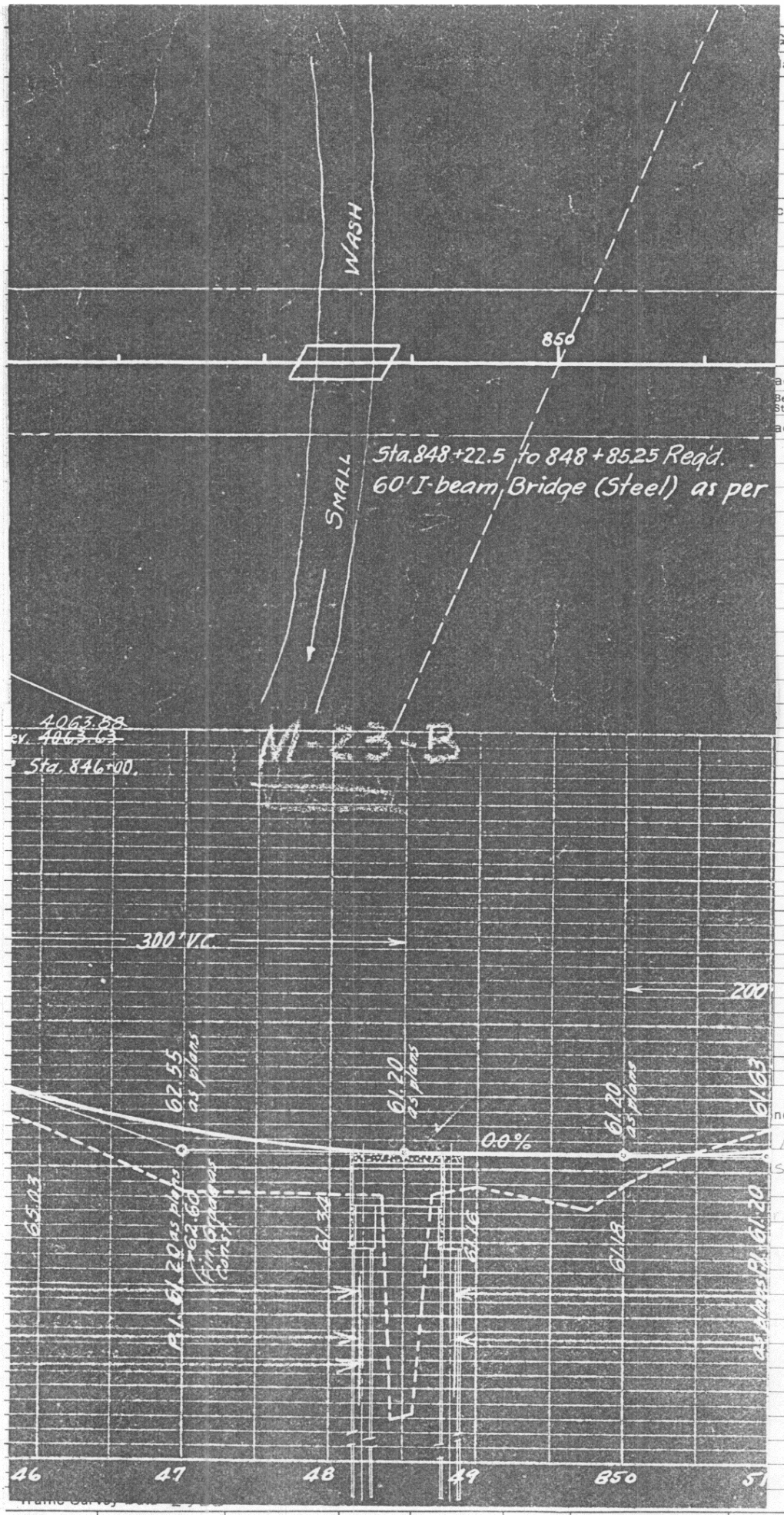
H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open







GERS

Material	Spacing	Allowable Stress
SS	6'-0"	

cap Anchor bolts

acing

Bearing Stiffeners	Interior Stiffeners	C to C bearing

acing

ndition of structure (in pencil)

Appr slabs Shoulder
shing. No slope protection,
critical '68'
is in danger '70

Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-23-B	FAP-245-C1	otero	50	B 381.00	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 12-56

Checked Date

Location Sec. 5 Township 24 S Range 54 W Photo. Neg. No.

Bridge over THOMPSON ARROYO Station 797+03.9 to 797+96.9 No. and Type of Spans 3-CSG Total length 93'-0"

Rating H-20 S16 Member Rating Unit Stress 16,200 / 20,000 Design Live Load H20S16-44 Required Live Load H20S16 Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	TANGENT.	400' V.C.	OPEN	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	"	-2.475% to 400' V.C.		Between Rail			
Forward approach	"	400' V.C.				Minimum	Forward approach pavement and Rdwy
BEARING	S66° 06' W	P.I. 798+00		Sidewalks	2@2'-0"		

Design by C.D.H. Built by C.D.H. Maintained by C.D.H. 56-4975 Plans F 001-5 (4)

Contract No. Contractor DOMENIC LEONE CONST. CO. INC. Fabricator Midwest Steel & Iron Wks. Co. Contract price 22321.20

WATERWAY Area of Br. opening 800 sq ft 932 sq ft '70' Area of Relief opening 10 Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4065.19
Low bridge	4062.46
Low water	4047.50
Normal high water	
Maximum high water	

Drainage area (size and character) ~~979~~ Sq. Mi.

Drift and Ice LIGHT. Dams

Channel width Depth Elevation of Stream bed 4047.50

Nature of stream bottom Eastbound

Remarks THIS STRUCT. IS IN THE SOUTH LANE AND PARALLEL TO M-23-A

Safety guardrail installed, project C09-0050-00
Completed 5-13-71

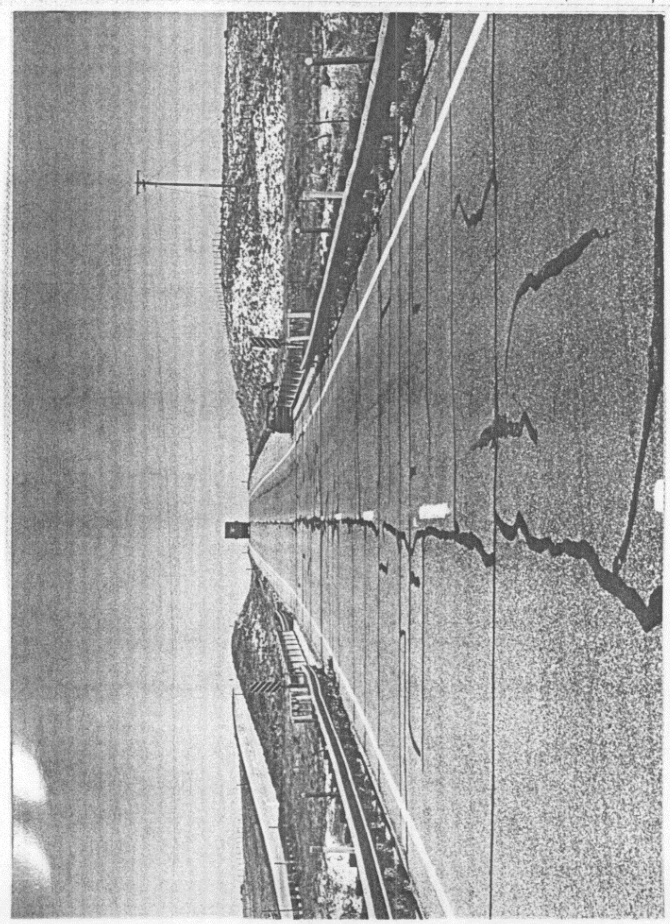
SUBSTRUCTURE

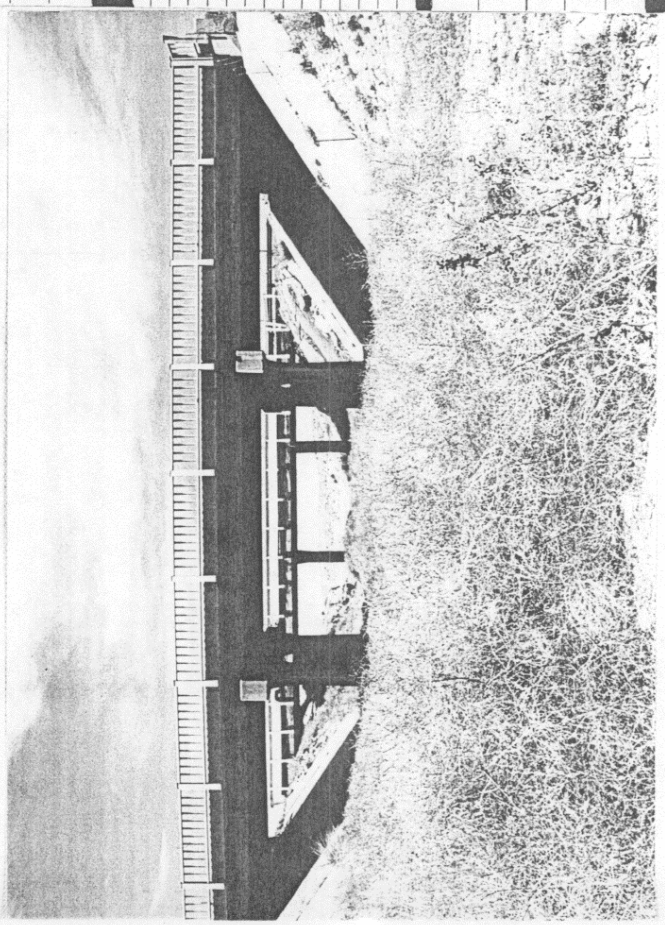
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	1'-6" x 4'-0"	CONC.	4	10¾" O.D. SPP x 25'-0" LONG.				NO WINGS.
Forward	"	"						
Pier	2'-0" x 2'-7"	"		2-COL. C.		27'-2¼"		
Pier	"	"		"		"		

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
M-23-E	F 001-5(4)	OTERO	50	B 382.84	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open



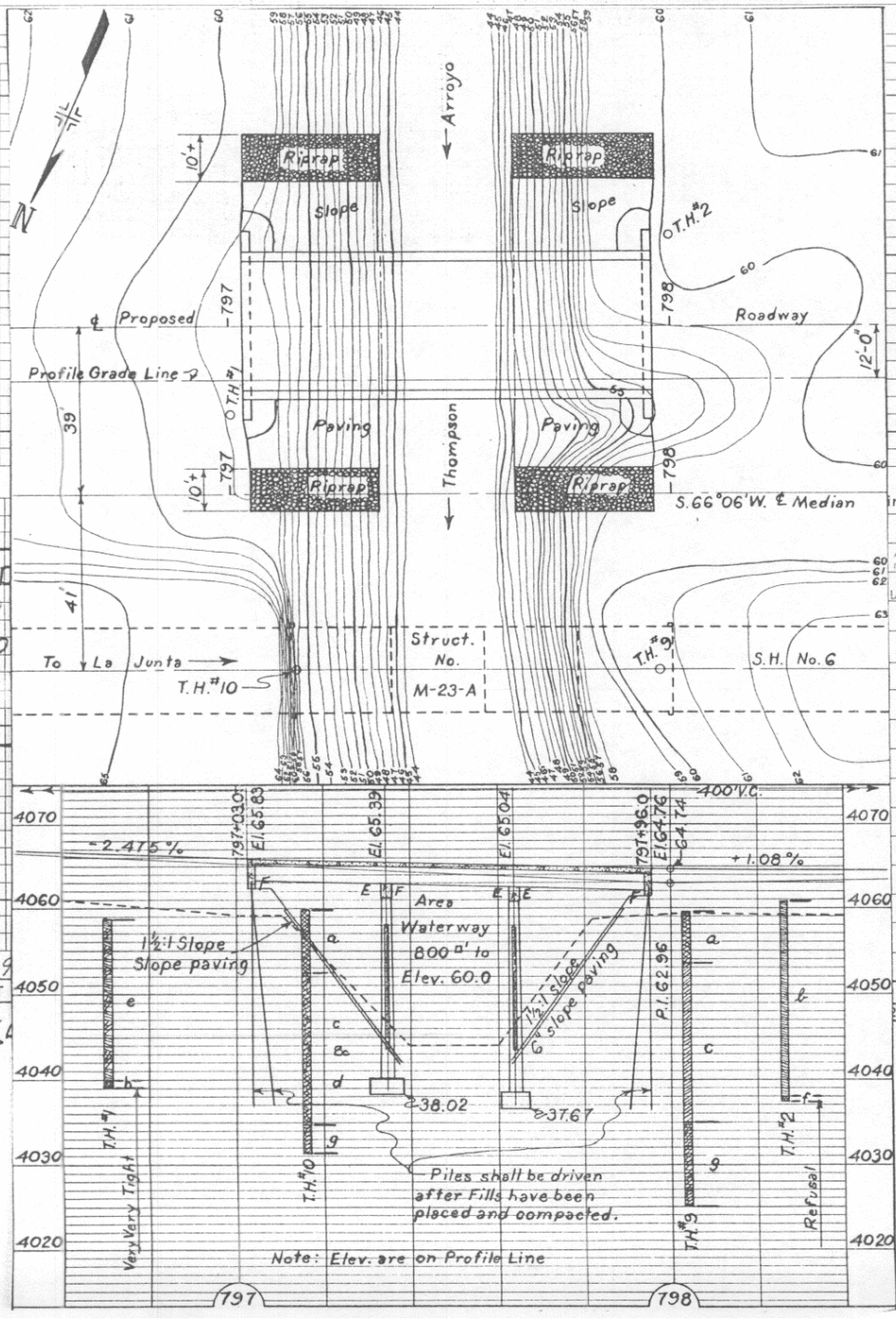


Clear Span	No. of Beams	Spacing	Size (Including Slab)	Slab Thickness	Remarks
28'-7½"	4	8'-6"	1'-4" x 2'-6½"	0'-7½"	20-0 c. to c. of bearings.
28'-9"					
28'-7½"					

RIGID FRAME:- No. of Ribs | Spacing | Clear Span | Slab Thickness

ARCHES:- Material | Rise | Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



DOT

LAT. 3

LONG. 10

Rd. Sect.

Br. Letter

(in pencil)

underneath. Appr
ing. Berms are
ving. '68' '70'

Traffic Survey Data 2

STR. NO.	PROJECT
M-23-E	F001-5(4

Third Bridge

CLEARANCE

27-30 | 40 | 50 | —12 | 12-14 | 14— | Open

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made 11 - 2-42

Location Sec. 5 Township 24S Range 54W Photo. Neg. No. PS 536 Checked Date

Bridge over Wash Thompson Arroyo Station 797+13.5 to 798+06.5 No. and Type of Spans 4 - TD Total length 93'-0"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '28 Required Live Load H 20 S16 -30 Posted Live Load Year built 1931

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	-0.94%	Open	Between Curbs	24'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	-4.8 to -0.94 300' VC	"	Between Rail			
Forward approach	tan	-0.94 to +0.4 200' VC	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 245 C(1)

Contract No. Contractor A.S. Horner Fabricator Nat'l. Lbr. & Creo. Co. Contract price 3979.72

WATERWAY Area of Br. opening 700 ± See M-23-E Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4064.20
Low bridge	4061.95
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 9.79 ± Mi Rolling grass land, adobe

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 4047.5

Nature of stream bottom

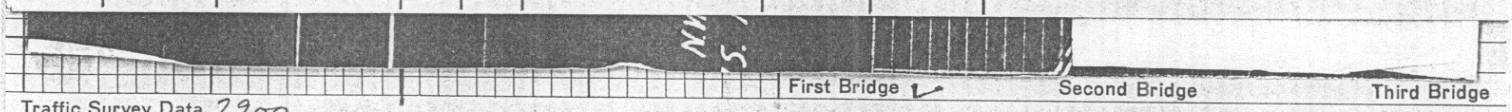
Remarks This struct. is parallel to M-23-E, 6" O.S. Slab H16 @ fs = 18024. PSI Good for H18.2 fs = 1800 @ ¼ Points of Rdwy

Roll No.

Sheet No.

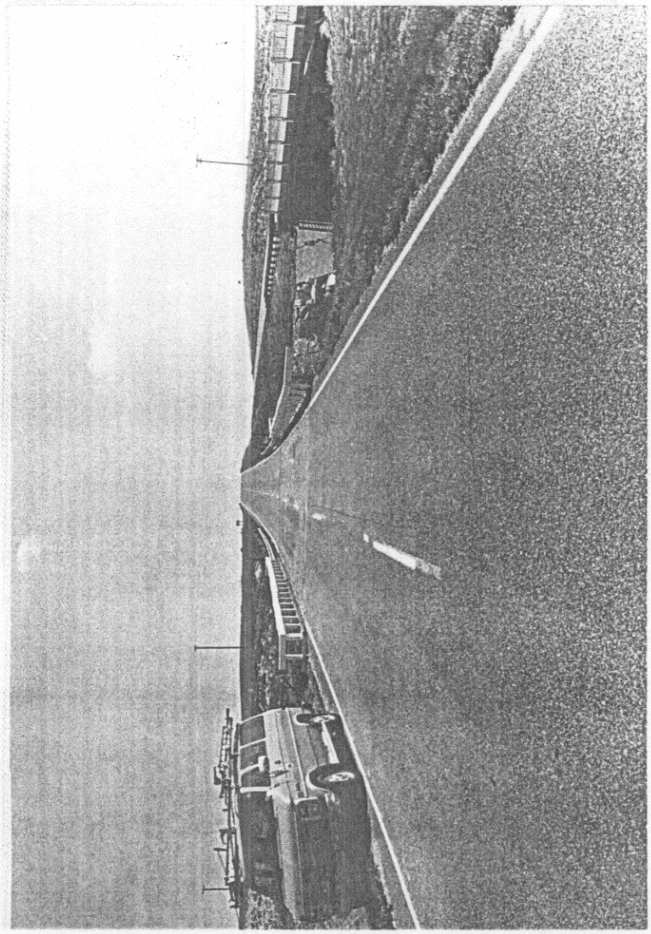
SUBSTRUCTURE

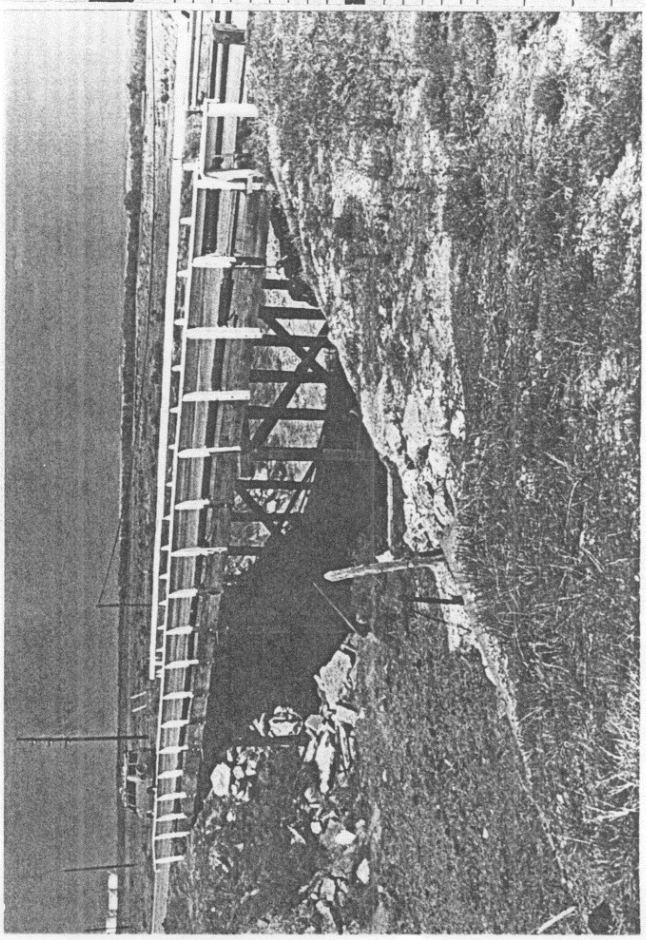
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x 12"	TC	6	12"	28' TP			No Wings
Forward	12"x 12"	TC	6	12"	28' TP			
Pier	12"x 12	TC	6	12"	28' TP			
Pier								Swaybraces 3"x 12" T
								Backing Plank —



Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
M-23-A	FAP-245-C1	Otero	50	B 382.85	FA	—10 10 12½ 15 20 18	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open



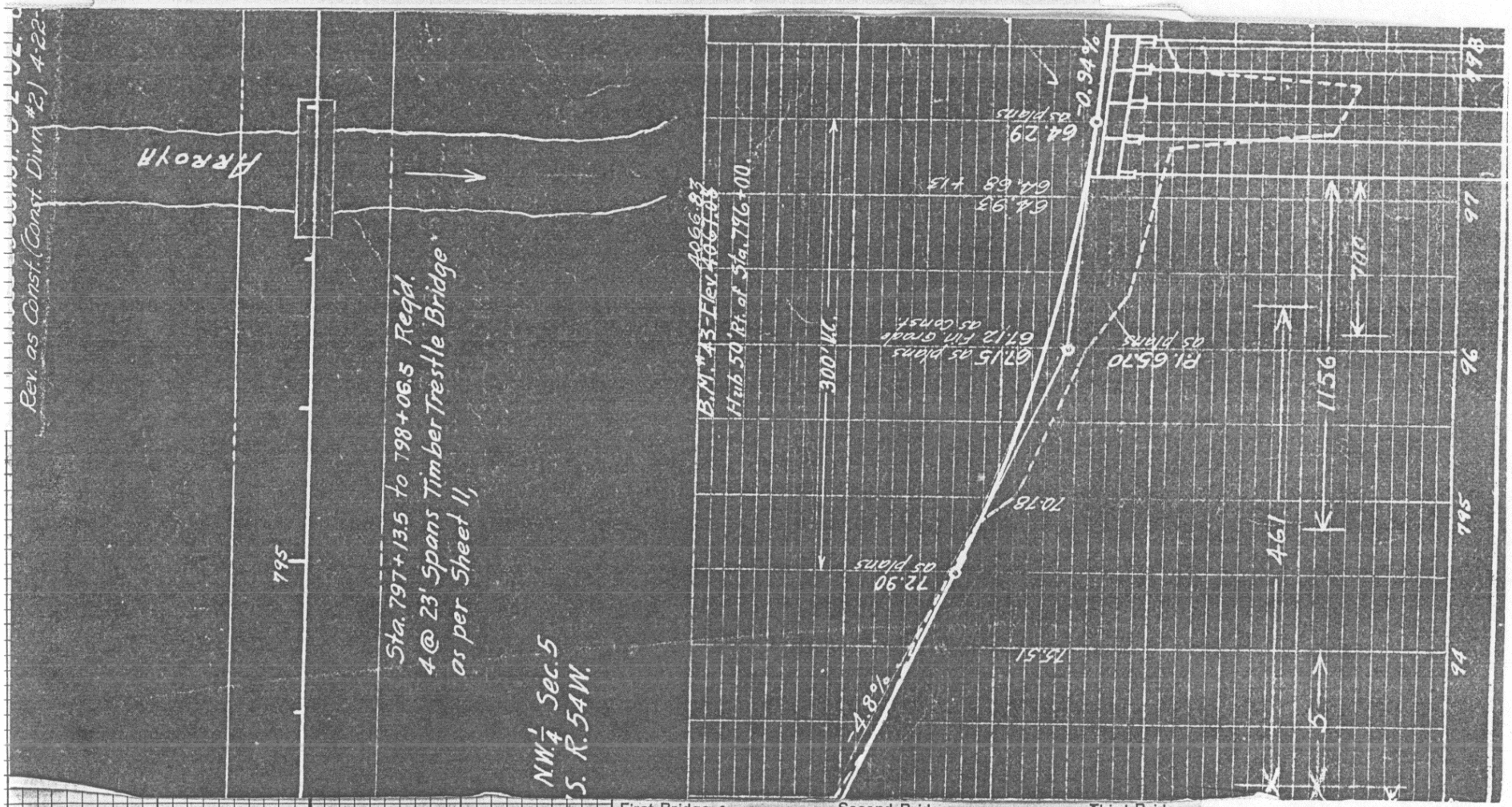


UU			LL			LU			LU			Swaybrace
UU			LL			LU			LU			
UU			LL			LU			LU			C to C Chords

Truss bearing — Bolts — Pins

Connectors

Remarks



First Bridge — Second Bridge — Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG			H - LOADING - RATED					ROADWAY						CLEARANCE			
							—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
M-23-A	FAP-245-C1	Otero	50	B 382.85		FA					18										

Bridge Dept.

Location Sec. 27 Township 23 S Range 54 W Photo. Neg. No. Checked Date

Bridge over WASH (Vandiver Arroyo) Station 659+58.0 To 661+15.44 No. and Type of Spans 3-CSG Total length 157'-5¼"

Rating H-20S16 Member Rating Unit Stress fc 1200 fs 20000 Design Live Load H-20S16-44 Required Live Load H20S16 Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30° Rt.	Superelevation
Bridge	TANGENT	+0.10% To 600' V.C.	OPEN	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	✓	+0.10%		Between Rail				
Forward approach	✓	600' V.C.				Minimum	Forward approach pavement and Rdwy	
BEARING	S 29°56' W	P.I 663+50		Sidewalks	2@2'-0"			

Design by C.D.H. Built by C.D.H. Maintained by C.D.H. 56-4975 Plans F001-5(4)

Contract No. Contractor DOMENIC LEONE CONST. CO. Fabricator Midwest Steel & Iron Wks. Co. Contract price 60331.15

WATERWAY Area of Br. opening 1100 □' Sec L-23-I Area of Relief opening NONE Skew of flow (Normal) Flood

	Elevation		
Grade center of bridge	4039.91	Drainage area (size and character)	14 SQUARE MILES.
Low bridge	4035.85	Drift and Ice	Dams 4020?
Low water		Channel width Depth	Elevation of Stream bed 4120.00
Normal high water		Nature of stream bottom	
Maximum high water		Remarks	

THIS STRUCTURE IS IN THE EAST LANE AND PARALLEL TO L-23-I

Safety guardrail installed project C09-0050-00
Completed 5-13-71

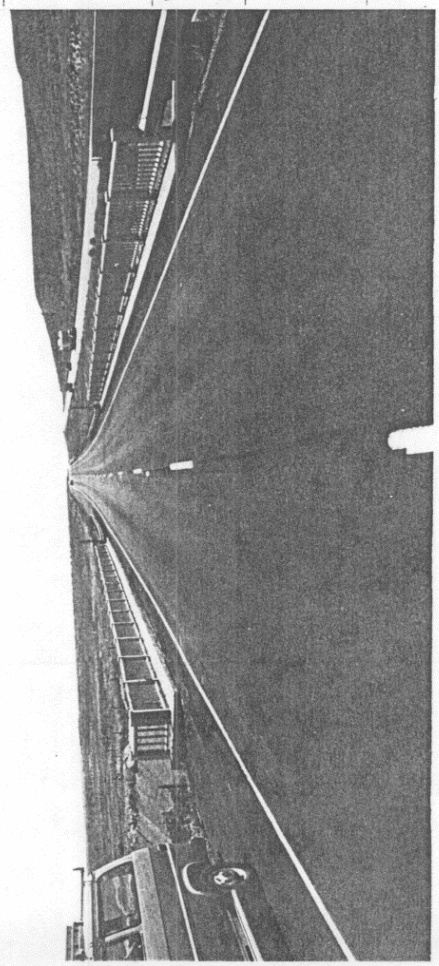
SUBSTRUCTURE

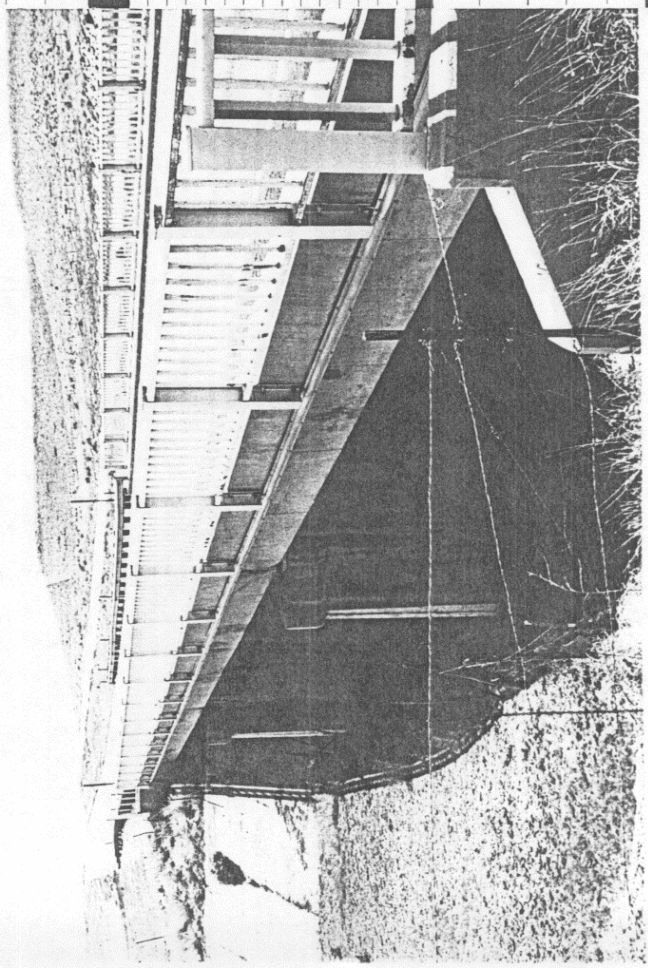
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'-0"x4'-9 13/16"	CONC	6	10¾" O.D.	x 36'-0" LONG			NO WINGS.
Forward	2'-0"x4'-10¼"	✓		✓	x 34'-0" ✓			
Pier			CONC. SEMI-GRAVITY ON					
Pier				7-10¾" O.D. x 22'-0" SPP				

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED (—10, 10, 12½, 15, 20)	ROADWAY (15-18, 19-22, 23-26, 27-30, 40, 50)	CLEARANCE (—12, 12-14, 14—, Open)
L-23-S	F001-5(4)	OTERO	50	B 385.44	FA			



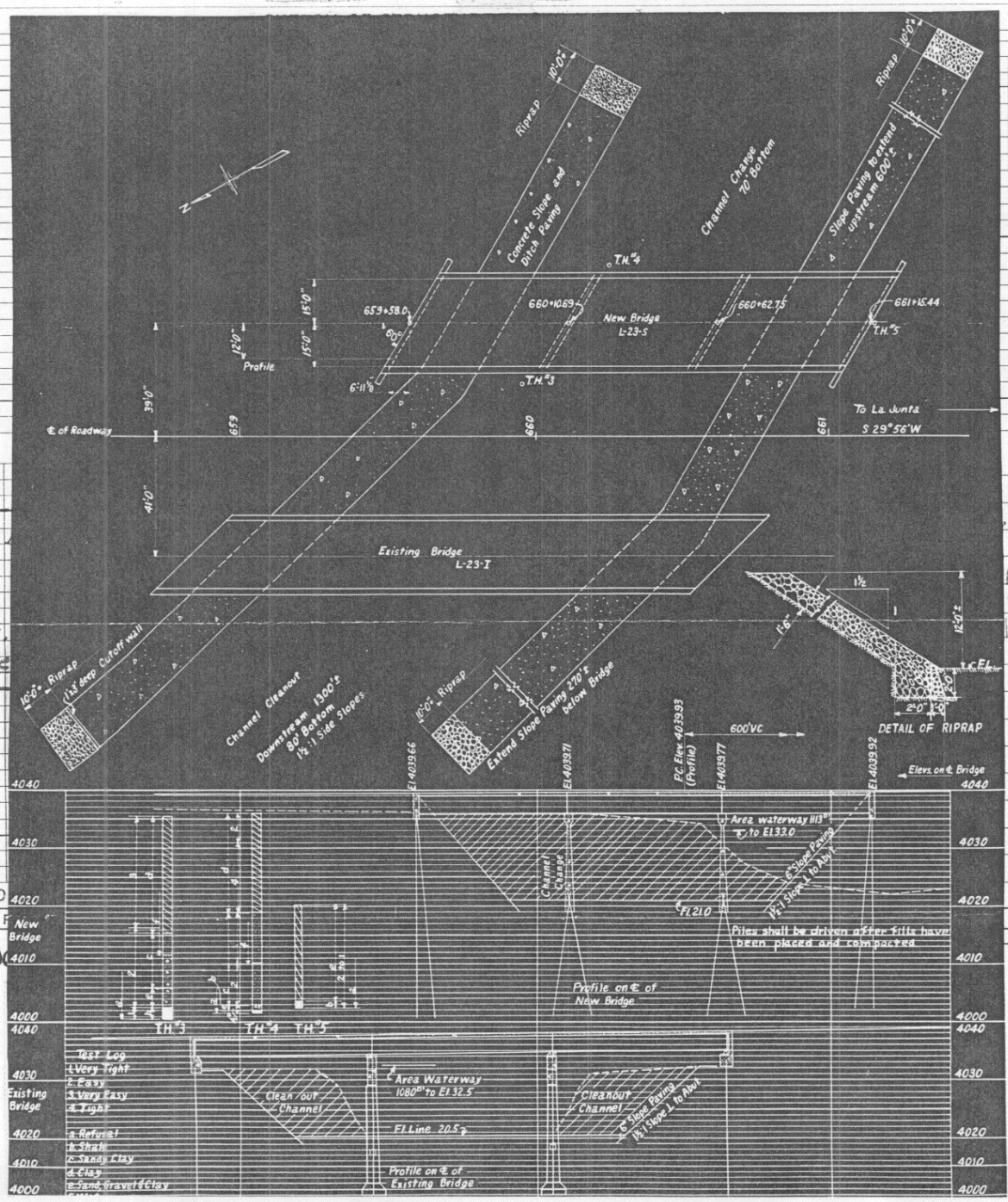


Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
49'-8"	4	9'-5"	1'-8" x 3'-10"	0'-7½"	
50'-4"					
49'-8"					

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	



LAT.
LONG.
Rd. Sect.
Br. Letter

Traffic Survey D

Third Bridge

STR. NO.	F	CLEARANCE			
		—12	12-14	14—	Open
L-23-S	FO				

CONCRETE and STONE MASONRY BRIDGES

Made

Checked

Date

Location Sec. 27 Township 23 S Range 54 W Photo. Neg. No.

Bridge over VanDiver Arroyo Station 136+23.78 to 137+92.78 No. and Type of Spans 2 - CPG Total length 169'-0"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 1957

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 42°	Superelevation 02%
Bridge				Between Curbs	38'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach				Between Rail				
Forward approach				Out to Out	40'-6"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by CDOT S. Burgen Built by Maintained by Plans BRF 050-4(16)

Contract No. Contractor Fabricator Contract price

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation	Drainage area (size and character)
Grade center of bridge		
Low bridge		Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed
Normal high water		Nature of stream bottom
Maximum high water		Remarks Item 113 = 5

Replaces L-23-I

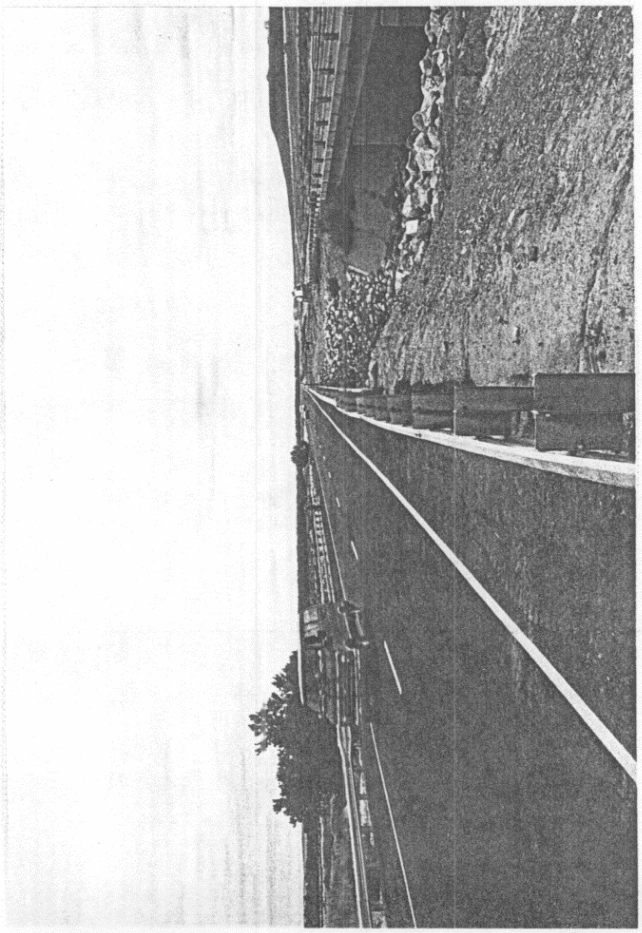
SUBSTRUCTURE

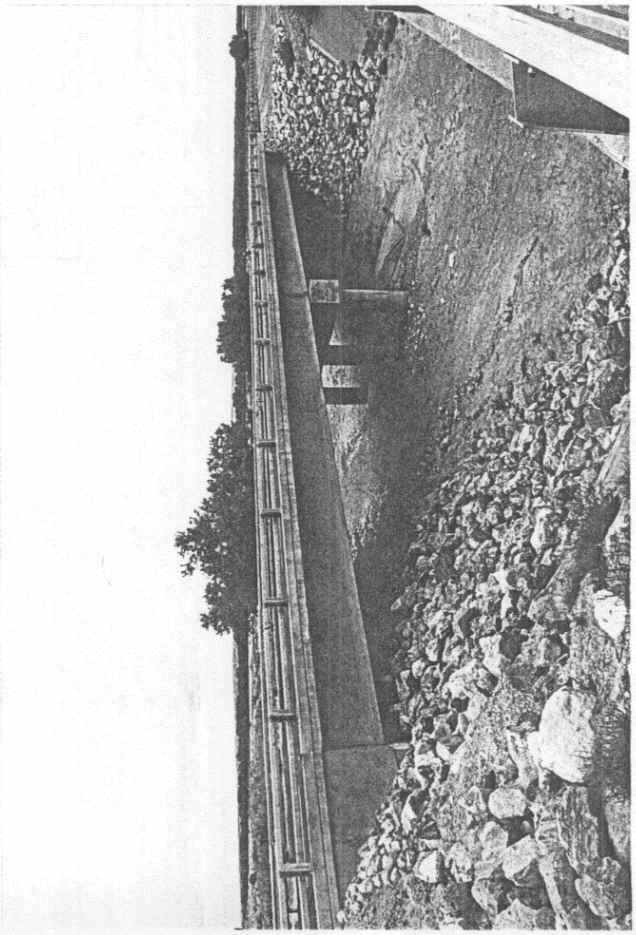
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-23-J	BRF 050-4(16)	OTERO	50	385.44	B															





SUPERSTRUCTURE

Curbs — **Hand rail**

Wearing Surface

CONCRETE SLAB - Clear Span — **Thickness**

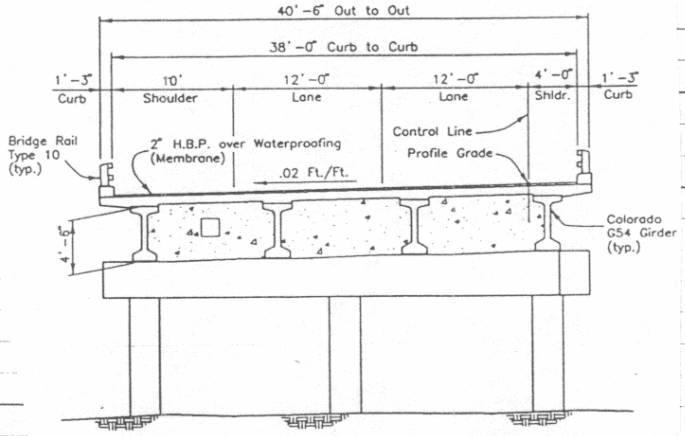
CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

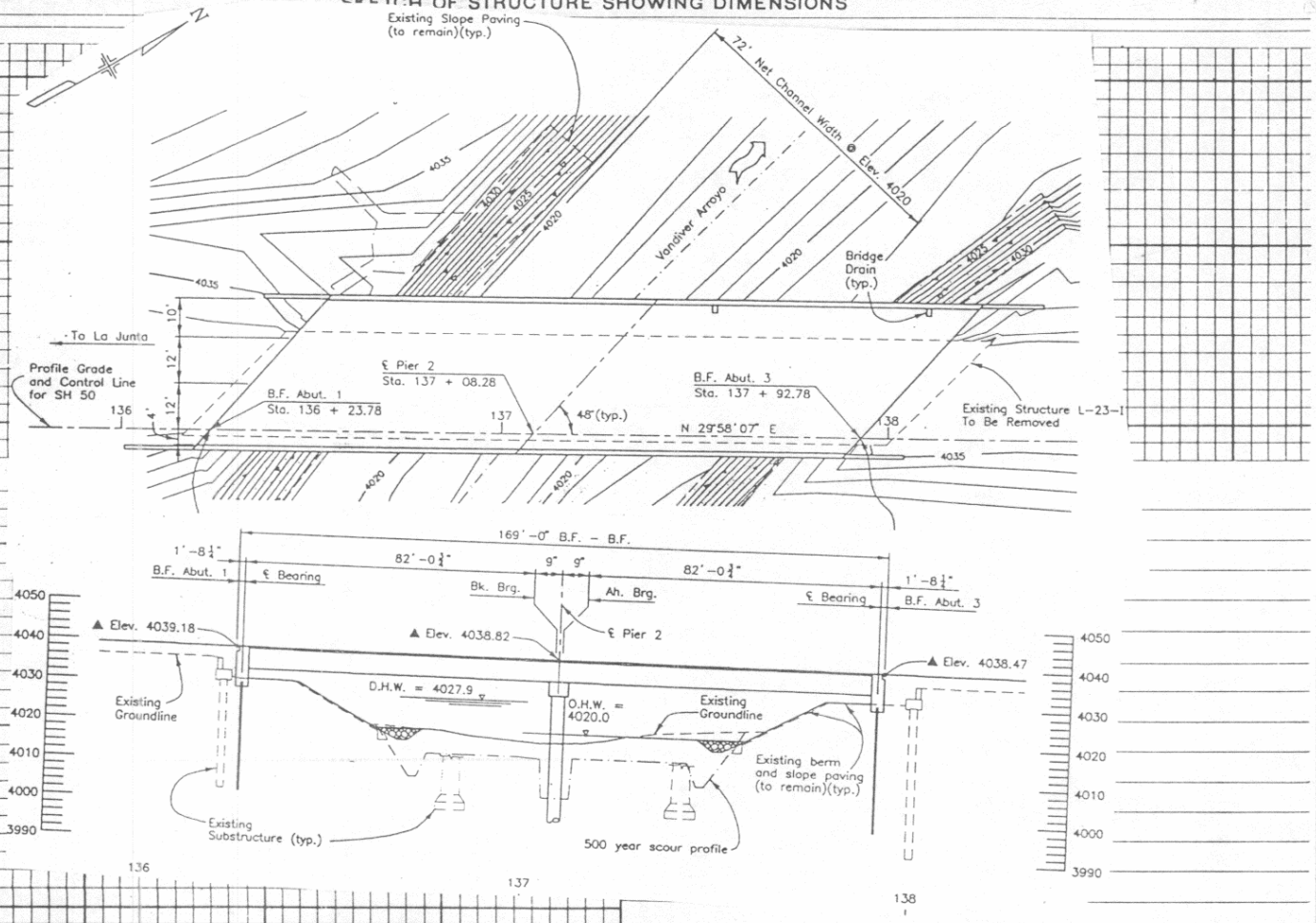
RIGID FRAME:- No. of Ribs — **Spacing**

ARCHES:- Material — **Rise**

Clear Span	Ribs			Thickness		
	No.	Spacing	Width	Crown	Spring	Deck S



SKETCH OF STRUCTURE SHOWING DIMENSIONS



First Bridge — Second Bridge — Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
1-72-T	BRF 050-4(14)	MESA	50	307 44	B															

Location Sec. 24 Township 23S Range 54 W Photo. Neg. No. Checked Date

Bridge over Draw Station 526+17 to 525+83 No. and Type of Spans 3 - CBC Total length 34'-0"

Rating H20-S16 Member Rating Unit Stress Design Live Load H20-S16 Required Live Load H20-S16 Posted Live Load Year built 61

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0	Superelevation
Bridge	Tangent	Tan. to VC		Between Curbs	44'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	do	Tan.		Between Rail				
Forward approach	do	200' VC				Minimum	Forward approach pavement and Rdwy	
Bearing	N68-40E	PI 526+00		Sidewalks	None			

Design by CDH Built by CDH Maintained by CDH Plans F 001-5(14)

Contract No. Contractor Pioneer Const. Co. Fabricator Contract price $45,605.77

WATERWAY Area of Br. opening 130 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	4004.80
Low bridge	4004.70
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 4½ Sq. mi

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3998.70

Nature of stream bottom

Remarks

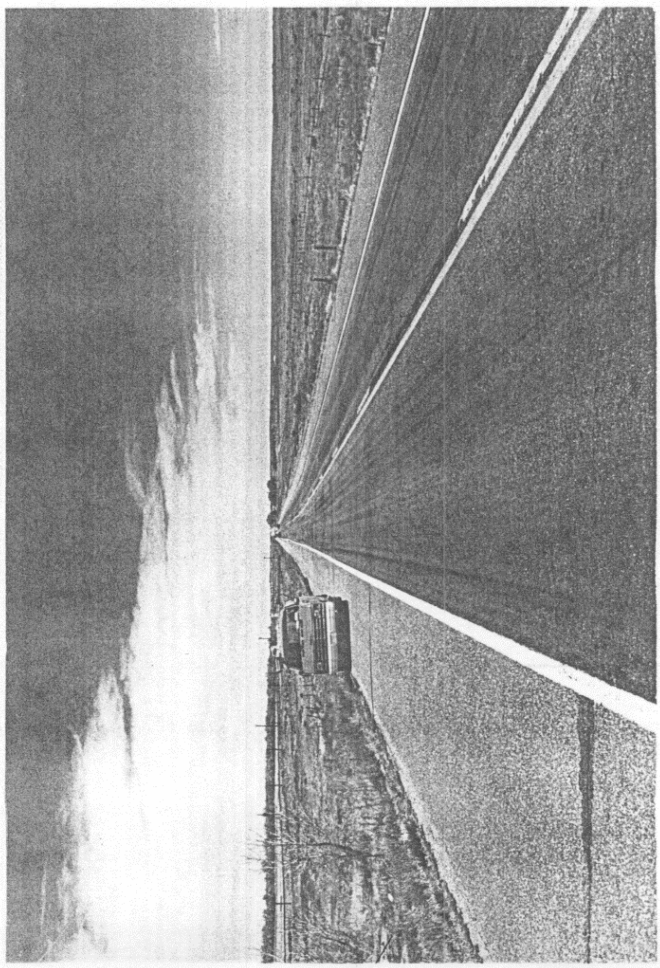
SUBSTRUCTURE

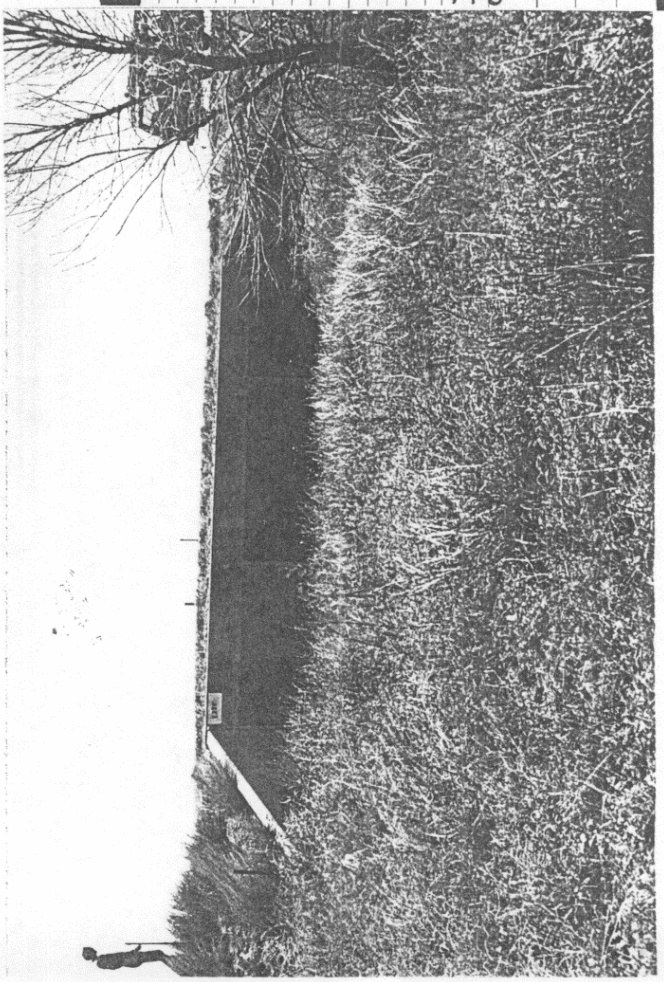
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear		3	(9-12-9)		X 6' X 58' CBC			4 @ 45 12'-6" Long
Forward				Type 9 A				
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
L-23-K	F 001-5(14)	OTERO	50	B 388.01	FA		44'0"	





Curbs

Wearing Surface

CONCRETE SLAB - Clear Span 91-12'-9"

CONCRETE BEAM & SLAB

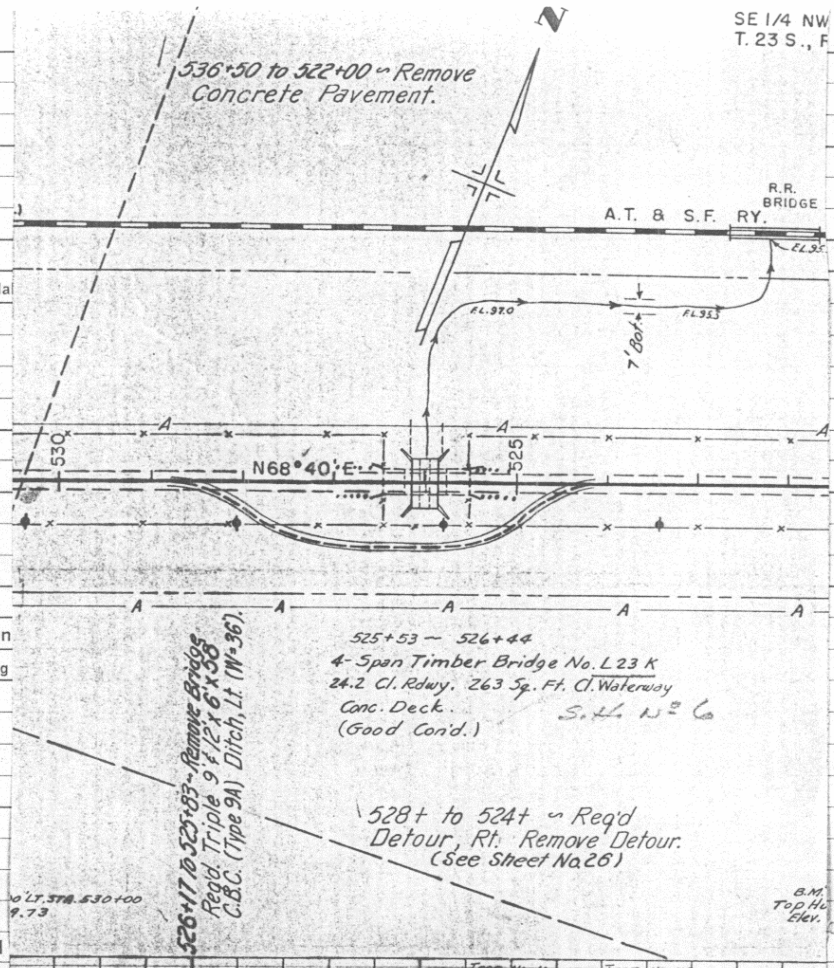
Clear Span	No. of Beams	Spacing	Size (including Slab)	Sla

RIGID FRAME:- No. of Ribs Spacing

ARCHES:- Material

Clear Span	Ribs			— Thickn	
	No.	Spacing	Width	Crown	Spring

SKETCH



LOCATION SKETCH

DOD

LAT. 38° 01.9'

LONG. 103° 23.6'

Rd. Sect. 116

Br. Letter K

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-23-K	F 001-5(14)	OTERO	50	B 388.01	FA					■					44'-0"					■

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.E.J. 9-58 Checked Date

Location Sec. 10 Township 23 S Range 53 W Photo. Neg. No.

Bridge over Las Animas Consolidated Canal Station 202+95.0 No. and Type of Spans 1-CBC Total length 24'-4 7/8"

Rating H20 S16 Member Rating Unit Stress f_s 16200 f_c 820000 Design Live Load H20-S16-44 Required Live Load H-20 S16-44 Posted Live Load Year built '58

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 55° Lt.	Superelevation
Bridge	Tangent	-0.68%		Between Curbs		Maximum	Rear approach pavement and Rdwy	
Rear approach	✓	✓		Between Rail				
Forward approach	✓	✓		Rdwy.	44'-0"	Minimum	Forward approach pavement and Rdwy	
Bearing N74°20' E				Sidewalks				

Design by CDH. Built by CDH. Maintained by CDH. Plans F001-5(9)

Contract No. Contractor Pioneer Const. Co. Fabricator Contract price $16870.15

WATERWAY Area of Br. opening 72 sq ft 51 sq ft 70' Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3957.36
Low bridge	3954.60
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) Canal

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3948.56

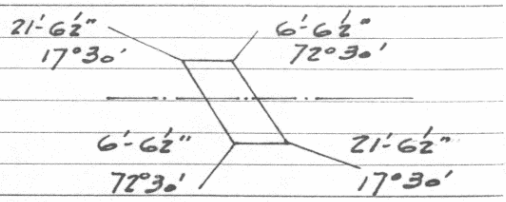
Nature of stream bottom

Remarks

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material
Rear		1-12' x 6' x 30' CBC.					
Forward							
Pier							
Pier							

Wing (Lengths, angles, etc.)

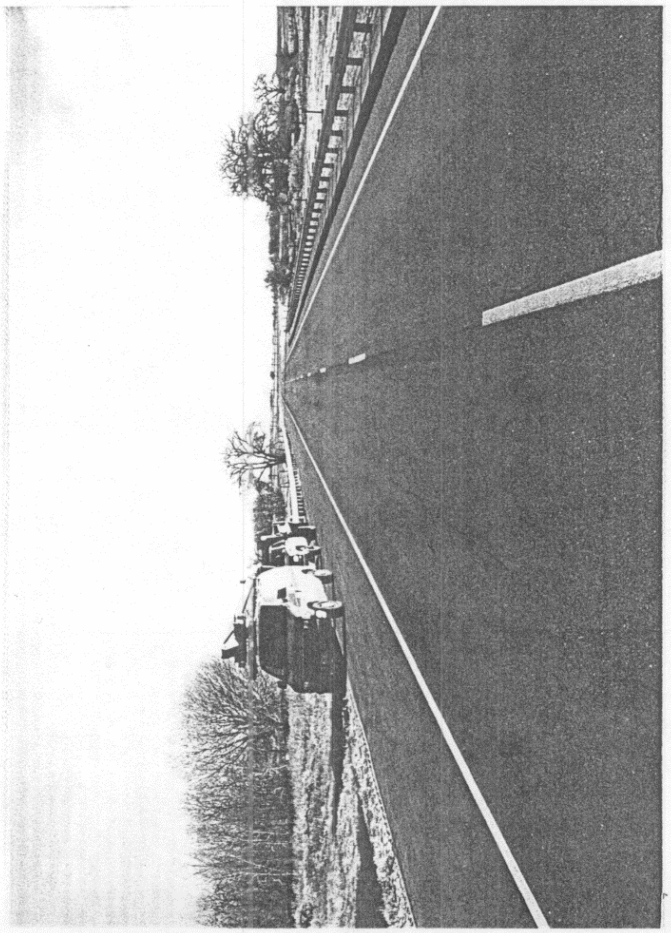


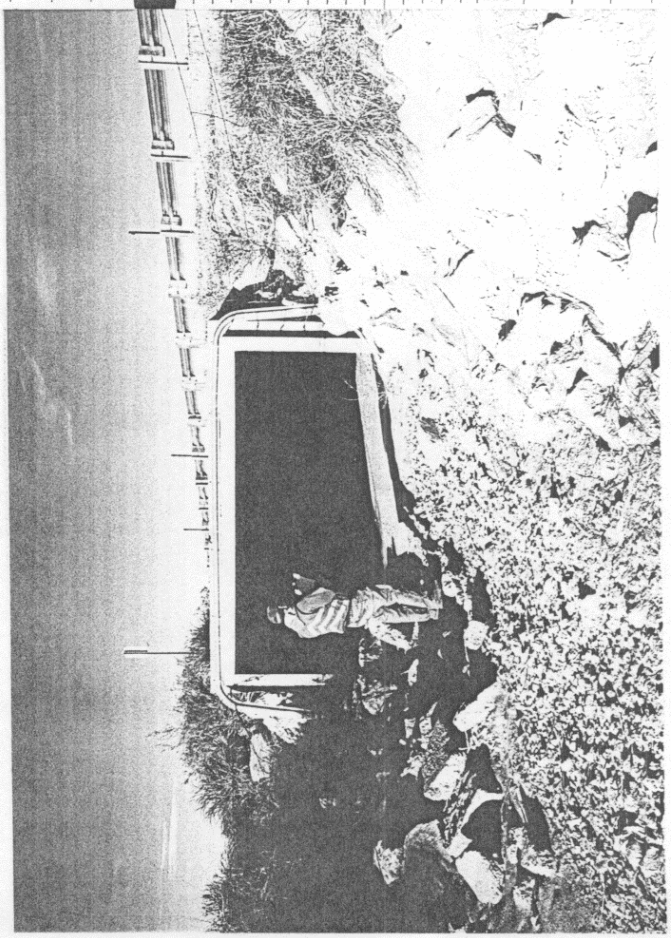
Br. Letter L

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-23-C	F001-5(9)	BENT	50	B 392.55	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							44'	





Curbs

Wearing Surface Earth Fi

CONCRETE SLAB - Clear Span 12

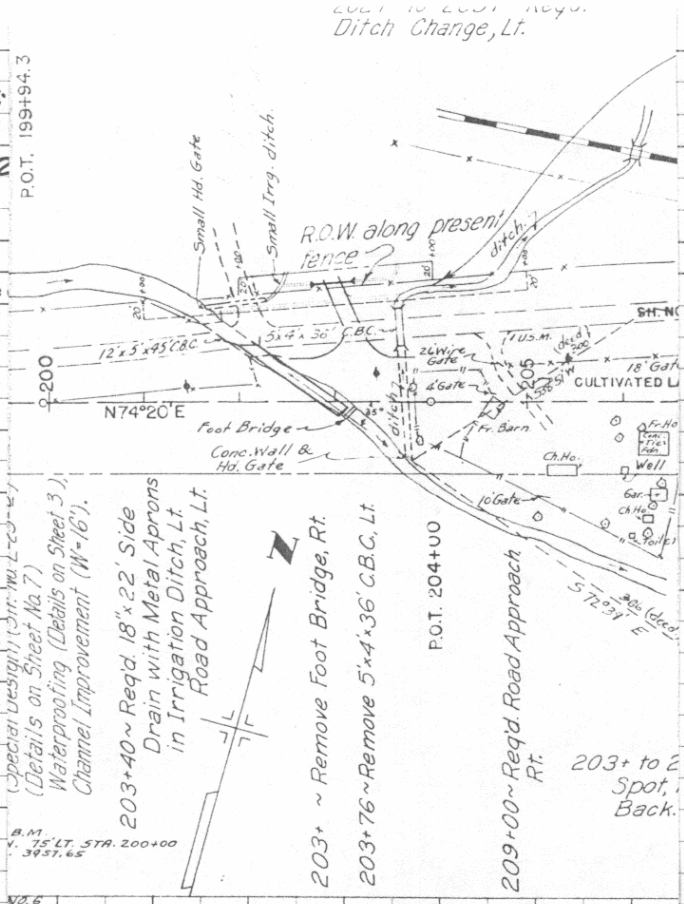
CONCRETE BEAM & SLAB

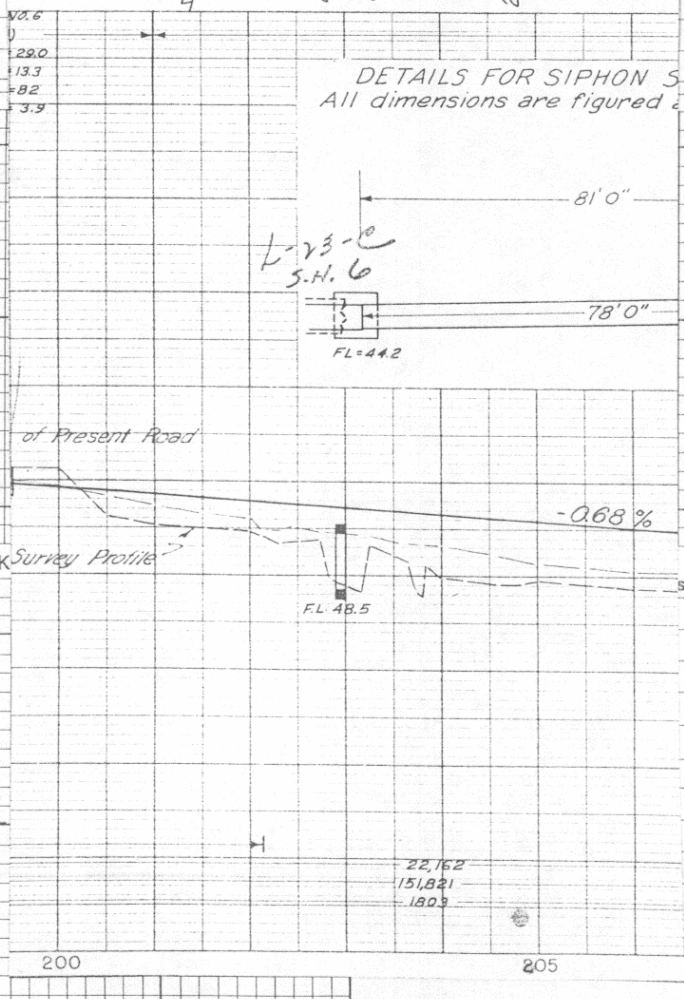
Clear Span	No. of Beams	Spacing	Size

RIGID FRAME:- No. of Ribs

ARCHES:- Material

Clear Span	Ribs		
	No.	Spacing	Width





LOCATION SK

structure (in pencil)

DOD

LAT. 38°03.3'

LONG. 103°19.8'

Rd. Sect. 116

Br. Letter L

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 2900

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-23-C	F001-5(9)	BENT	50	B 392.55	FA										44'					

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made S. C. H.

Location Sec. 3 Township 23S Range 52W Photo. Neg. No. Checked Date June '73

Bridge over Arkansas River Station * No. and Type of Spans 8-CPG Total length 833'-6"

#Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 74

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0	Superelevation
Bridge	Tan	-.1821%		Between Curbs	42'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	"	"		Between Rail				
Forward approach	"	"		0 to 0	44'-6"	Minimum	Forward approach pavement and Rdwy	
Bearing S11-05E				Sidewalks				

Design by Meheen Eng. Built by DOH Maintained by DOH Plans F050-5(5)

Contract No. Contractor Ramsour Bros. Inc. Fabricator Prestressed Conc. Do263 Contract price $611,434.22

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3911.12
Low bridge	
Low water	
Normal high water	3900.0'
Maximum high water	

Drainage area (size and character) 14,000Sq.Mi. #Int. Alt.

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom *Sta. 299+2.384 to 307+35.883

Remarks This str. in W. bnd. lane, parallel to L-24-A

E

SUBSTRUCTURE

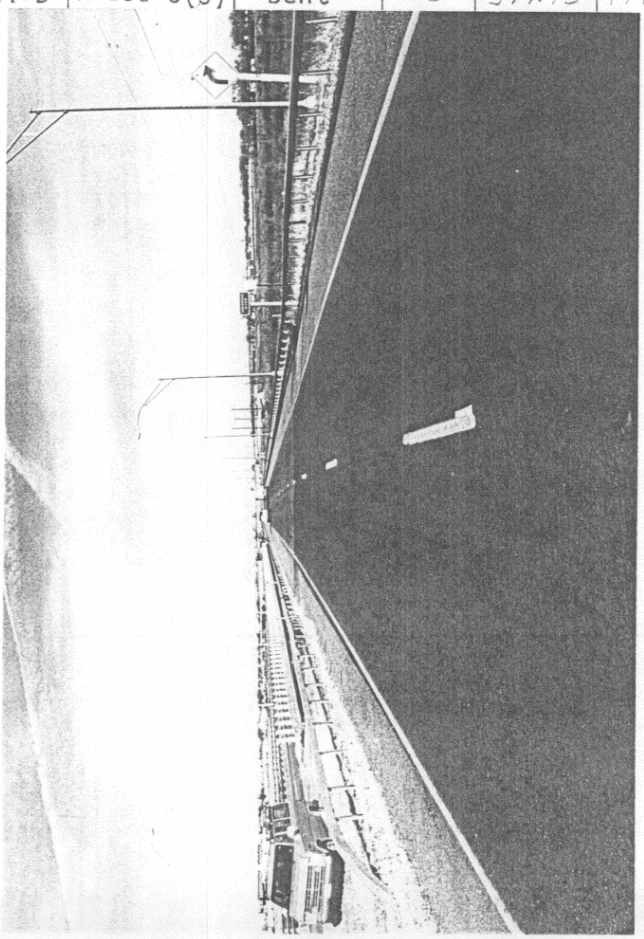
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	3'-6"x3'	Conc	9	12"	HP@53#x22'			4-19'-1" parallel to C. L. Rdwy. on HP10"x42#
Forward	"	"	"	"	"			
Pier			5	cal	conc on spd. ftg.			
Pier								

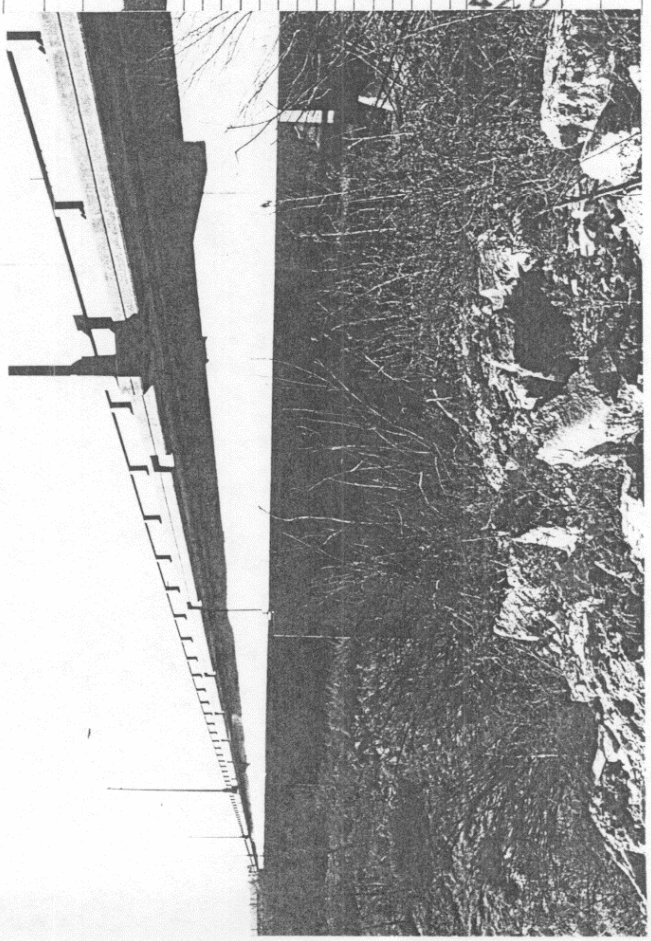
First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
L-24-D	F 050-5(5)	Bent	50	B 399.93	FAP	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

42'0"





SUPERSTRUCTURE

Curbs 2-1'-3"x8"

Wearing Surface

Hand rail 1-8"x6"x1/4" tube rail on 5"x5"x1/2" tube post 2'-3"high galv. mounted thru curb (br rail type 5)

CONCRETE SLAB - Clear Span 1 1/2" HBP over waterproof membrane

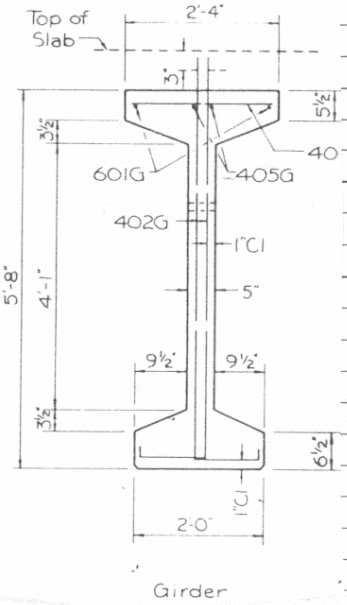
Thickness Per F 050-5(6) gd rail(type 5) connected by Herren Strong Inc

ctos

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness
85'-0"	5	9'-3"	24"x68"	7 1/4"
6@110'-0"	"	"	"	"
85'-0"	"	"	"	"

Remarks Colorado S-68 Gdr.



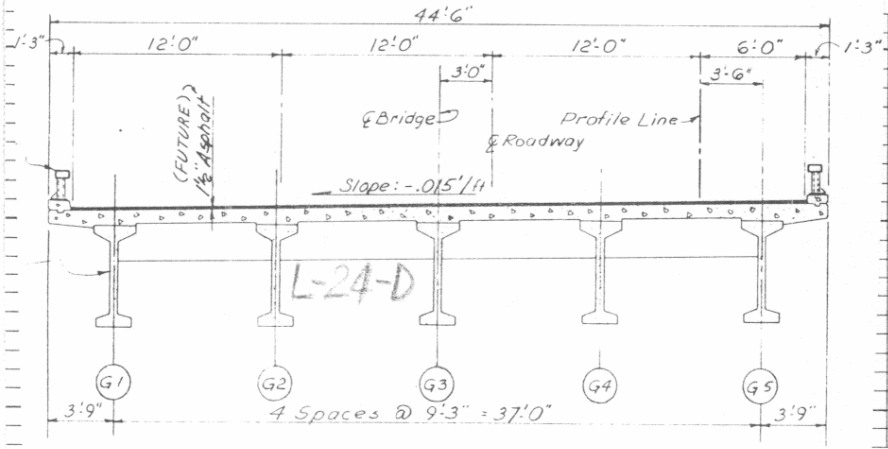
Girder

RIGID FRAME:- No. of Ribs Spacing Clear S

ARCHES:- Material Rise

Clear Span	Ribs			Thickness			Re
	No.	Spacing	Width	Crown	Spring	Deck Slab	

SKETCH OF STRUCTURE SHOWING DIMENSIONS



TYPICAL SECTION (LOOKING SOUTH)
Orig. Scale 1"=5'0"

S:-General condition of structure (in pencil)

LAT 38-04.8
LONG 103-12.9

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
L-24-D	F 050-5(5)	Bent	50	B 399.93	FAP		42'0"	

Colorado State Highway Department — Bridge Dept. — STEEL BEAM and GIRDER

Location Sec. 3 Township 23S Range 52W Photo. Neg. No. WGC Checked Date

Bridge over Arkansas River Station * No. and Type of Spans 8 ~~SDG~~ (Cont.) Total length 833'-4" Year built '66

Rating HS20 44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	6° Lt. to tang.	-0.20%		Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy 30'-0"x 0'-10"x 20'-0"
Rear approach	"	"		Between Rail			
Forward approach	"	"		C to C Truss		Minimum	Forward approach pavement and Rdwy 30'-0"x 0'-10"x 20'-0"
Bearing	S 10°33'E			Sidewalks	1'-4" 1'-2"		

Design by Meheen Engr. Co. Built by Dept. of Hwys. Maintained by Dept. of Hwys. Plans F 001-5(18)

Contract No. Contractor Fabricator Omaha Steel Works 65-06 Contract price [illegible]

WATERWAY Area of Br. opening 17400' Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3911.33
Low bridge	3904.66
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 13934 sq. mi.

*Sta. 244+18.33 to 252+51.67

Drift and Ice Dams

Channel width Depth W Elevation of Stream bed 3885+

Nature of stream bottom This Str. in ~~X~~ bnd lane, parallel to L-24-D

Remarks Lights on West side 150'-0" apart

T1972-3
BDN 1972-94

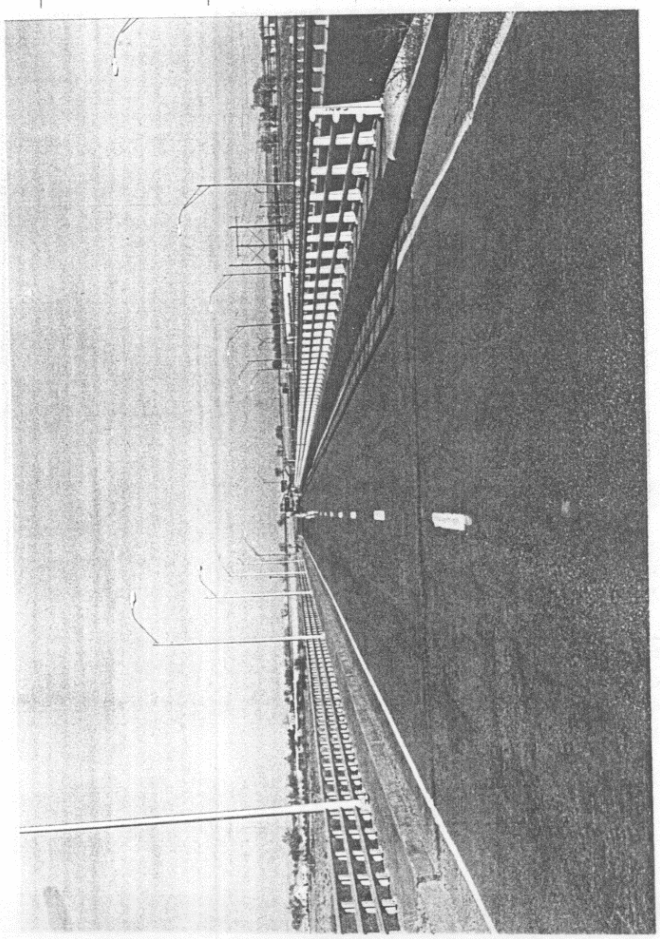
SUBSTRUCTURE

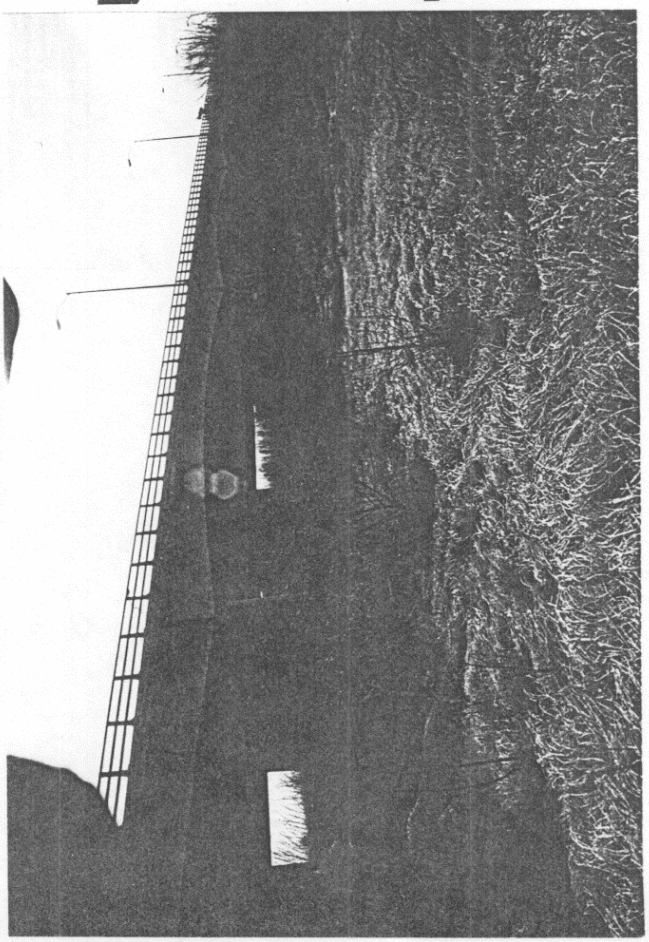
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	3'6"x 2'6"	Conc.	7	12	BP 53 28'-0"			No wings
Forward	"	"	"	"	"			
Pier	No cap	on	Conc.		cantilever	(Typ.)		
Pier	piers					27'-1" Max.		Swaybraces
								Backing Plank

First Bridge Second Bridge Third Bridge

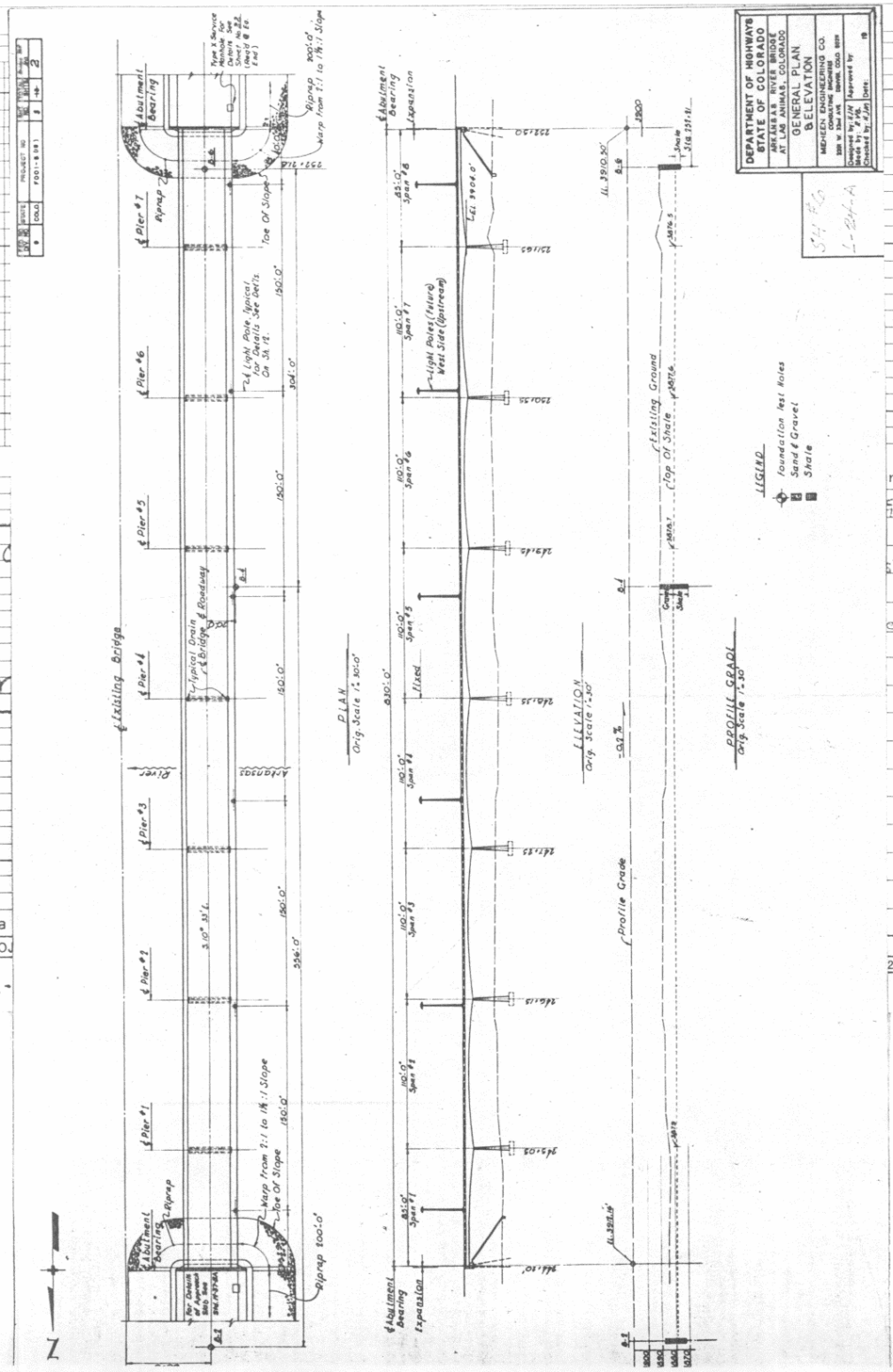
Traffic Survey Data 5250

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
-24-A	F001-5(18)	Bent	50	P 399.94	FA			





I-BEAM GIRDERS Size					Spacing		
PLATE GIRDERS Depth	Web	Flange Ls	Cover Plates	Bearing Stiffeners	Interior Stiffeners	C to C bearing	
FLOOR BEAMS End		Interior		Spacing			
Floor Beam Connections							
Remarks							



LAT.
LONG.
Rd. Sect.
Br. Letter

Traffic Survey Data	
STR. NO.	PROJ
L-24-A	F001-

(n pencil)
clear thru slab
along E curb
ting, Rip rap
ed Re-bars too close to

Third Bridge

CLEARANCE					
27-30	40	50	—12	12-14	14—

Colorado State Highway Department — STEEL BEAM and GIRDER BRIDGES

Location Sec. 28 Township 22S Range 51W Photo. Neg. No. Checked Date Nov 83

Bridge over Draw Station 14 + 35 No. and Type of Spans 5-CMP Total length 42'6"

Rating H-20 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built '84

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0	Superelevation
Bridge	Tan		600'	Between Curbs		Maximum	Rear approach pavement and Rdwy	
Rear approach	"			Between Rail				
Forward approach	"			Rdwy	40'0"	Minimum	Forward approach pavement and Rdwy	
Bearing	N51-15E			Sidewalks				

Design by DOH Built by DOH Maintained by DOH Plans BRF 050-5(21)

Contract No. Contractor HLM Const., Inc. Fabricator Contract price $54,368.60

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood

	Elevation		
		Drainage area (size and character)	3.4 Sq mi
Grade center of bridge			
Low bridge		Drift and Ice	Dams
Low water		Channel width Depth	Elevation of Stream bed 3889.6'
Normal high water		Nature of stream bottom	
Maximum high water DHW	3995.1'	Remarks Remove L-24-J	

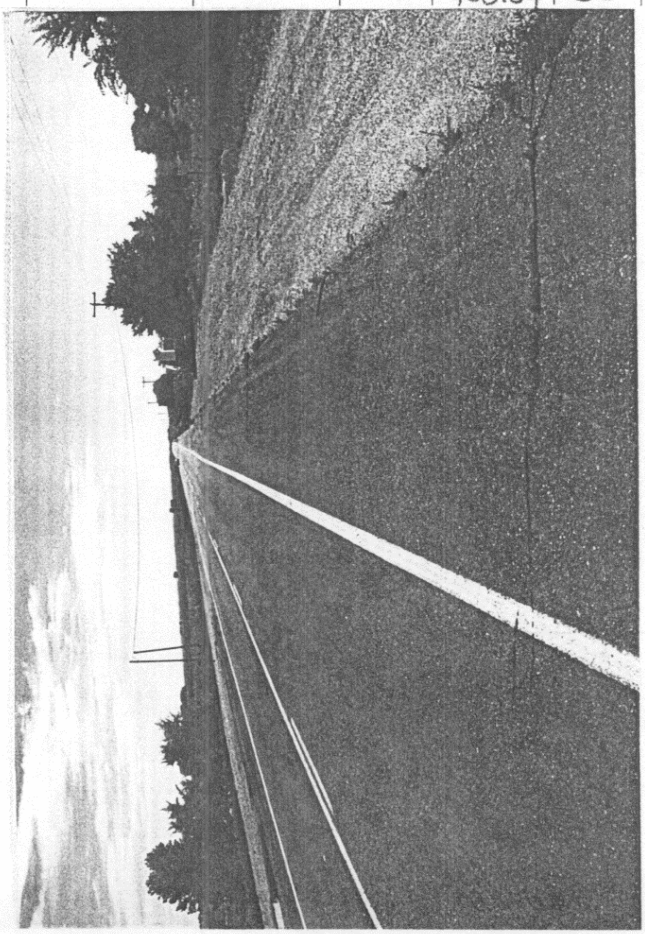
SUBSTRUCTURE

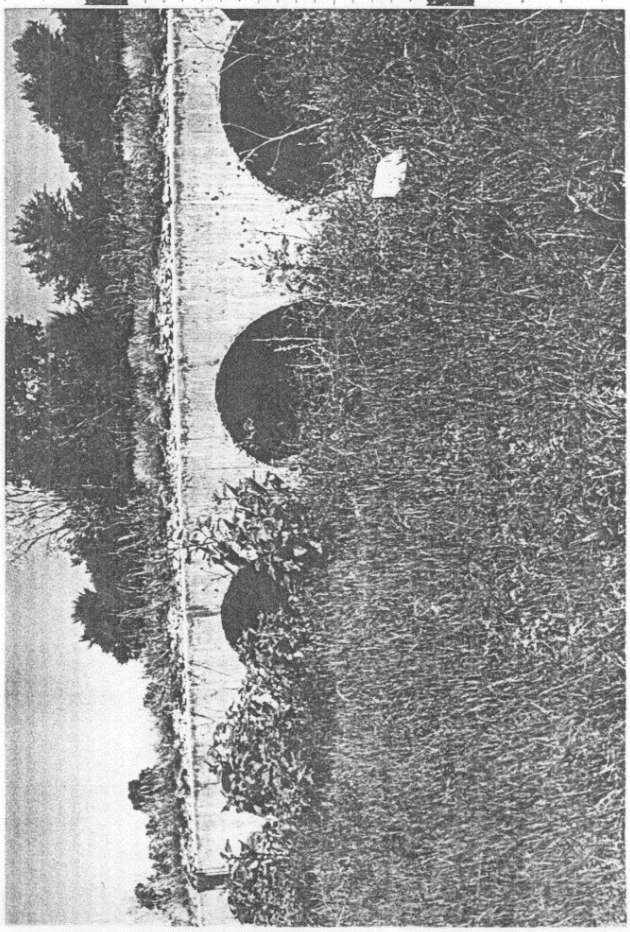
Abut's Piers	CAP or SILL		PILING - FRAME BENTS - CONCRETE					Wing (Lengths, angles, etc.)
	Size	Material	No.	Butt Size	Material	Grade to Footing	Footing Material	
Rear								
Forward		5-66" x 84'0"	Cross Culvert pipe/headwall					
Pier								
Pier								Swaybraces
								Backing Plank

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-24-AA	BRF050-5(21) BENT	50	B 405.04	50		—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open





SUPERSTRUCTURE

Span No.	FLOOR		STRINGERS					
	Thickness - Type and Material	Wearing Surface	Effective Span	Number	Size	Material	Spacing	Allowable Stress
A								
B								
C								
D								
E								

Fastenings:- Floor to stringer — Stringer to cap

Stringers Lapped or butted

Wheel guard — Hand rail

Remarks: Height of fill 1'0"

I-BEAM GIRDERS Size — Spacing

PLATE GIRDERS Depth — Web — Flange Ls — Cover Plates — Bearing Stiffeners — Interior Stiffeners — C to C bearing

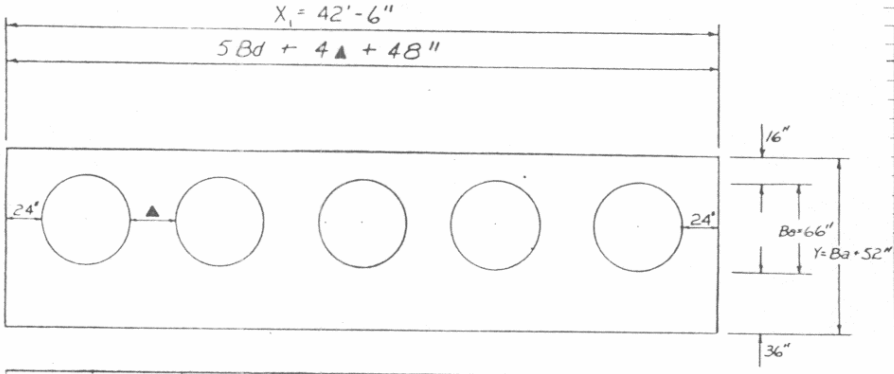
FLOOR BEAMS End — Interior — Spacing

Floor Beam Connections

Remarks

Lat 38-06.0N
Long 103-07.8W

SKETCH OF STRUCTURE SHOWING DIMENSIONS



Bd	X_1	A_1	Y	B	CONCRETE	STEEL
					5 CMP	5 CMP
66"	42'-6"	6¾"	9'-10"	12"	11.08 yd^3	1054 lb.

General condition of structure (in pencil)

First Bridge — Second Bridge — Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-24-AA	BRF050-5(21)	BENT	50	B 105.01	50															

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made [illegible]

Checked Date

Location Sec. 27 Township 22S Range 51W Photo. Neg. No. B-128-4

Bridge over Draw Station 101+00 to 101+20.5 No. and Type of Spans 1 - TS Total length 20'-6

Rating H-20 S16 * Member Str Rating Unit Stress ft 1774 Design Live Load H-15 '28 Required Live Load H20 S16 '44 Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	0.0	open	Between Curbs	29'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	0.0	"	Between Rail	30'-0"		
Forward approach	tan	0.0	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHO Built by CSHO Maintained by CSHO Plans FAP 59R 1

Contract No. Contractor DRISCOLL CONST. CO. Fabricator NAT'L. LBR. & CREO. CO. Contract price 2332.33

WATERWAY Area of Br. opening 66" "70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3887.00
Low bridge	3884.87
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 1.6 □ Mi. Flat farm land

Drift and Ice light drift noice Dams none

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks * Good for only H-16 class @ 156 psi with 3" oil surf.

PER/FC 050-5(10), NEW MAT & GD. RAIL TYPE-3 ADDED TO STR. BY STERLING PAVING CO.(1977)

P.S. Lists as minor Struct. Roll No. $2344.65

Sheet No.

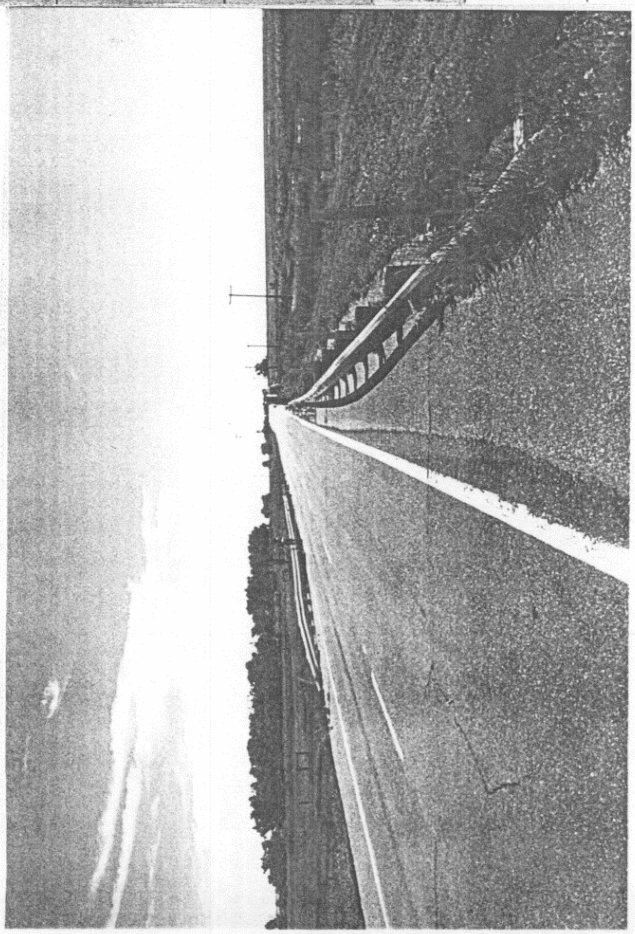
SUBSTRUCTURE

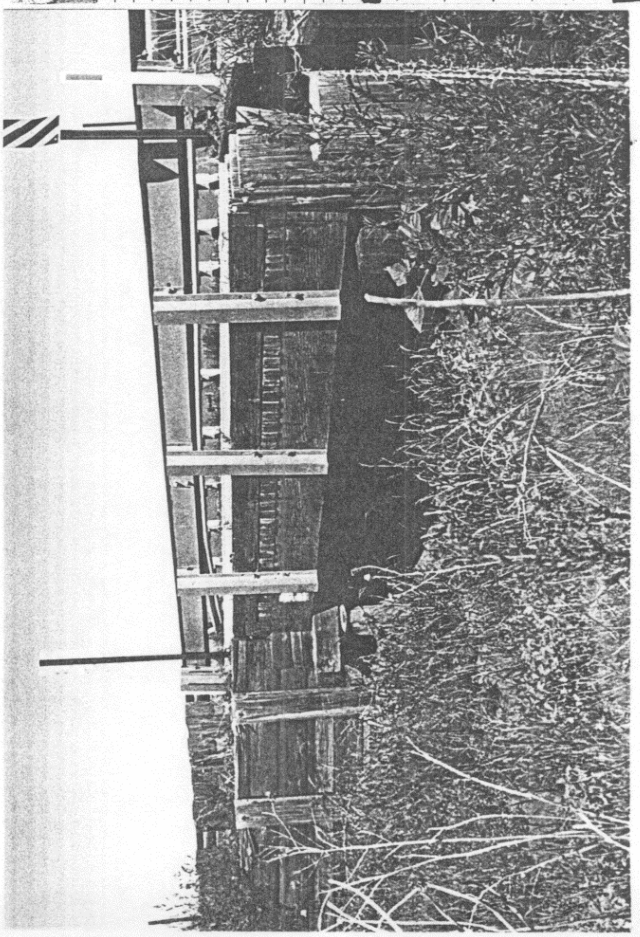
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x 12"	TC	7	12"	18' TP			16' T 45°
Forward	12"x 12"	TC	7	12"	18' TP			
Pier								
Pier								Swaybraces
								Backing Plank

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-24-b	FAP-59-R1	Bent	50	B 406.65	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





Interior floor beam

Upper Chord			Lower Chord			Diagonals			Verticals			
Member	Material	Size	Member	Material	Size	Member	Material	Size	Member	Material	Size	Top Laterals
LU			LL			LU			LU			Bott. Laterals
UU			LL			LU			LU			Portals
UU			LL			LU			LU			Swaybrace
UU			LL			LU			LU			
												C to C Chords

Truss bearing

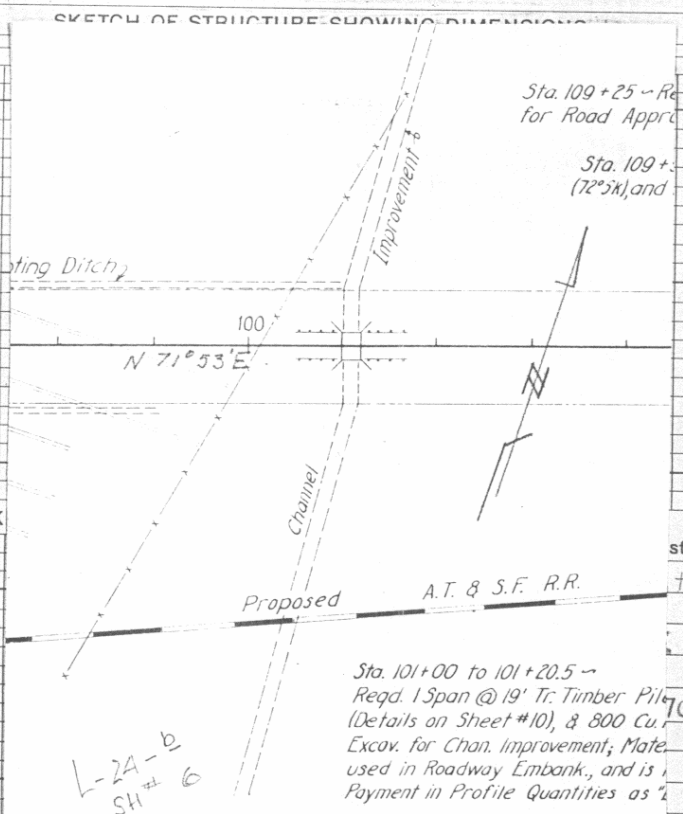
Bolts

Pins

Connectors

Remarks

SKETCH OF STRUCTURE SHOWING DIMENSIONS



LOCATION SK

structure (in pencil)

t fair 3"o.s. '68'

bridge Load

70'

NOTES ON STRUCTURE No. L-24-B

NT STRUCTURE:

Roadway
Waterway
of Superstructure
of Substructure
irements as to removal

M DATA:
age area in Sq. Mi.
ty during high water
ion of:
ximum high water
v Water
rmal Stage
eam Bed
- Light

(New Alignment)

PROPOSED STRUCTURE:
Position referred to present structure
Span - 1@ 19'-0"
Clear roadway - 29'-0"
Clear waterway -
Type of Superstructure - Tr. Timb. - 6
Type of Substructure - Treated Pilin
Detour Structure requirements
R.R. Siding - Kreydill
Haul to bridge site - 3/4 Mi.

Nearby structures on same stream
Location - 1500' North
Waterway - 47 Sq. Ft.
Record during Floods

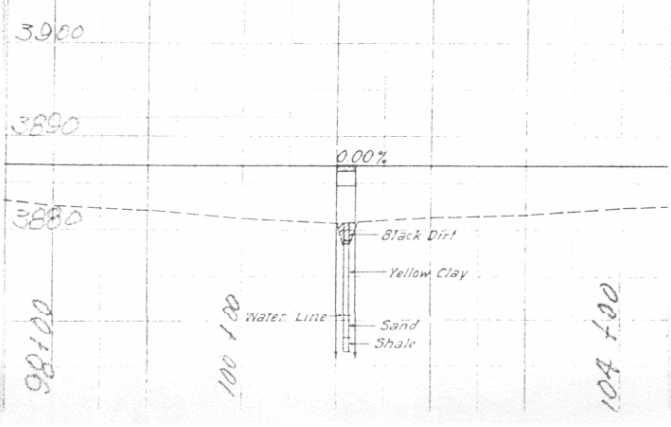
Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY
L-24-B	FAP-59-R1	Bent

nd Bridge

Third Bridge

ROADWAY				CLEARANCE			
23-26	27-30	40	50	—12	12-14	14—	Open
	■						■



Colorado State Highway Bridge Dept. — STEEL BEAM and GIRDER BRIDGES — Made AFF 2-42

Location Sec. 25 Township 22 S Range 51 W Photo. Neg. No. B-128-6 Checked Date 2"

Bridge over Gageby Creek Station 194+00 to 195+40.33 No. and Type of Spans 3-CI Total length 140'-4"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '35 Required Live Load H-20 S1-30 Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	tan	0.0	Open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy	
Rear approach	tan	0.0	"	Between Rail	31'-2"			
Forward approach	tan	0.0	"	C to C Truss		Minimum	Forward approach pavement and Rdwy	
				Sidewalks	none			

Design by CSHD Built by CSHD Maintained by CSHD B-1312 Plans FAP59R1

Contract No. Contractor Driscoll Const. Co. Fabricator Denver Steel & Iron Wks. Contract price 31419.

WATERWAY Area of Br. opening 1800 □' 592 □' 70 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3875.00
Low bridge	3871.46
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 79 □ Mi. Rolling farm land, sandy soil

Drift and Ice med drift light ice Dams none

Channel width Depth Elevation of Stream bed 3857.8

Nature of stream bottom

Remarks PER/FC 050-5(10), GD. RAIL TYPE-3 CONNECTED TO STR. BY STERLING PAVING CO. (1977)

Roll No.

Sheet No.

SUBSTRUCTURE

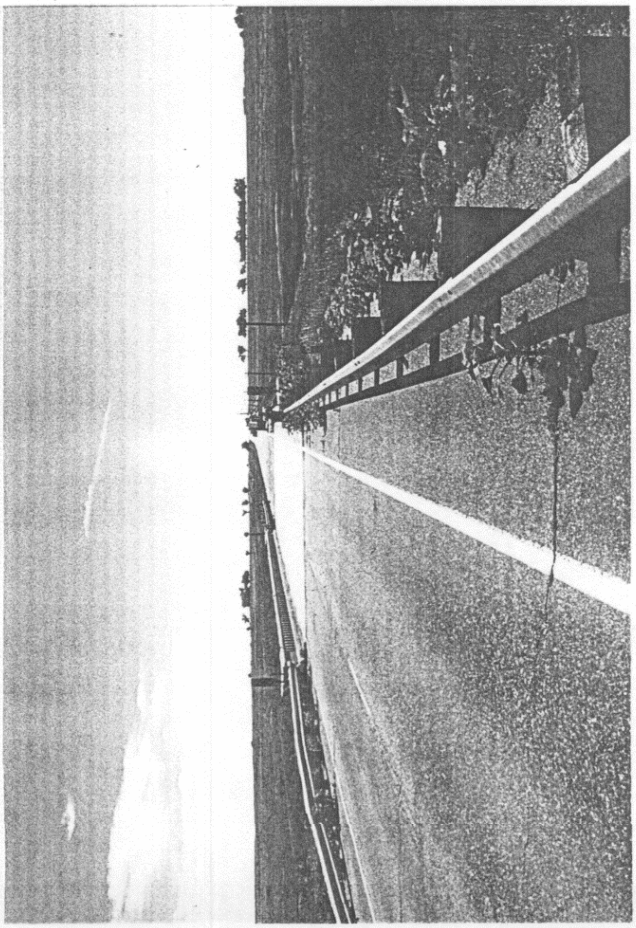
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CCF	33'-0"		30' Conc 45°
Forward					CCF	33'-0"		
Pier	2'-6" x 3'-8½"	Conc			2 Co/C	31'-0"		
Pier								Swaybraces
								Backing Plank

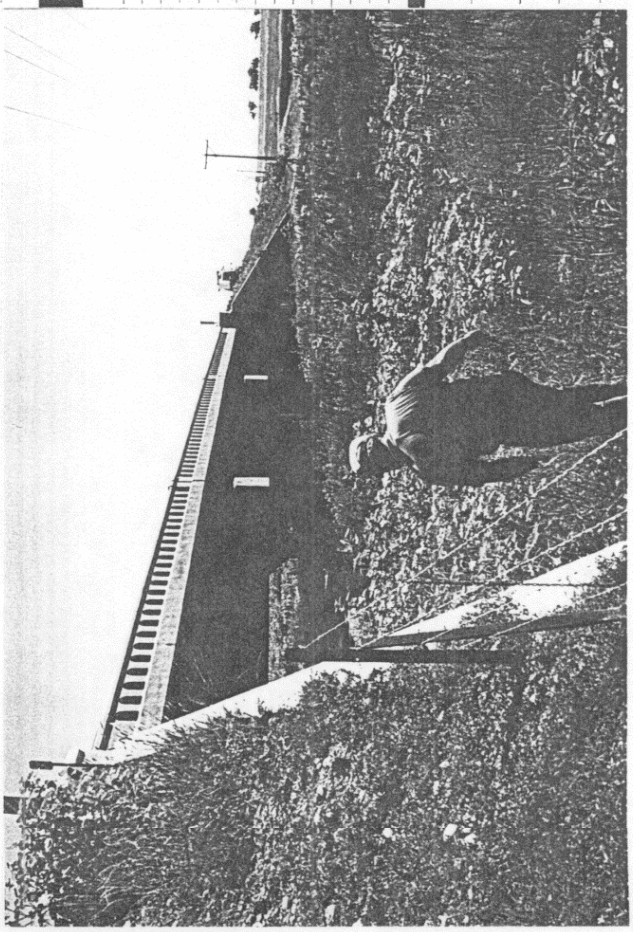
Br. Letter R

First Bridge Second Bridge Third Bridge

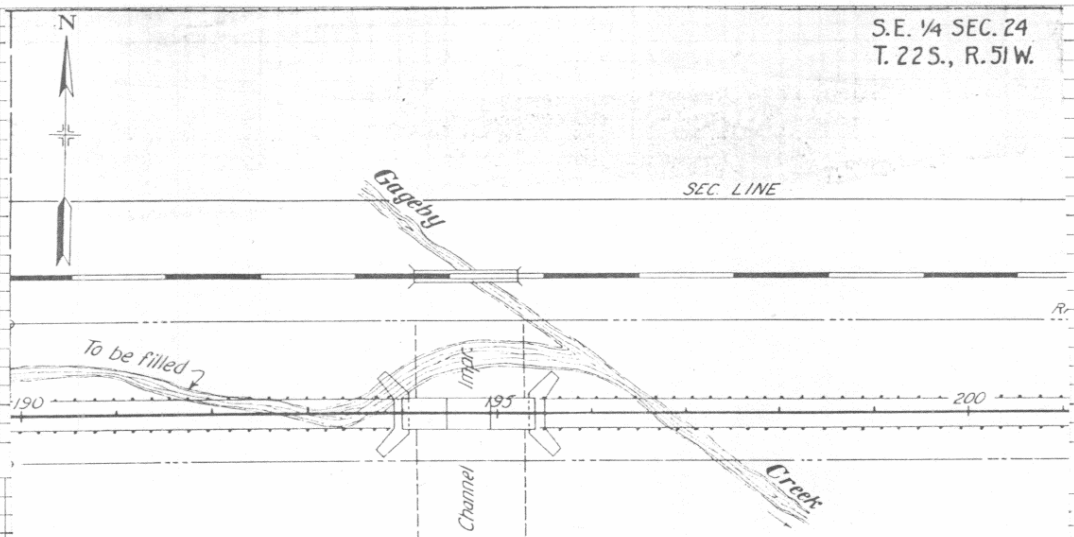
Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-24-M	FAP-59-R1	Bent	50	B 408.43	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SKETCH OF STRUCTURE SHOWING DIMENSIONS



Sta. 194+00 to 195+40.2
Reqd. 3 Spans @ 45'-Conc. I-Beam Bridge
(Details on Sheets #12 to 15), and 16,021 Cu. Yds.
Uncl. Excav. for Channel Improvement, Material
to be used in Roadway Embank., & is included
for Payment in Profile Quantities as "Borrow".

Sta. 195+42.7 to
Reqd. 2-703' le
Cable Guard Fen

DOT
LAT. 3
LONG. 1
Rd. Sect
Br. Letter

Traffic Survey Data

STR. NO.	PROJECT
L-24-M	FAP-59

S.H. 6

N.E. ¼ S
T. 22 S., R

Third Bridge

CLEARANCE				
50	—12	12-14	14—	Open

NOTES ON STRUCTURE No. L-24-M

PRESENT STRUCTURE:
Span - 3 @ 40'-0"
Clear Roadway
Clear Waterway - 540 Sq. Ft.
Type of Superstructure
Type of Substructure
Requirements as to removal

STREAM DATA:
Drainage area in Sq. Mi. - 79
Velocity during high water
Elevation of:
Maximum high water
Low Water
Normal Stage
Stream Bed - 3857.8
Drift
Scour

PROPOSED STRUCTURE:
Position referred to present structure - New Alignment
Span - 3 @ 45'-0"
Clear roadway - 30'-0"
Clear waterway - 1800 Sq. Ft.
Type of Superstructure - Concrete & I-Beam
Type of Substructure - Conc. Abuts. & Piers
Detour structure requirements
R.R. Siding - Kreybill
Haul to bridge site - 1¼ Mi.

Nearby structures on same stream:
Location
Waterway
Record during floods

Plkg. Wearing Surf.

Span

0.00%

79	8192	7829	
819	8192	7829	
1,120	40,150	56,370	
0			
an Chg. Rt	Avail from Chan. Chg. Rt @ Lt. Sta. 194+-195+	Avail from Chan. Chg. Rt. Sta. 194+-195+	

195 200

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made AFF 2-42

Checked

Date

Location Sec. 29 Township 22S Range 50W Photo. Neg. No. B-128-7

Bridge over McRae Arroya Station 285+70 to 286+86 No. and Type of Spans 5-TD Total length 116'-0"

Rating H-20 S16 Member Str Rating Unit Stress 1590 Design Live Load H-15'28 Required Live Load H 20 S16 30' Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	0.0	open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	0.0	"	Between Rail	31'-0"		
Forward approach	tan	0.0	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 59 R1

Contract No. Contractor Driscoll Const. Co Fabricator Nat'l. Lbr. & Creo. Co. Contract price 8758.51

WATERWAY Area of Br. opening 826 sq in 70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3881.00
Low bridge	3878.85
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 3 sq Mi. Rolling farm land

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks

Good for H20 ft = 1590

Roll No.

Sheet No.

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x12"	TC	7	12#	28' TP			16' T 45°
Forward	12"x12"	TC	7	12#	28' TP			
Pier	12"x12"	TC	7	12#	28' TP			
Pier								Swaybraces 3"x12" T
								Backing Plank 4"x12" T

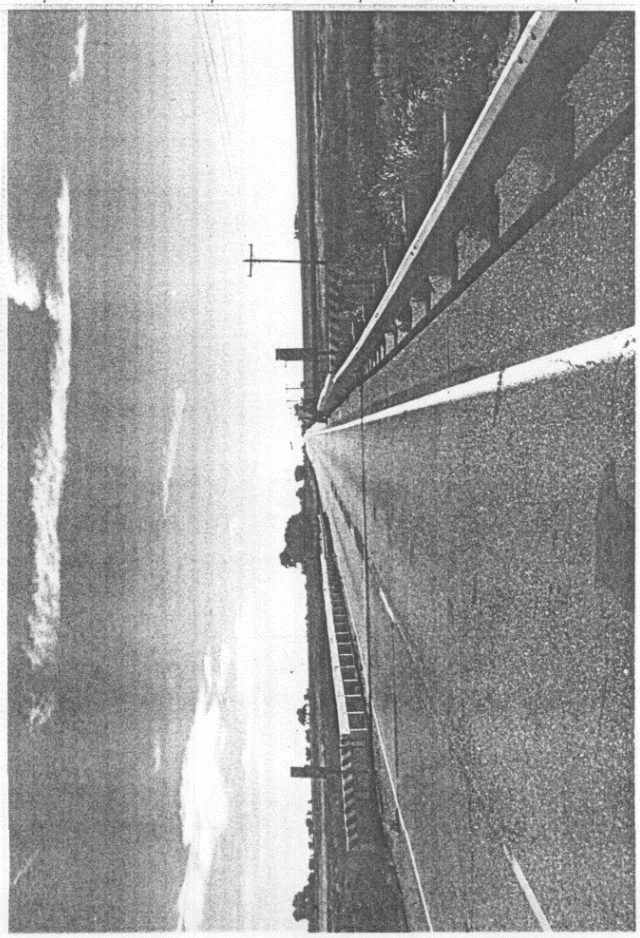
249+50 to 281+00 Widened R.O.W. Sta. 297+00 - 306+00 Widened R.O.W. Sta. 306+00 to 319+00

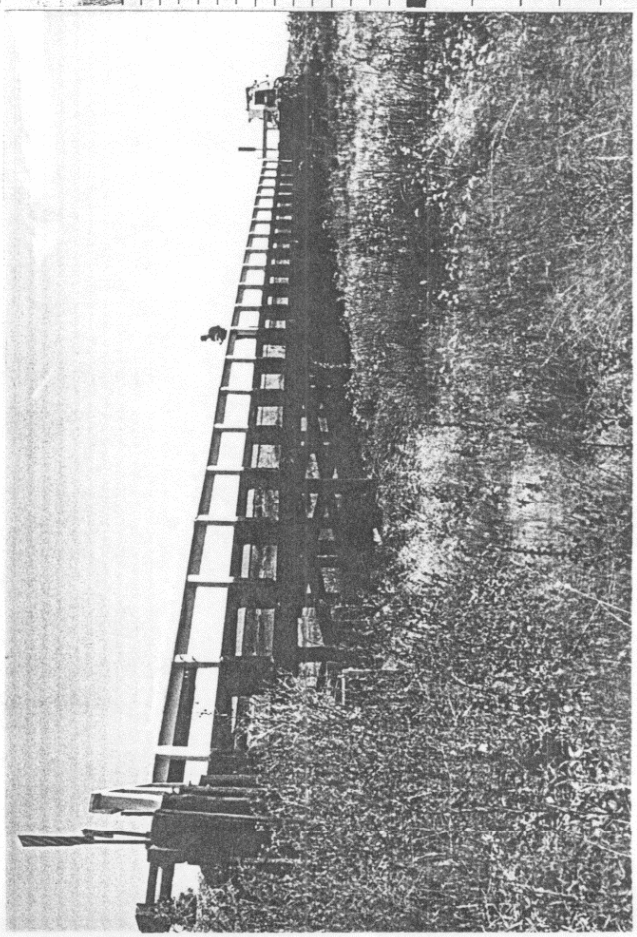
285 290

First Bridge Second Bridge Third Bridge

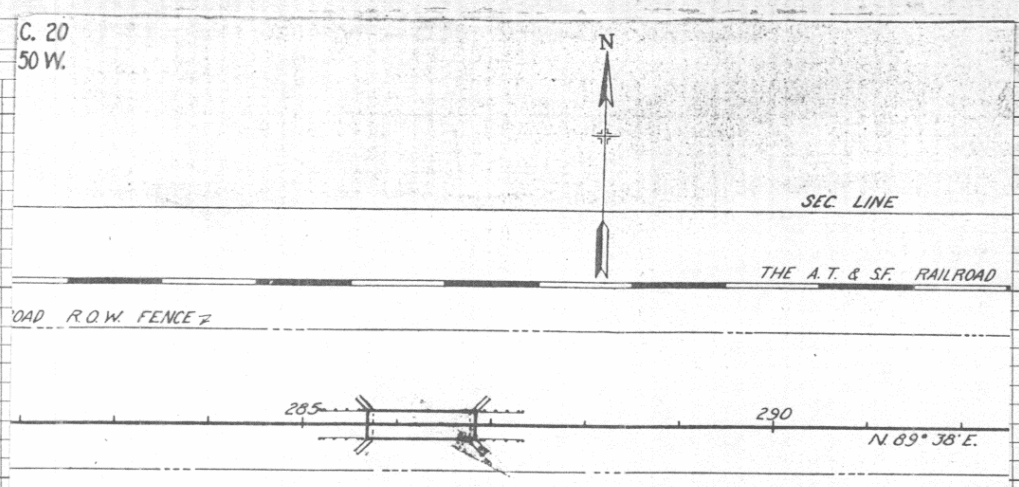
Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-24-L	FAP-59-R-1	Bent	50	B 410.16	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





C. 20
50 W.



Sta. 285+70 to 286+86
Req'd. - 5 spans @ 23' Treated Timber
Pile Trestle. (Details on sheet #16)

Sta. 285+20.5 to 285+67.5
Req'd. - 2-47' lengths wire cable guard fence, Rt. & Lt.

Sta. 286+88.5 to 287+35.5
Req'd. - 2-47' lengths wire cable guard fence, Lt. & Rt.

LAT.
LONG.
Rd. Sect.
Br. Letter

S.H. 6

Traffic Survey Data

STR. NO.	PRO.
L-24-L	FAP-

NOTES ON STRUCTURE NO. L-24-L

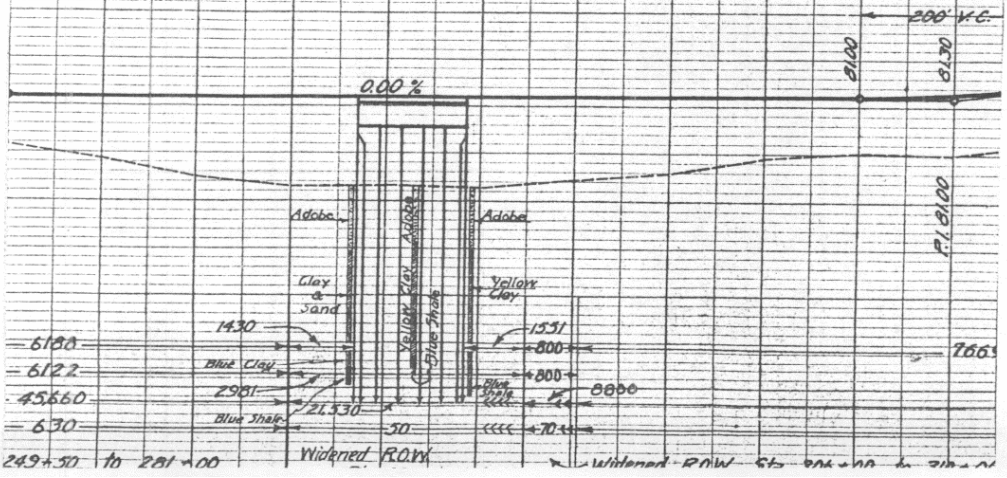
PRESENT STRUCTURE
Span
Clear Roadway
Clear waterway
Type of superstructure
Type of substructure
Requirements as to removal

New Alignment

STREAM DATA
Drainage area in Sq. Mi.
Velocity during high water
Elevation of:
maximum high water
Low water
Normal stage
Stream bed
Drift
Scour

PROPOSED STRUCTURE
Position referred to present structure
Span = 5 @ 23'-0"
Clear Roadway = 30'-0"
Clear waterway
Type of superstructure = Timber with conc. sl
Type of substructure = Timber Piles = Dbl. Abu
Detour structure requirements
R.R. Siding = Beethurst
Haul to bridge site 1.0 Mi.

Nearby structures on same stream
Location = R.R.
Waterway =
Record during floods =



Third Bridge

CLEARANCE						
27-30	40	50	—12	12-14	14—	Open

pencil)
SE wing
'70'

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made AFF 2-42

Checked Date

Location Sec. 29/29 Township 22 S Range 49 W Photo. Neg. No. B-129-1

Bridge over Prowers Arroya Station 662+20 to 662+44 No. and Type of Spans 1-TD Total length 24'-0"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '28 Required Live Load H 20 S16 44' Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	400' V.C.	Open	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	-0.90% to V.C.	"	Between Rail	31'-0"		
Forward approach	tan	V.C. to -.10%	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 218 AR

Contract No. Contractor Driscoll Const. Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 2898.00

WATERWAY Area of Br. opening 150ª' 110ª' "70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3836.79
Low bridge	3834.54
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 18□ Mi. Flat farm land

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks

4" 05. Slab @ ¼ Points Good for H 18.6 f_t = 1801

H 16 @ f_s = 16,150. PSI

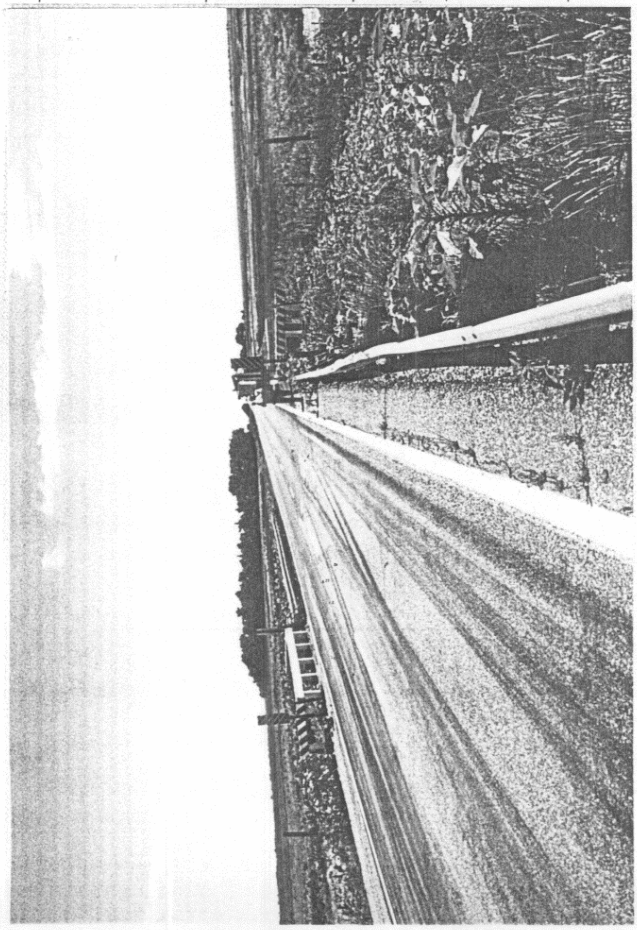
SUBSTRUCTURE

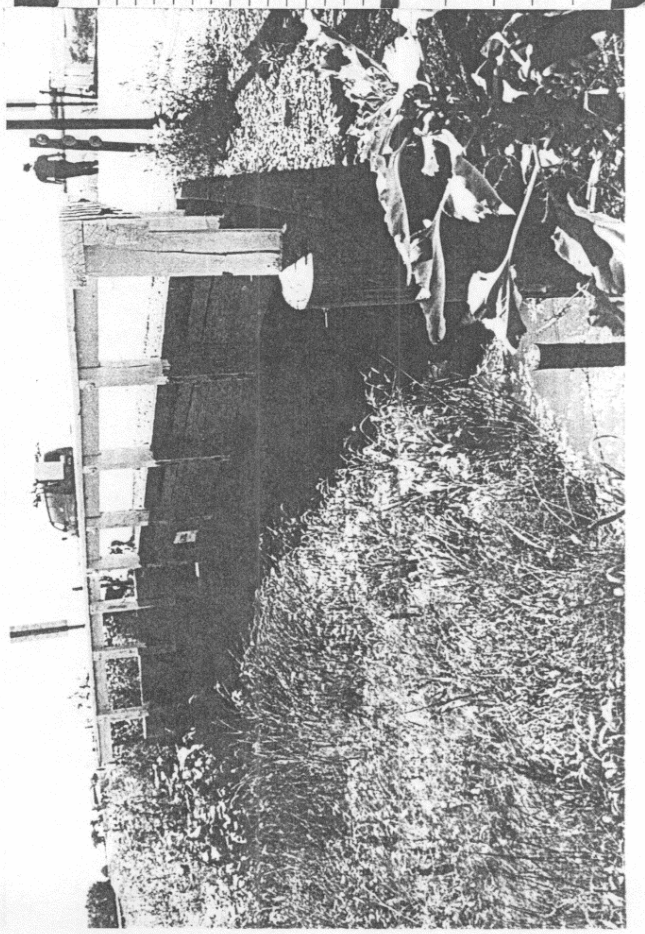
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x12"	TC	8	12ϕ	34' TP			10' T 45°
Forward	12"x12"	TC	8	12ϕ	34' TP			
Pier								
Pier								Swaybraces —
								Backing Plank 4"x 12" T

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED (—10 10 12½ 15 20)	ROADWAY (15-18 19-22 23-26 27-30 40 50)	CLEARANCE (—12 12-14 14— Open)
L-25-L	FAP-218-AR	Bent	50	B 416.36	FA			





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	218-AR	54	

REVISED 12-30-36 T.L.W. (BRIDGES & APPROACHES ADDED)

S.E. 1/4 SEC. 20 T. 22 S. R. 49 W.

Span No.	FLOOR Thickness - Type and Material	Wearing Surface
A	CS 7"-9"	3/4" Conc Mon
B		4" o.s.
C		
D		
E		

Fastenings:- Floor to stringer none

Stringers Lapped or butted

Wheel guard 11-6"x6"

Remarks

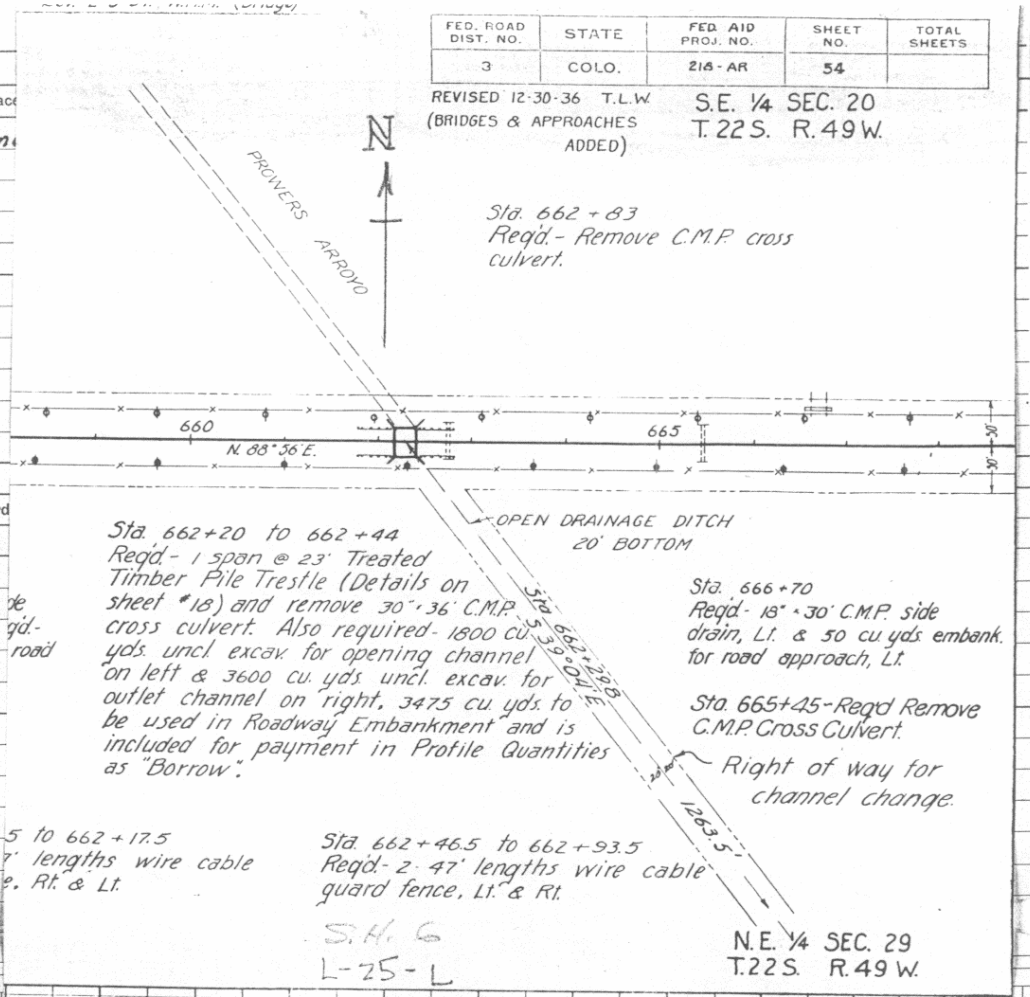
TRUSSES End floor beam

Upper Chord Member	Material	Size	Lower Chord Member	Material
LU			LL	
UU			LL	
UU			LL	
UU			LL	

Truss bearing

Connectors

Remarks



LOCATION SKETCH

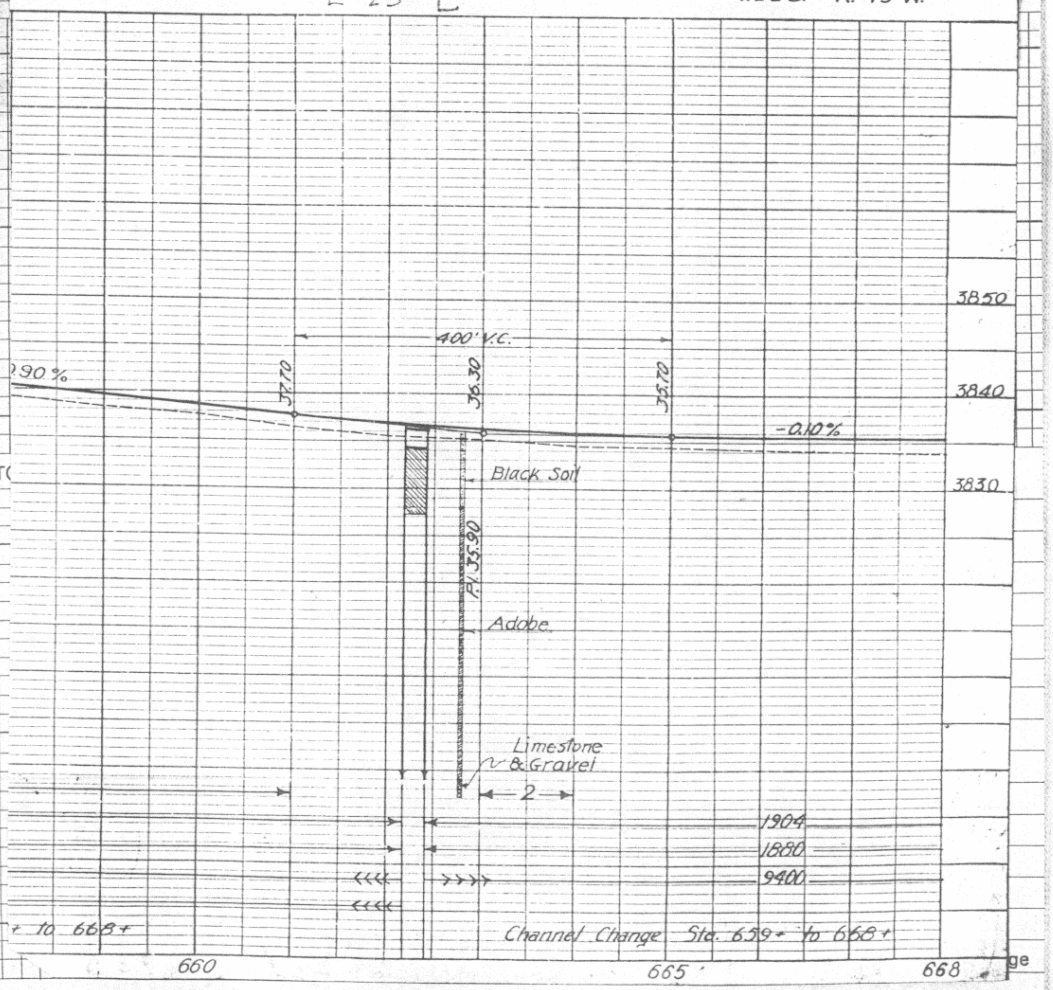
DOD

LAT. 38° 06.8'

LONG. 102° 55.3'

Rd. Sect. 116

Br. Letter T



Traffic Survey Data 2500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-L	FAP-218-AR	Bent	50	B 416.36	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.A.O. 11-50

Checked Date

Location Sec. 22/27 Township 22 S Range 49 W Photo. Neg. No.

Bridge over Lubers Drainage Ditch Station 738+74.9 to 738+93.1 No. and Type of Spans 1-63 (widened-CI) Total length 18'-2"

Rating H-15 Member Str. Rating Unit Stress fc 18000 Design Live Load H-15'-35 Required Live Load H-20 Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	Tangent	0.00%	>850'	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	–	–	–	Between Rail				
Forward approach	–	–	–			Minimum	Forward approach pavement and Rdwy	Comb. w/ FAP 57-A
				Sidewalks				Widened 218-AR

Design by C.S.H.D. Built by C.S.H.D. Maintained by C.S.H.D. Plans FAP 218-A (orig.)

Contract No. Contractor Driscoll Const. Co. Fabricator Contract price 5017.50

WATERWAY Area of Br. opening 140 sq ft Area of Relief opening Skew of flow (Normal) Flood

	Elevation	Drainage area (size and character)
Grade center of bridge	3799.9	
Low bridge		Drift and Ice — Dams
Low water		Channel width — Depth — Elevation of Stream bed
Normal high water		Nature of stream bottom
Maximum high water		Remarks

Microfilm Roll B-30

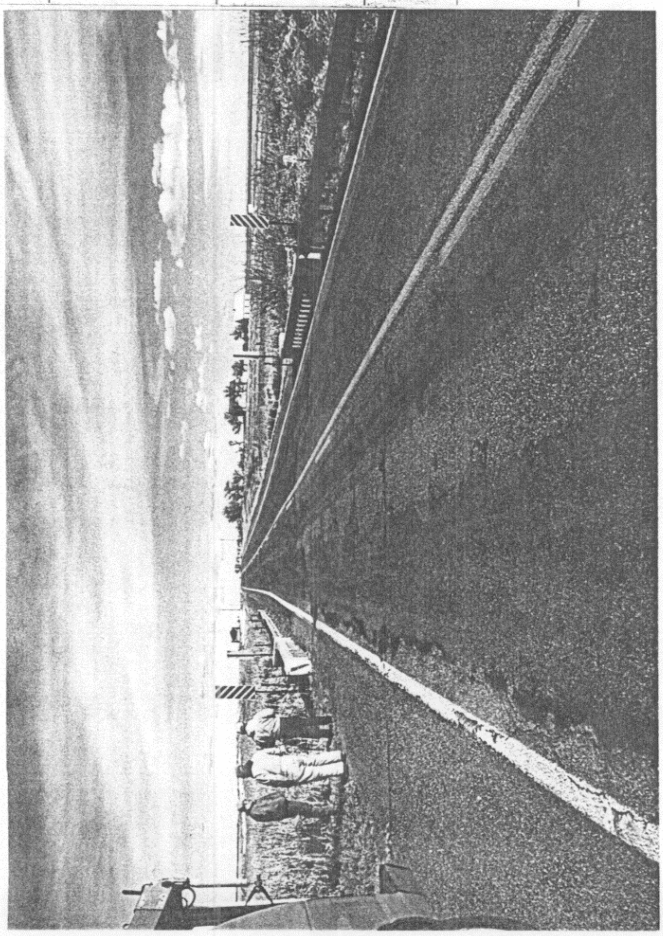
SUBSTRUCTURE

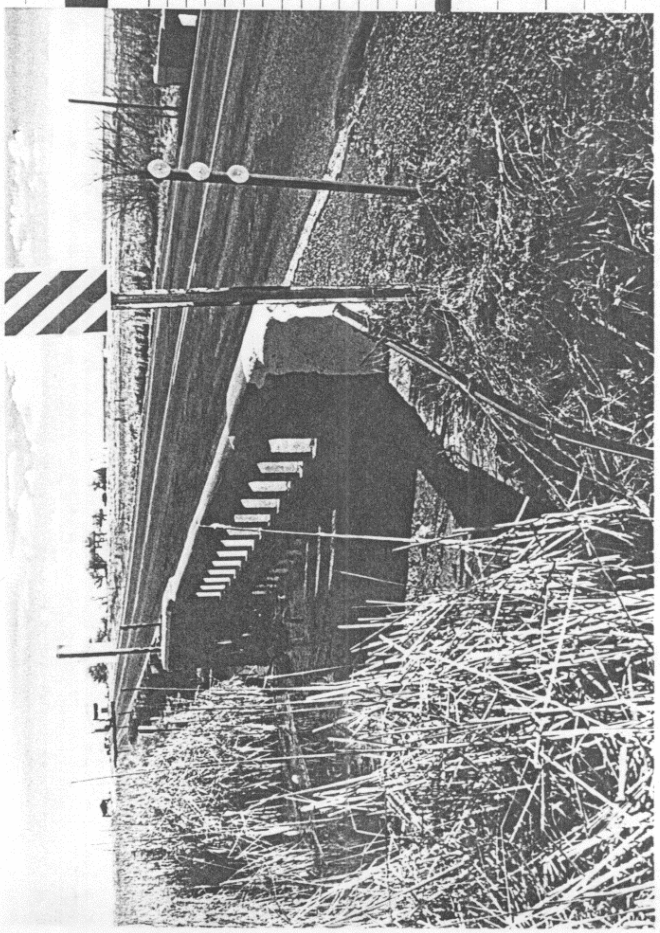
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear				CG	Abuts.			4-8'-0" @45°
Forward								
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-a	FAP 218 AAR	Bent	50	417.80	FA	–10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	–12 12-14 14– Open





SUPERSTRUCTURE

Curbs 9" Conc. Hand rail 1'-0" Wide, R.C., 2'-11" High

Wearing Surface

CONCRETE SLAB - Clear Span 15'-8½" Thickness 17½" to 19½" at crown

CONCRETE BEAM & SLAB Widened Section

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
26'-7½"	2	3.5'	18"WF@47#	0'-7½"	

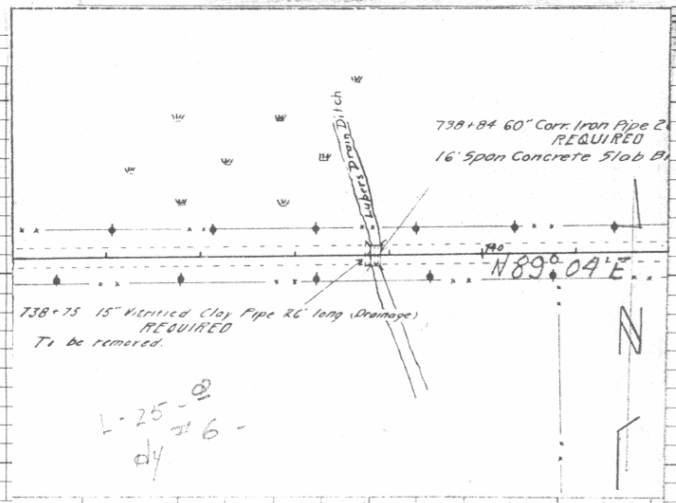
RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

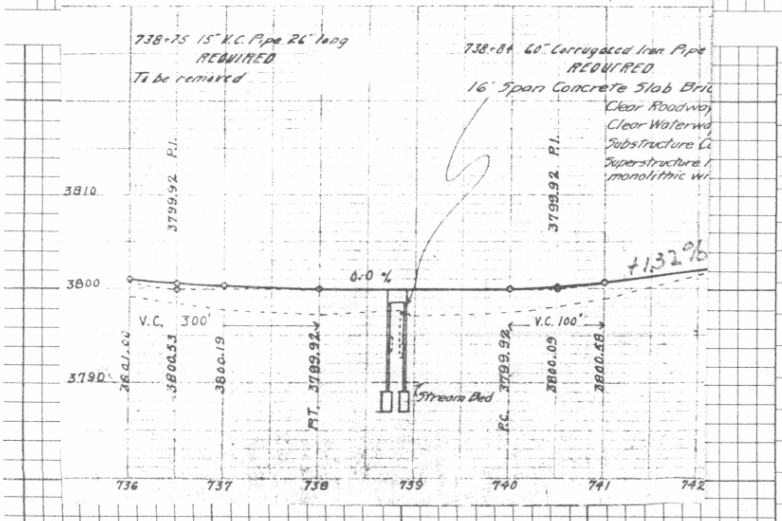
ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

Latitude 38°08.1'
Longitude 102°54.4'

RE SHOWING DIMENSIONS





REMARKS:-General condition of structure (in pencil)

SW end post broken loose. North panel replaced
Black paint poor. Maybe as much as 1'-0" of surf. Appr fills ok. Water too high to check abuts. Wings - conc. seems to be deteriorating '68'
SW wing rail loose '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-25-a	FAP 218 AAR	Bent	50.[B]	417.80	FA															

Bridge Dept.

Location Sec. 22/27 Township 225 Range 49W Photo. Neg. No. B-129-2 Checked Date

Bridge over Draw Station 755+03.75 to 755+36.25 No. and Type of Spans 1-CI Total length 32'-6"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '35 Required Live Load H 20 S 24 Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	800' V.C.	Open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	+1.24 to V.C.	"	Between Rail	31'-2"		
Forward approach	tan	V.C. to +1.00	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP 218 AR

Contract No. Contractor Driscoll Const. Co. Fabricator Denver Steel & Iron Contract price

WATERWAY Area of Br. opening 32' 10" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3803.88
Low bridge	3800.26
Low water	dry
Normal high water	
Maximum high water	

Drainage area size and character Flat farm land

Drift and ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 3795.0

Nature of stream bottom

Remarks

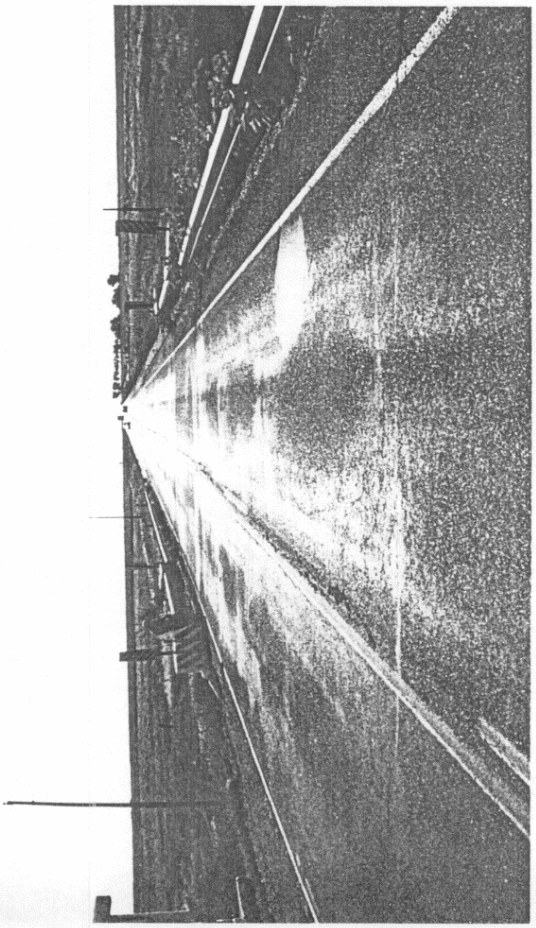
SUBSTRUCTURE

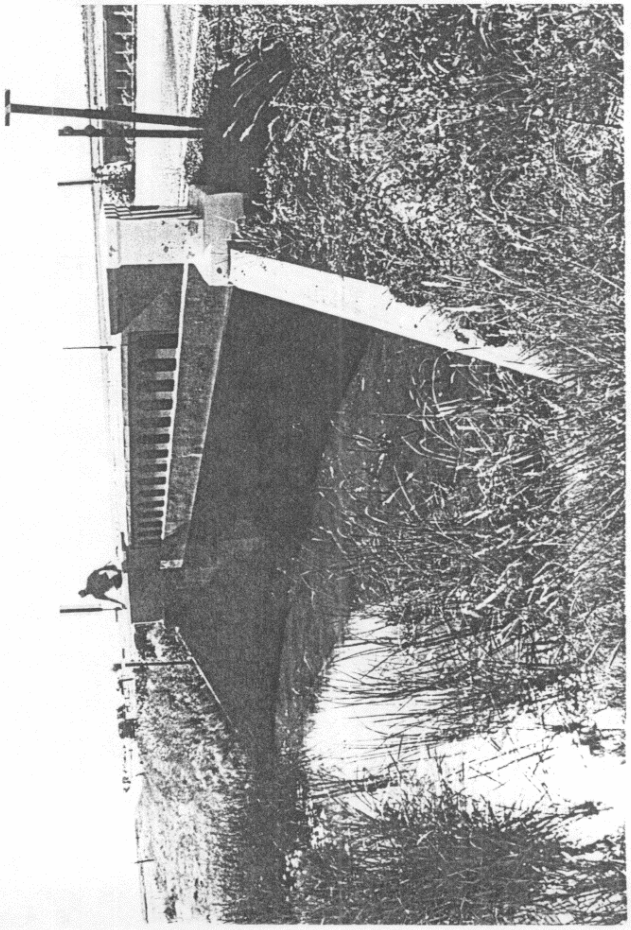
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CC	16'-0"	Shale	16' Conc. 45°
Forward					CC	16'-0"	Shale	
Pier								
Pier								Swaybraces
								Backing Plank

First Bridge Second Bridge ✓ Third Bridge

Traffic Survey Data 2500

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-E	FAP-218-AR	Bent	50	418.12	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





Stringers Lapped or butted

Wheel guard Conc 6"x 9" Hand rail conc - 2'-0" hi.

Remarks

I-BEAM GIRDERS Size Spacing

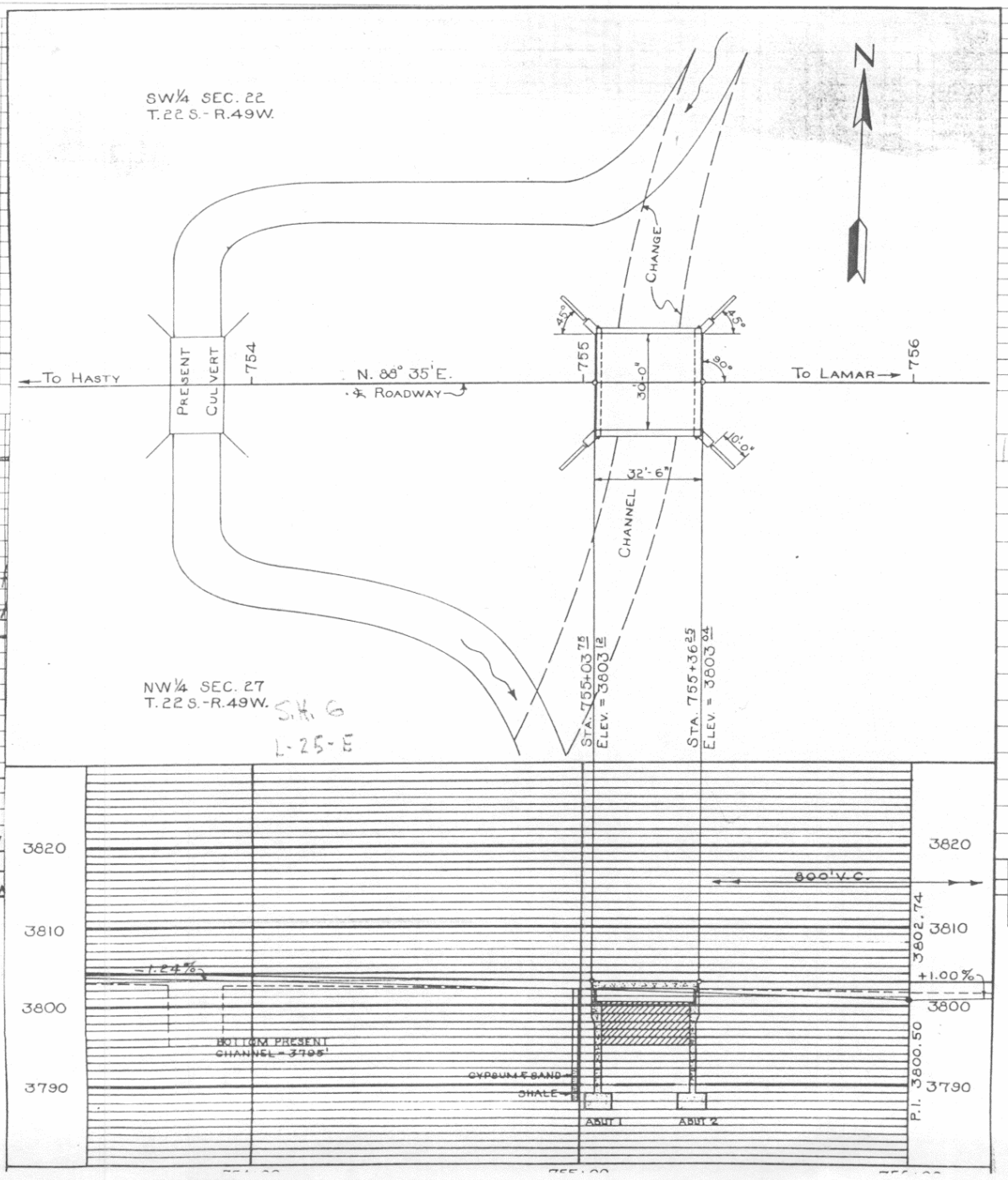
PLATE GIRDERS Depth Web Flange Ls Cover Plates Bearing Stiffeners Interior Stiffeners C to C bearing

FLOOR BEAMS End Interior Spacing

Floor Beam Connections

Remarks

SKETCH OF STRUCTURE SHOWING DIMENSIONS



LAT.
LONG.
Rd. Sect
Br. Lett

lls ok '68'
'70'

Traffic Survey

STR. NO.

L-25-E FA

Third Bridge

CLEARANCE

12	12-14	14	Open

Colorado State Highway Bridge Dept.

TIMBER SPANS

Made AFF 2-42

Location Sec. 23/26 Township 22S Range 49W Photo. Neg. No. B-129-3 Checked Date

Bridge over Limestone Creek Station 836+35 to 837+28 No. and Type of Spans 4-TD Total length 93'-0"

Rating H-20 S16 Member Str Rating Unit Stress F 12.5 Design Live Load H-15 '28 Required Live Load H 20 S16 30' Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	0°15' R	0.0	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan to 0°15 R	-1.4 to 0.0 500' V.C.	"	Between Rail	31'-0"		
Forward approach	0°-15' R	0.0 to -0.10 200' V.C.	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans FAP218 AR

Contract No. Contractor Driscoll Const. Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 7960.00

WATERWAY Area of Br. opening 576 sq ft "70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3807.00
Low bridge	3804.75
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 25 ± Mi. Flat farm to rolling grass land

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 3796.0

Nature of stream bottom

Remarks

2"x5" Slip Splices } see Calcs. Good for Rdy. T = 17.65
H/6 & 6 = 18.27 DL } for L-25-L

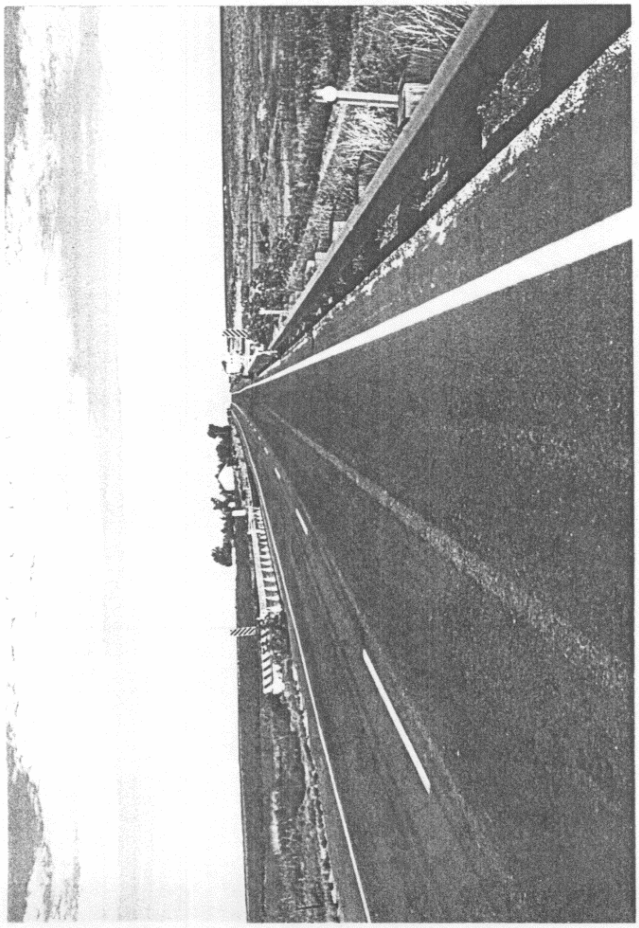
SUBSTRUCTURE

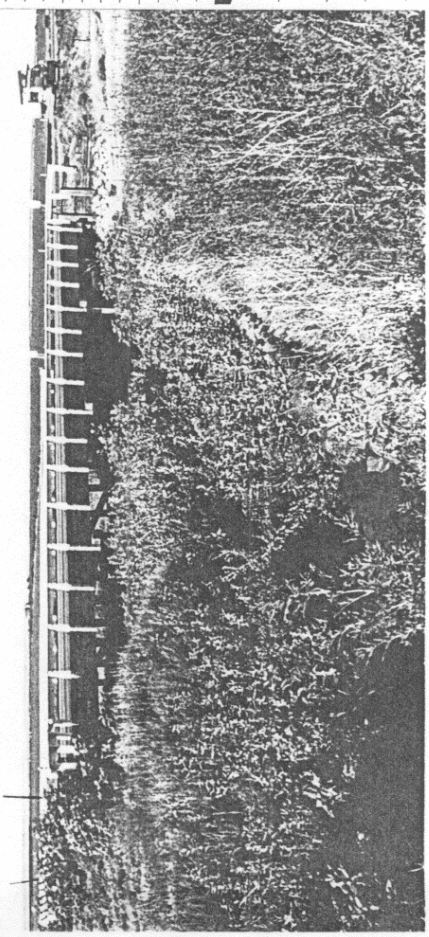
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x12"	TC	7	12"	32' TP			16'-T 45°
Forward	12"x12"	TC	7	12"	32' TP			
Pier		TC	7	12"	32' TP			
Pier								Swaybraces 3"x12" T
			8	12"	28' TP Sub-abuts			Backing Plank 4"x12" T

First Bridge Second Bridge Third Bridge

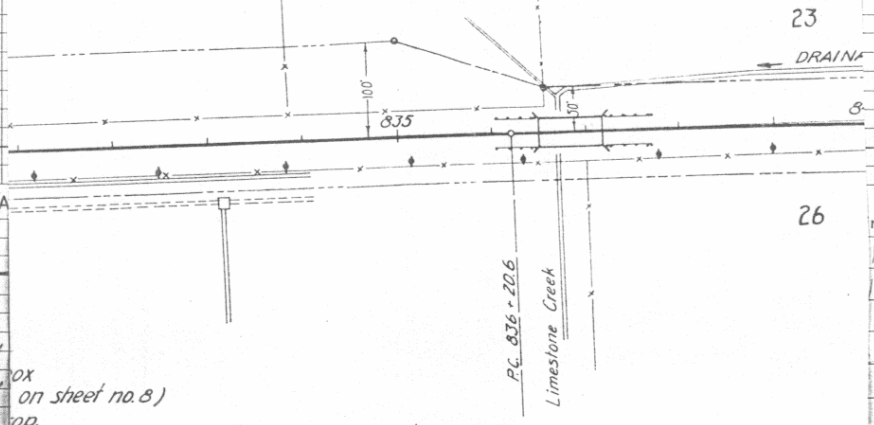
Traffic Survey Data 210-0

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
						—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
L-25-N	FAP-218 AR	Bent	50	E 419.67	FA			





Sta. 836+35 to 837+28
Req'd.- 4 spans @ 23' Treated Timber Pile Trestle (Details on sheet #21) and Remove 3'x3'x32' C.B.C. & 36"x40' CM.P. cross culv't.
Also Req'd.- 1500 cu. yds. uncl. excav. for channel improvement, material to be used in Roadway Embankment and is included for payment in Profile Quantities as "Borrow"



DOD
LAT. 38°06.
LONG. 102°51.
Rd. Sect. 116
Br. Letter V

ox
on sheet no. 8)
op.

Sta. 835+85.5 to 836+32.5
Req'd.- 2-47' lengths wire cable guard fence, Rt. & Lt.

STA. 833+15
Req'd.- Concrete division box and drop on right (details on sheet no. 8)
Also req'd.- Remove conc. drop.

Sta. 837+30.5 to 837+77.5
Req'd- 2-47' lengths wire cabl
guard fence, Lt. & Rt.

L-25-N
S.H. 6

n pencil)
Paint poor to fair
lders ok. NW wing
broken off and
king planks '68' '70'

Third Bridge

Traffic Survey Data 2100

STR. NO.	PROJECT	C
L-25-N	FAP-218 AR	B

CLEARANCE

27-30	40	50	—12	12-14	14—	Open

PRES
Span
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Clear
Type
Type
Requ
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Velo
Elev
max
low
norm
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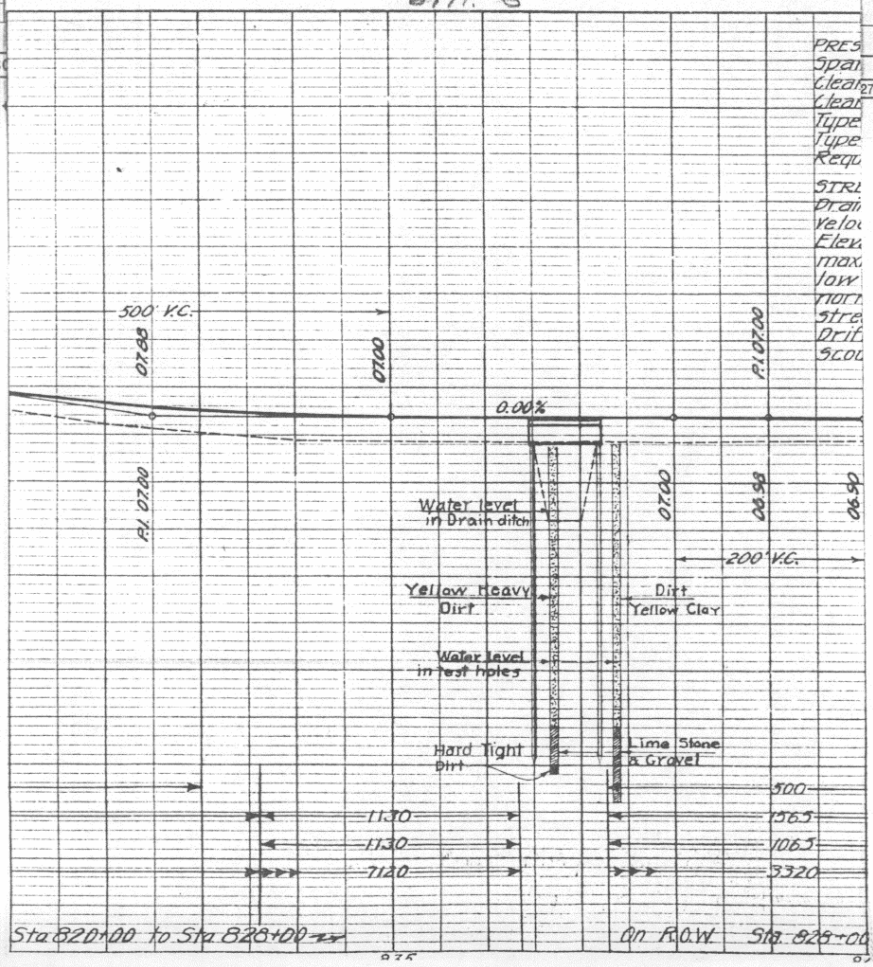


Bridge Dept. TIMBER SPANS Made Apr 2-42

Location Sec. 20/29 Township 22 S Range 48 W Photo. Neg. No. B-129-4 Checked Date

Bridge over Draw Station 953+23 to 953+70 No. and Type of Spans 2 - T D Total length 47'-0"

Rating H 20 S16 Member St Rating Unit Stress 1765 Design Live Load H-15 '28 Required Live Load H 20 S16 '42 Posted Live Load Year built 1936

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	0.0	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	-1.4 to 0.0 400' VC	"	Between Rail	31'-0"		
Forward approach	tan	0.0 to +1.8 500' VC	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans AWP4006

Contract No. Contractor Gardner Const. Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 5537.95

WATERWAY Area of Br. opening 336 sq. ft. 70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	
Low bridge	
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 3 sq. mi. Flat farm land.

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 3770.4

Nature of stream bottom

Remarks

4 Br. Stringers, see Calc. for [illegible] - 1933 AASHO 1202-51. (1-25-L.

TM27

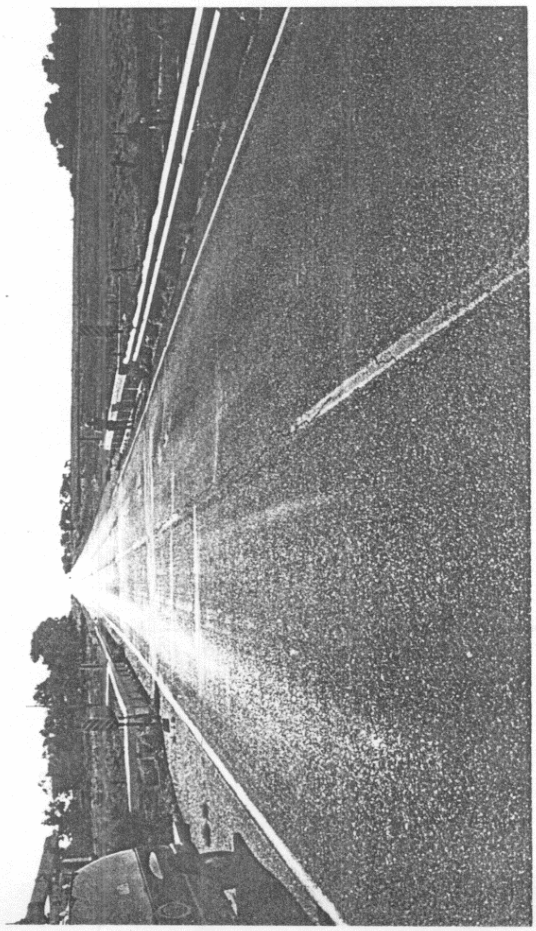
SUBSTRUCTURE

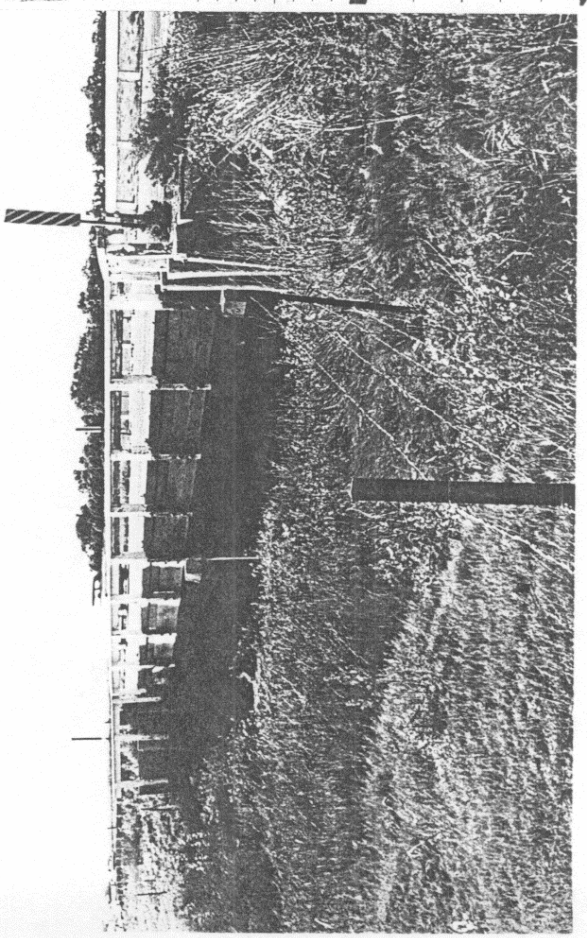
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x 12"	TC	7	12"	24' TP			10' T 45°
Forward	12"x 12"	TC	7	12"	24' TP			
Pier	12"x 12"	TC	7	12"	24' TP			
Pier								Swaybraces 3"x 12" T
			8	12"	20' TP Sub-abut.			Backing Plank 4"x 12" T

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-B	AWP-4006	Bent	50	B 421.87	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

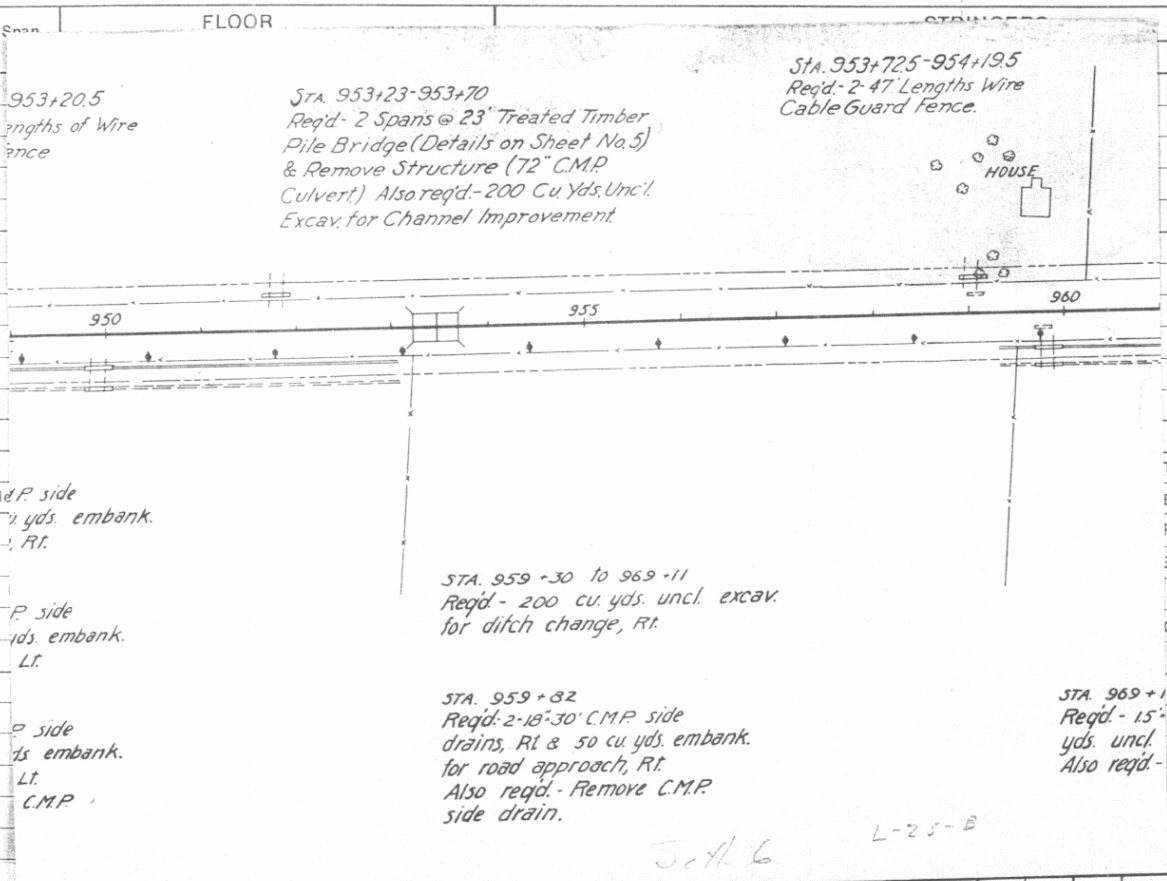




SUPERSTRUCTURE

Span | FLOOR | STRINGERS

Spacing	Allowable Stress
1'-7¼"	1600



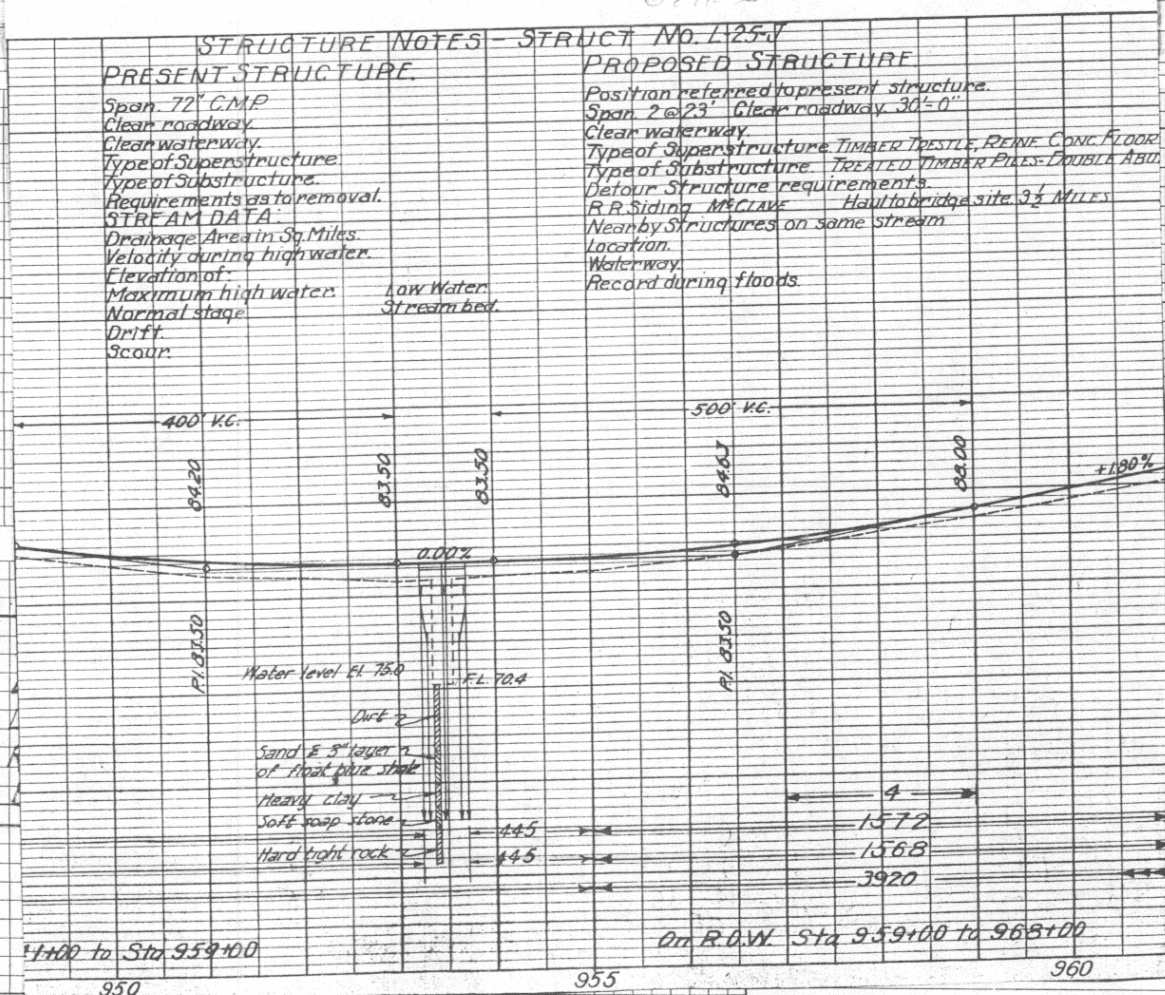
Top Laterals

Bott. Laterals

Portals

Swaybrace

C to C Chords



in pencil)

ngalittle Hole @

drail B.S. '62

No. 6" o.s. Appr

ning slightly. Top

ing, piles gone. 68

g fair. Sub-abutment has

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-B	AWP-4006	Bent	50	B 421.87	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made AFF 2-42

Location Sec. 21/28 Township 22 S Range 48 W Photo. Neg. No. B-129-5 Checked Date

Bridge over Graveyard Creek Station 1030+43 to 1030+76 No. and Type of Spans 1 {CI CSG Total length 33'-0"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '35 Required Live Load Posted Live Load Year built 1923 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	tan	0.0	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy	
Rear approach	tan	-2.3 to 0.0 400' VC	"	Between Rail	31'-2"			
Forward approach	tan	0.0 to +0.8 200' VC	"			Minimum	Forward approach pavement and Rdwy	
				Sidewalks	none			

Design by CSHD Built by CSHD Maintained by CSHD Plans AWP4006

Contract No. Contractor Gardner Bros. Fabricator Midwest Steel #6-2446 Contract price 14263.76

WATERWAY Area of Br. opening 248 70 Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3749.90
Low bridge	3747.40
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) Flat form land

Drift and Ice light drift no ice Dams none

Channel width Depth Elevation of Stream bed 3732.0

Nature of stream bottom

Remarks

TM 27

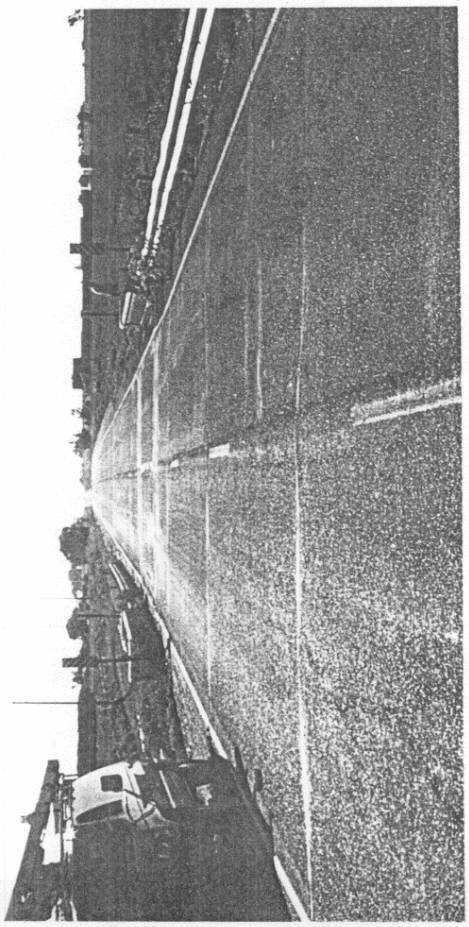
SUBSTRUCTURE

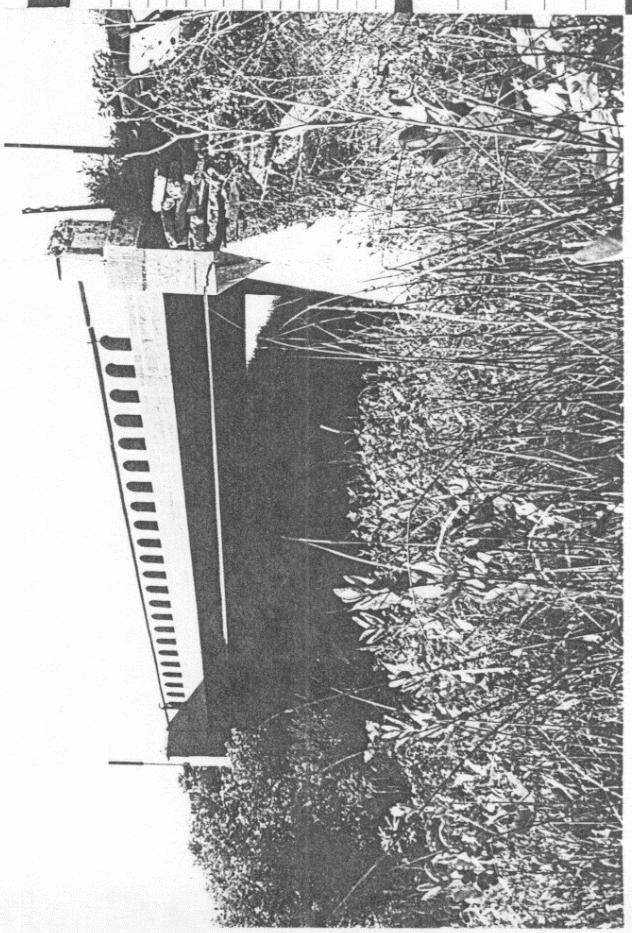
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CG	23'-1½"		10' Conc 45°
Forward					CG	23'-1½"		
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-25-C	AWP-4006	Bent	50	3 423.34	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
30'-0"	6	3'-5¼"	1'-1½" x 2'-1½"	8½"	Originaly 20' Rdwy CSG - FAP218 B 1923 - Widened by I-beams on wings

Max span length for steel strgrs = 24'-7⅝"

New I beams - 21" WF @ 68#

RIGID FRAME - No. of Ribs | Spacing | Clear Span | Slab Thickness

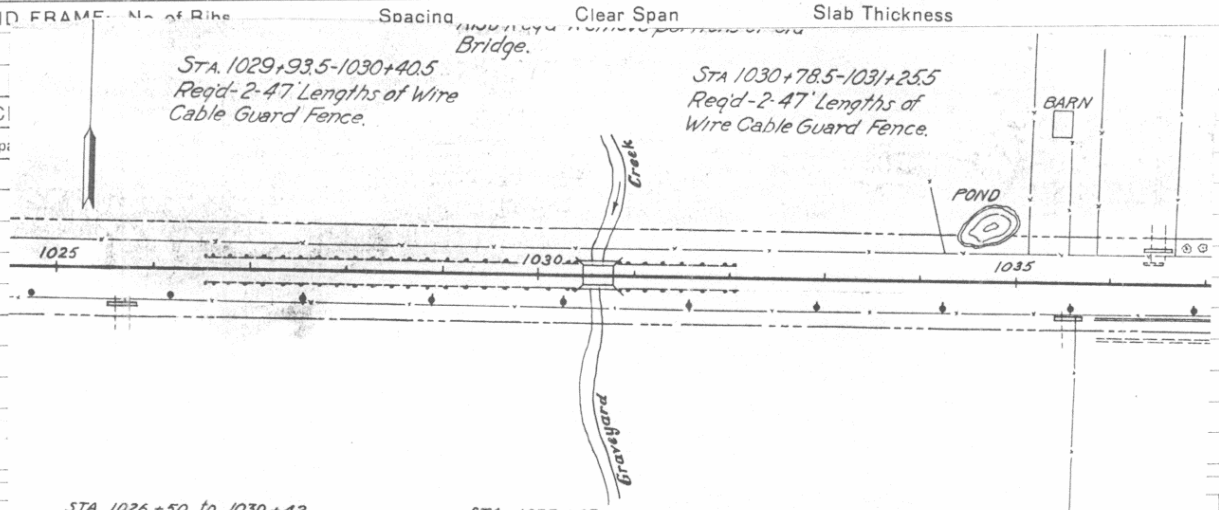
ARCH

Clear Span

Bridge.

STA. 1029+93.5-1030+40.5
Req'd-2-47 Lengths of Wire Cable Guard Fence.

STA 1030+78.5-1031+25.5
Req'd-2-47' Lengths of Wire Cable Guard Fence.



STA. 1026+50 to 1030+42
Req'd - Remove 784' guard fence on left & Right.

STA. 1035+63
Req'd - 18"x48' C.M.P. side drain, Rt & 50 cu. yds. embank. for road approach, Rt.

STA. 1035+85 to 1053+40
Req'd - 400 cu. yds. uncl. excav. for ditch change, Rt.

STA.- 1030+77 to 1032+05
Req'd.- remove 256' guard fence left & Right.

S.H.C.

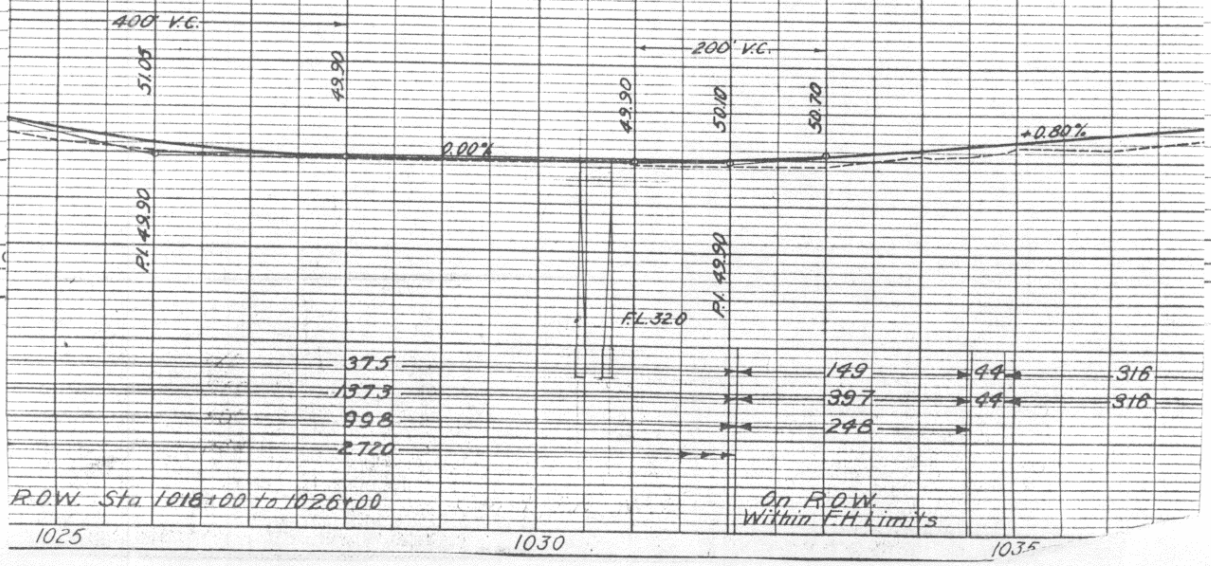
STRUCTURE NOTES - STRUCT. NO. L-25-C

PRESENT STRUCTURE.

Span 30'-0"
Clear roadway 19'-0"
Clear waterway
Type of Superstructure Conc. T Beam
Type of Substructure Conc. Gravity
Requirements as to removal.
STREAM DATA:
Drainage Area in Sq Miles.
Velocity during high water
Elevation of:
Maximum high water Low Water
Normal stage Streambed.
Drift
Scour

PROPOSED STRUCTURE.

Position referred to present structure: WIDENING ROADWAY
Span Clear roadway 30'-0"
Clear waterway
Type of Superstructure Conc. T-Beams & 3 Steel I-Beams Exc.
Type of Substructure: Concrete Gravity
Detour Structure requirements.
R.R Siding KEESE Haul to bridge site 3 MILES
Nearby Structures on same stream.
Location
Waterway.
Record during floods.



LAT
LON
Rd.
BY.

Traffic

STR. NO.

L-25-

Third Bridge

	CLEARANCE			
50	—12	12-14	14—	0

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 9-52 Checked Date

Location Sec. 27 Township 22 S Range 48 W Photo. Neg. No. B 913-6

Bridge over EAST GRAVE YARD CREEK Station 1056+ No. and Type of Spans 1-CS Total length 16'-6"

Rating H-15 Member Rating Unit Stress Design Live Load H-20 Required Live Load H-20 & 24 Ton 44 Posted Live Load Year built 1924/1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	TANGENT	+ 0.17%		Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	✓	✓		Between Rail				
Forward approach	✓	✓				Minimum	Forward approach pavement and Rdwy	
BEARING	N87°53'E			Sidewalks	NONE			WIDENED AWP 4006

Design by C. D. of H. Built by C. D. of H. Maintained by C. D. of H. Plans FAP 218-B

Contract No. Contractor Gardner Bros. Fabricator Contract price 9811.82

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	
Low bridge	
Low water	
Normal high water	
Maximum high water	3741.0

Drainage area (size and character)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks THIS STRUCTURE WIDENED TO 30'-0" RDWY. WITH C.I. UNDER AWP 4006

All Conc. f'c = 2,500 psi. (Added 2 WF ea side)

Roll FM 2?

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CONC.			4 @ 45° 14'-0" LONG.
Forward					✓			
Pier								
Pier								

First Bridge Second Bridge Third Bridge

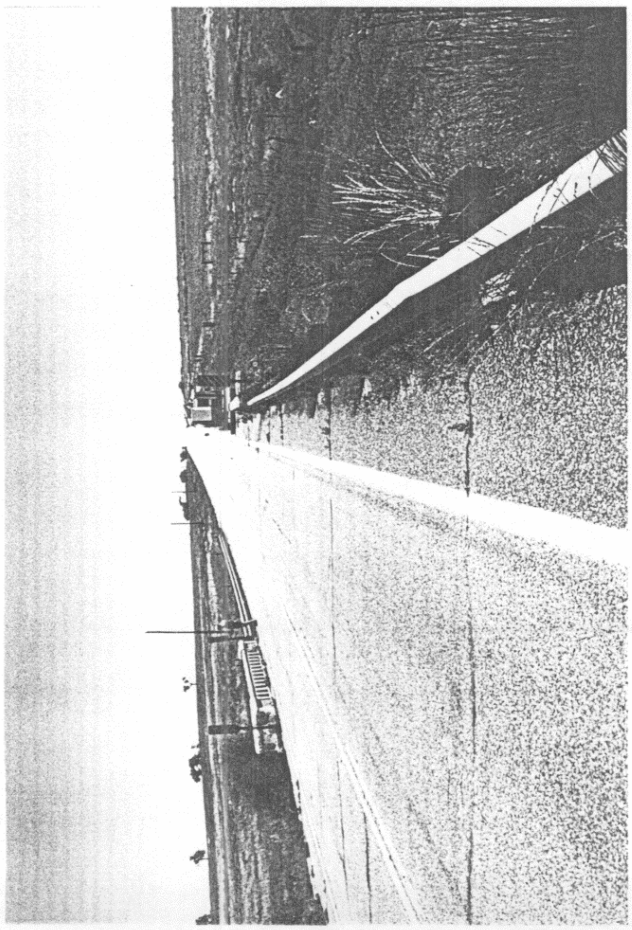
Traffic Survey Data 2450

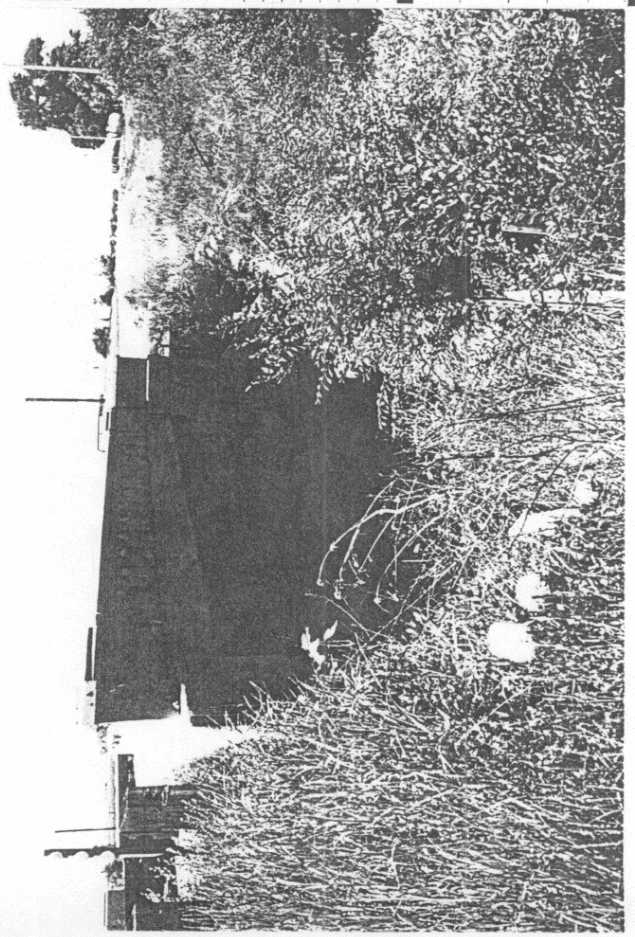
STR. NO.	PROJECT	COUNTY	Highway	LOG		
L-25-d	FAP 218-B AWP 4006	BENT	50	B 423.82		FA

H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20

ROADWAY: 15-18 | 19-22 | 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open





SUPERSTRUCTURE

Curbs 9" Conc. Hand rail Conc. 3'9" High

Wearing Surface 1" oil surf.

CONCRETE SLAB - Clear Span 14'-0" Thickness 14" at Curb 1'-3½" at Center

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

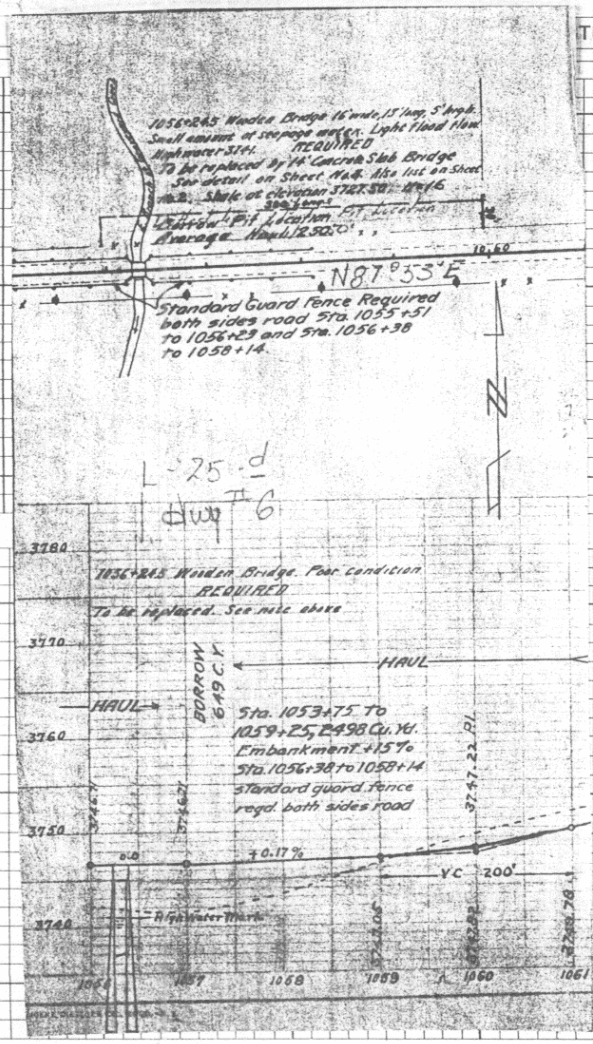
RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

Latitude 38°08.1'
Longitude 102°47.6'

TURE SHOWING DIMENSIONS



REMARKS:-General condition of structure (in pencil)

Wrong number BS 58

South west pilaster broken BS 60
SW endpost loose from collision 7" o.s. Appr
fills ok. SE shoulder washing badly. Conc.
disintegrating badly in both abuts. Widened
on wings. Scouring under SW corner. '68'
Paint on bms. poor. '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
1-25-d	FAP 218-B AWD 4006	Bent	50	B 423 R2	FA															

CONCRETE and STONE MASONRY BRIDGES

Bridge Dept.

Location Sec. 19/30 Township 22 S Range 47 W Photo. Neg. No. B 913-7 Checked Date

Bridge over RIVER VIEW CANAL Station 1219+ No. and Type of Spans 1-CS Total length 18'-6"

Rating H-15 Member Rating Unit Stress Design Live Load H-15-35 Required Live Load Posted Live Load Year built 1924 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 20° 22' Lt.	Superelevation
Bridge	TANGENT	-0.20 %		Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	✓	✓		Between Rail				
Forward approach	✓	✓				Minimum	Forward approach pavement and Rdwy	
				Sidewalks				WIDENED 168 BR-2

Design by C. D. of H. Built by C. D. of H. Maintained by C. D. of H. Plans FAP 168-B

Contract No. Contractor Driscoll Const. Co. Fabricator Contract price [illegible]

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation	Drainage area (size and character)
Grade center of bridge		
Low bridge		Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed
Normal high water		Nature of stream bottom
Maximum high water		Remarks THIS STRUCTURE WIDENED TO 30'-0" Rdwy. WITH C.I. UNDER 168 BR#2

Microfilm Roll # T-138

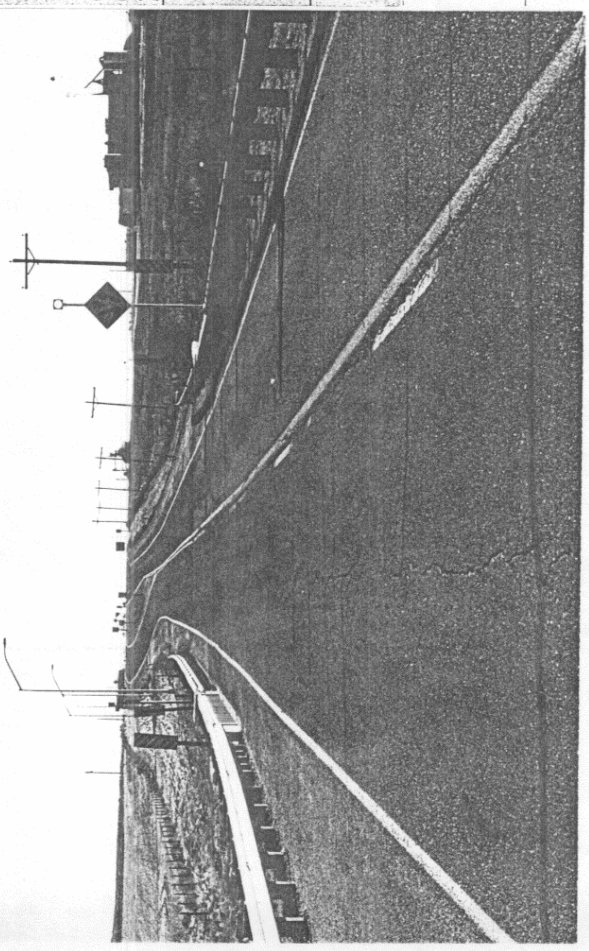
SUBSTRUCTURE

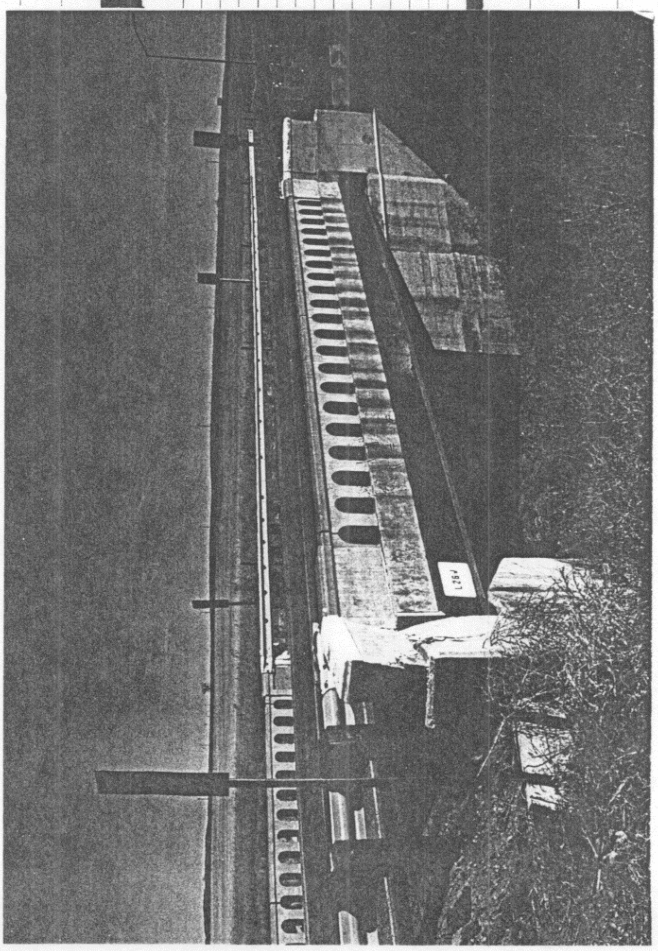
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CONC.			4 @ 9'-0"
Forward					✓			
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2050

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-J	FAP 168 B FAP 168 BR2	PROWERS	50	B 426.90	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





RIGID FRAME:- No. of Ribs | Spacing | Clear Span | Slab Thickness

ARCHES:- Material | Rise | Shape

Clear Span	Ribs: No.	Ribs: Spacing	Ribs: Width	Thickness: Crown	Thickness: Spring	Thickness: Deck Slab	Remarks

Latitude 38°08.1'
Longitude 102°41.8'

Traffic Survey Data 2450

STR. NO.	PROJECT	COUNTY	Highway	LOG
L-26-J	FAP 168 B FAP 168 BR2	PROWERS	50	B 126.90 FA

H - LOADING - RATED: —10 | 10 | 12½ | 15 | 20 | 15-18 | 19-22

ROADWAY: 23-26 | 27-30 | 40 | 50

CLEARANCE: —12 | 12-14 | 14— | Open

First Bridge | Second Bridge | Third Bridge

Station 1219+074 - 1219+272 Req'd.- Widen Present Bridge (Details on Sheets No. 4 & 5) NOTE: Concrete Waste from Bridge is to be placed in drainage canal to check scour.

...way

...19+049 Req'd.- ...Cable Guard

Station 1219+29.7 - 1219+ 2-47' Lengths Wire Cabl... Fence Rt. & Lt.

1220

S 89°39' E

...eq'd 36"x30' C.M.P. ...Headwall on Left.

Station 1219+35 Req'd.- 36"x30' C.M. Side Drain with Headwall on Le...

STA. - 1218+78
Req'd. - Remove 18"x32' C.M.P. Cross Culvert.

N. W. ¼ SECTION 30
T. 22 S. — R. 47 W.

Hwy 116

STRUCTURE NOTES - STRUCT. NO. L-26-J

...T STRUCTURE.

...-9"
...tway. 20'-0"
...rway. 16'-0"
...erstructure. CONCRETE SLAB
...structure. CONCRETE ON WOOD PILES
...nts as to removal.
DATA:
Area in Sq. Miles.
...uring high water
...f:
...high water
...tage

Low Water
Stream bed.

PROPOSED STRUCTURE

Position referred to present structu...
Span 19'9" Clear roadway 30'-0"
Clear waterway 16'-0"
Type of Superstructure. CONCRETE SLAB
Type of Substructure. CONCRETE ON ...
Detour Structure requirements. N...
R.R. Siding WILEY. Haul to bridge
Nearby Structures on same stream.
Location.
Waterway.
Record during floods.

3740

300' V.C.

600' V.C.

3709

3690

3720

3736

-0.20%

3700

3680

3660

478

GRADE SEPARATION

Made WDC

Location Sec. 20 Township 22S Range 47W Photo. Neg. No. Checked Date 4/88

Overpass / Underpass SH 50 Station 1262+71.80 No. and Type of Spans 2-CSECP Total length 226'-7"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 88

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 14°33'18" Superelevation
Bridge				Between Curbs	44'-0"	Truss	Rear approach pavement and Rdwy
Rear approach				Between Rail	46'-6"		
Forward approach				C to C Truss		Underpass	Forward approach pavement and Rdwy
				Sidewalks			

Design by CDOH Built by KIRKLAND TRENCHING Maintained by CDOH Plans CXFC 17-0050-14

Contract No. Contractor Fabricator Contract Price $484,415.71

Apportionment Cost Blast Protection

Provision for RR Development

Drainage

Lighting System Collision protection

SUBSTRUCTURE

Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear ABUT 1	2'-6"	CONC. ON SEMI GRAVITY	5		HP 12x74 - 50'-6"		PILES CONC. ON	15'-3", Parallel with ℄ OF ROADWAY
Forward ABUT 2	2'-6"	" "	5		HP 12x74 - 44'-0"		CONC. ON PILES	ACUTE ∠ 75°55'15"
Pier 2	1'-6"	CONC. OWSP, FTG.	16		HP 12x74 - 20'-3"		"	
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-26-BU	CXFC 17-0050-14	PROWERS	50	B 427.71																

SUPERSTRUCTURE (If Steel Truss, see next card)

Span No.	FLOOR		STRINGERS					
	Thickness - Type and Material	Wearing Surface	Effective Span	Number	Size	Material	Spacing	Stress
A								
B								
C								
D								
E								

Stringers Lapped or butted

Wheel guard

Hand Rail BRIDGE RAIL TYPE 3

Remarks

CONCRETE SLAB - Clear Span

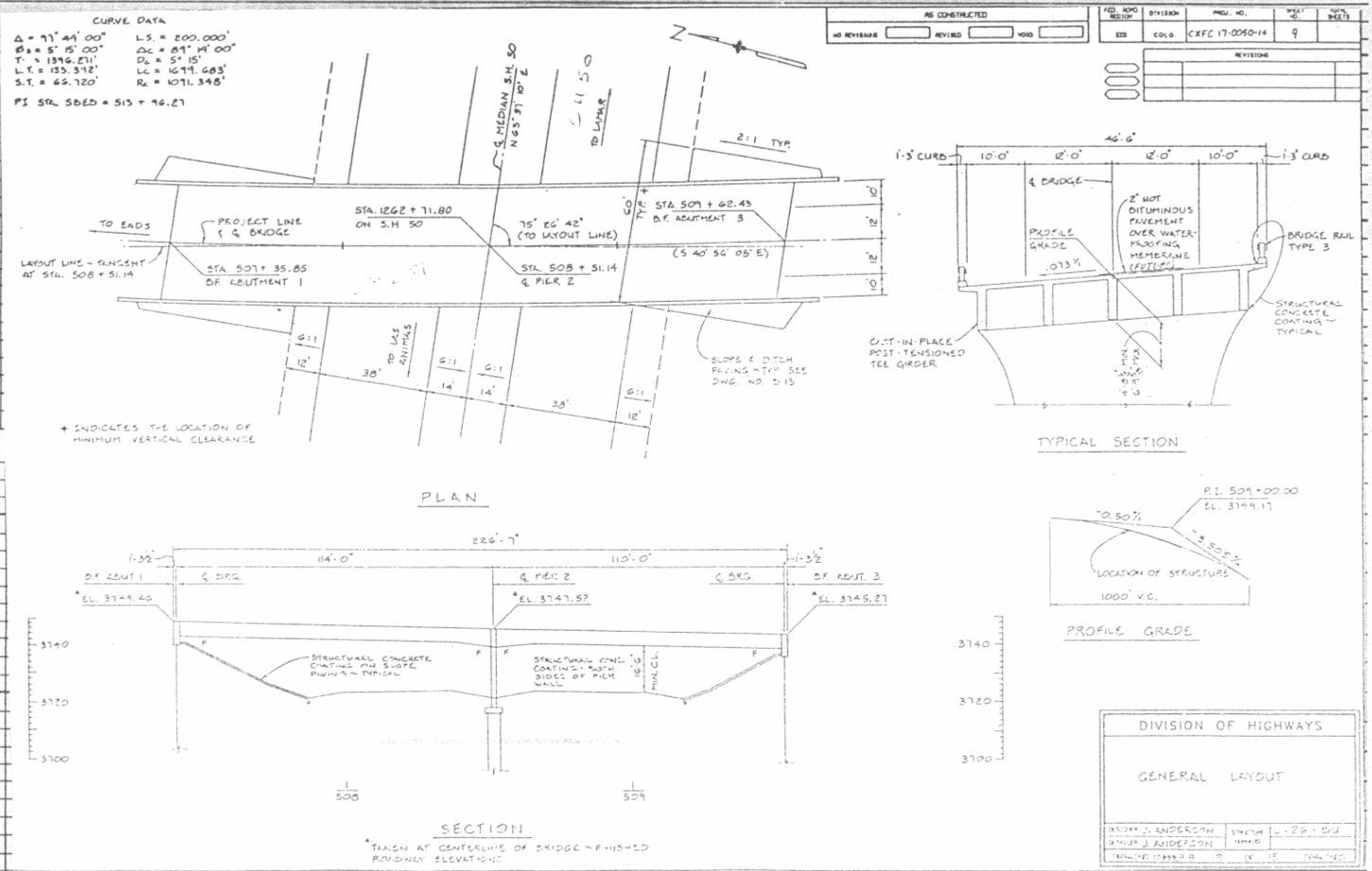
Thickness 8 1/4"

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness
114'-0"				
110'-0"				

Type of RR deck on Underpass

SKETCH OF STRUCTURE SHOWING DIMENSIONS



First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED					ROADWAY						CLEARANCE			
					—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-26-BU	CXFC 17-0050-14	PROWERS	50	B 427.71															

CONCRETE and STONE MASONRY BRIDGES

Made DOH

Location Sec. 28 Township 22S Range 47W Photo. Neg. No. Checked Date May 82

Bridge over AMITY CANAL Station * No. and Type of Spans 1-CDTPG Total length 62'0"

#Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 8[illegible]

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0	Superelevation
Bridge	Tan	-1.65%	1300'	Between Curbs	112'2"	Maximum	Rear approach pavement and Rdwy	
Rear approach	"	"		Between Rail				
Forward approach	"	"		o to o	114'8"	Minimum	Forward approach pavement and Rdwy	
Bearing S59-25-45E				Sidewalks				

Design by DOH Built by DOH Maintained by DOH Plans FC 050-5(16)

Contract No. Contractor HIM Const., Inc. Fabricator Contract price $268,567.20

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood

	Elevation	
Grade center of bridge	3682.51'	Drainage area (size and character)
Low bridge		Drift and Ice Dams
Low water		Channel width Depth Elevation of Stream bed 3666.0'
Normal high water DHW	3672.4'	Nature of stream bottom
Maximum high water		Remarks *Sta 1312+96.45 to 1313+58.45; Remove L-26-A # Int. Alt.

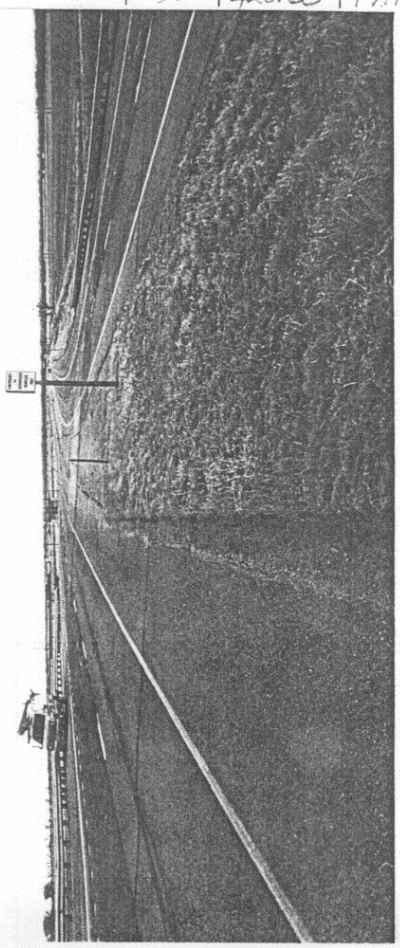
SUBSTRUCTURE

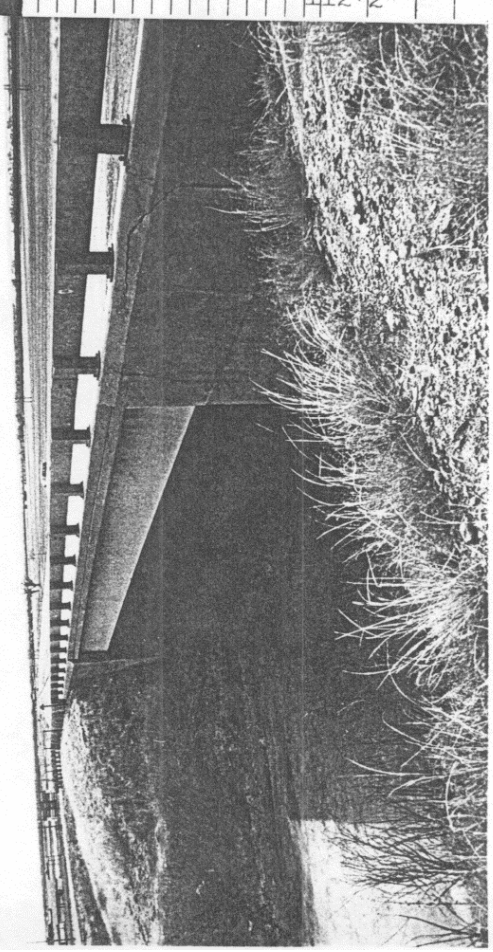
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'6"x2'4"	Conc	13	HP	12x53			4-13'3" @ 0 deg
Forward	"	"			"			
Pier								
Pier								

Traffic Survey Data

First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-B#	FC050-5(16)	PROWERS	50	B 428.68	FAP	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							41'2"	





SUPERSTRUCTURE

Curbs 2 – 1'3" x 6" **Hand rail** metal plate gd rail on W6x20 posts; 2'5" high, galv, mounted thru curb (type 3)

Wearing Surface 2" HBP

CONCRETE SLAB - Clear Span **Thickness**

CONCRETE BEAM & SLAB double T precast and prestressed

Clear Span C to C	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
59'6"	16	7'2"	7'2"x3'8½"	6½"	

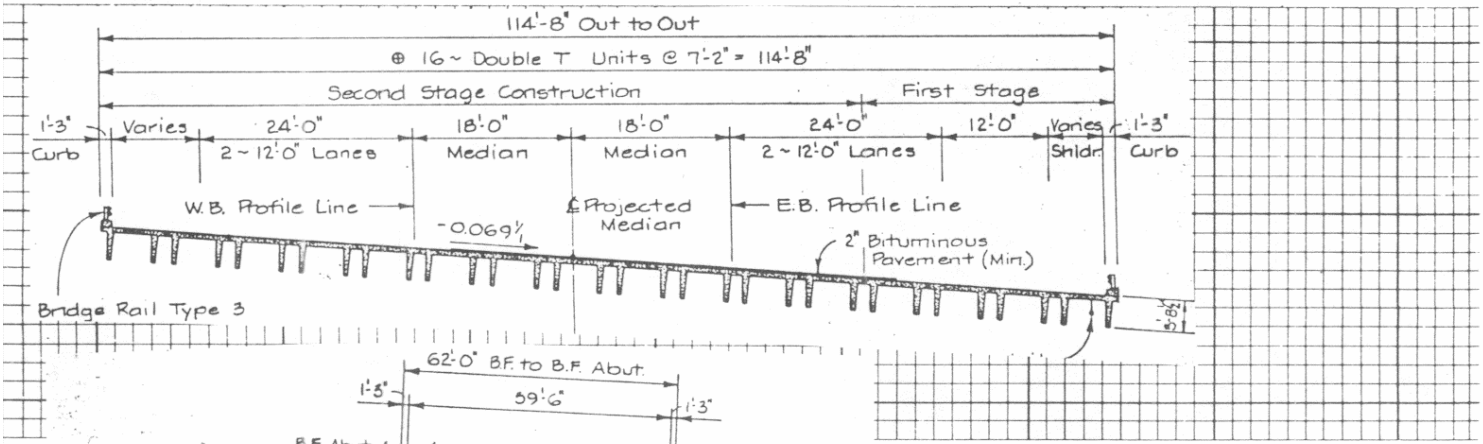
RIGID FRAME:- No. of Ribs **Spacing** **Clear Span** **Slab Thickness**

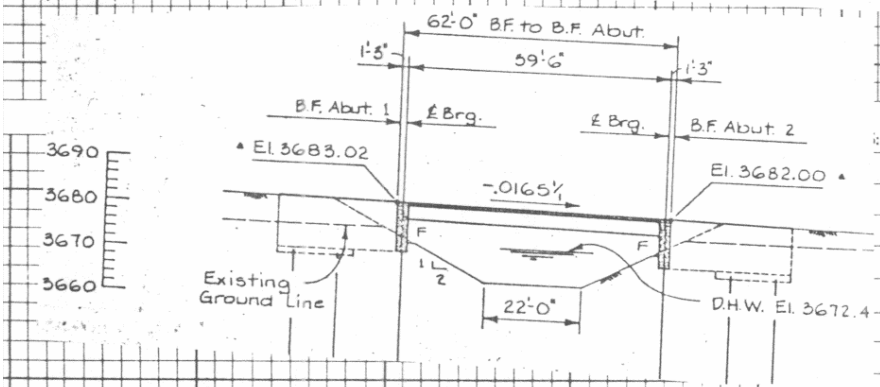
ARCHES:- Material **Rise** **Shape**

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

Lat 38-06.6N
Long 102-41.8W

SKETCH OF STRUCTURE SHOWING DIMENSIONS





:-General condition of structure (in pencil)

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						–10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	–12	12-14	14–	Open

CONCRETE and STONE MASONRY BRIDGES

Made CJD

Checked

Date 6/83

Location Sec. 28 Township 22S Range 46W Photo. Neg. No.

Bridge over Wiley Drain Station 1332+19.83 No. and Type of Spans 6-CBC Total length 117' 11-7/8"

Rating HS 20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built '84

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 56°34.3' Lt. Superelevation
Bridge	Spiral	-0.6756%		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		Rdwy 2 @ 38'0"		Minimum	Forward approach pavement and Rdwy
				Sidewalks			

Design by DOH (M.SHIN) Built by DOH Maintained by DOH Plans FC 050-5(19)

Contract No. Contractor Kenney Const. Co. Fabricator Contract price $382,995.25

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3665.9'
Low bridge	
Low water	
Normal high water	Dgn. 3662.8'
Maximum high water	

Drainage area (size and character) 33 Sq. Mi.

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3652.25'

Nature of stream bottom

Remarks

Int. Alt.

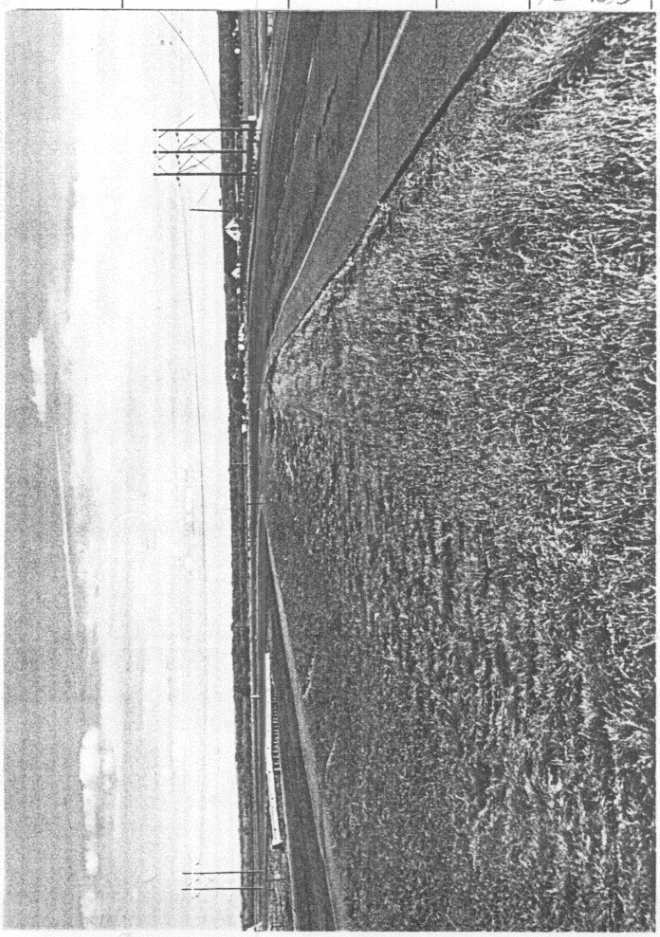
SUBSTRUCTURE

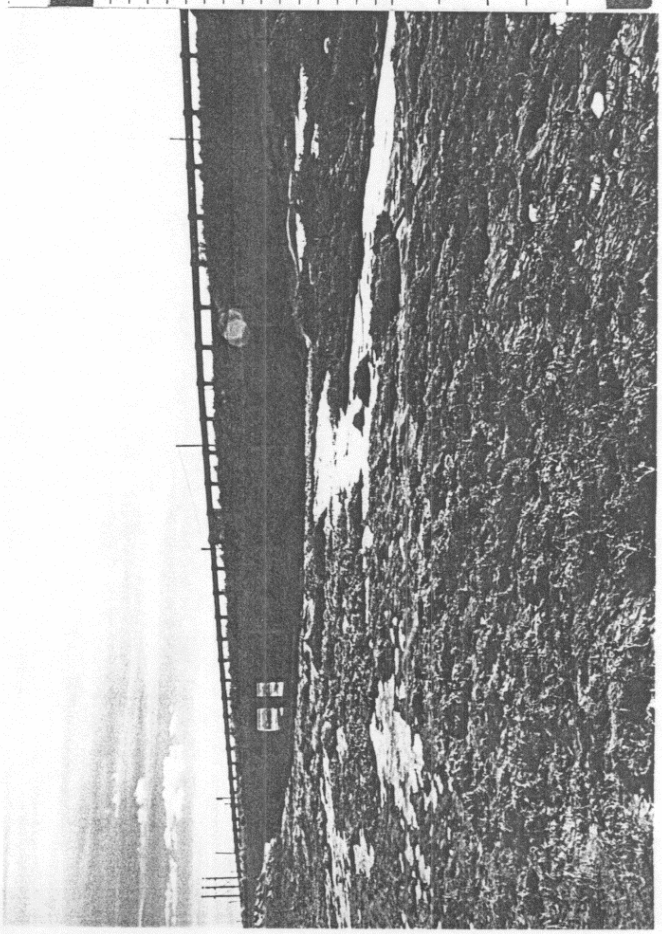
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								2 - 56'0" parallel to $\mathcal{L}$ Rdwy
Forward	(10'x10'x10'x10'x10'x10')	x8'x23 6'						2 - 32'0" @ 90°
Pier		(Special)						
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
L-26-BT	FC 050-5(19)	Prowers	50	429.05	AP	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50 2 @ 38'0"	—12 12-14 14— Open





SUPERSTRUCTURE

Curbs | **Hand rail**

Wearing Surface

Max Height of Fill - 6'0"

CONCRETE SLAB - Clear Span | **Thickness** Top Slab - 11"

6'-6'-6'-6'-6'-6' | Bottom Slab - 12"

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

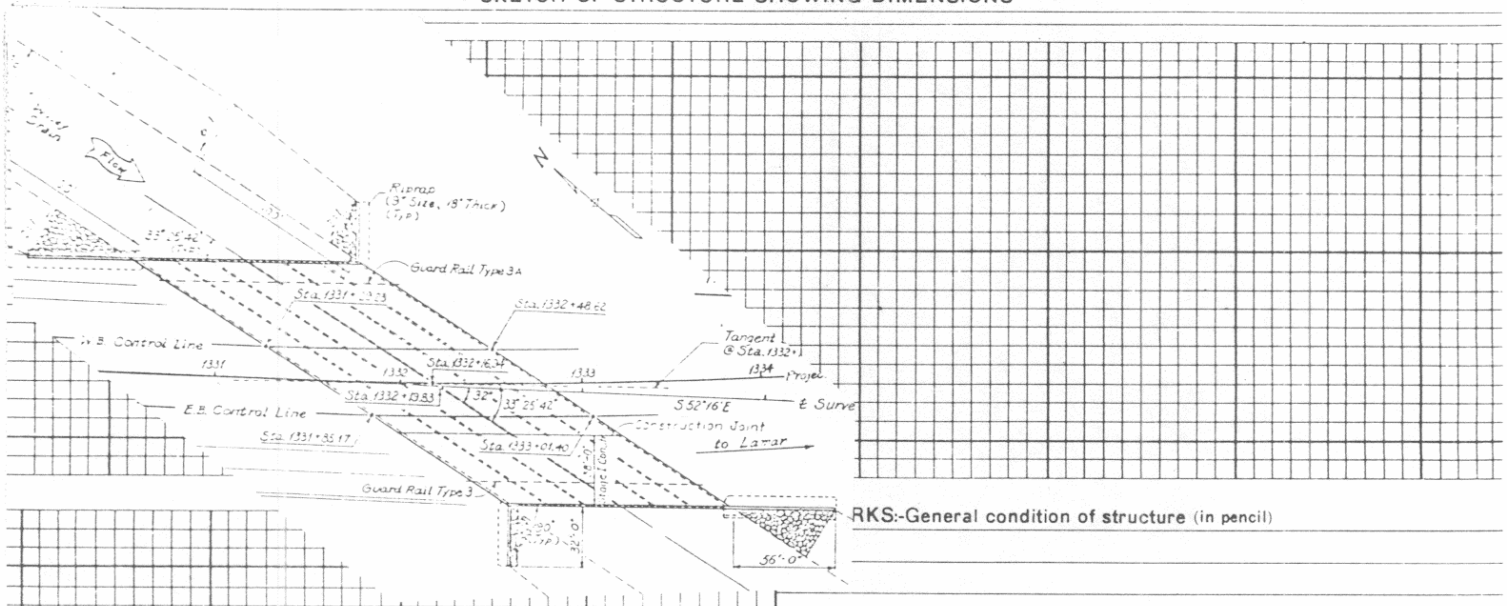
RIGID FRAME:- No. of Ribs | Spacing | Clear Span | Slab Thickness

ARCHES:- Material | Rise | Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

Lat. 38°06.5'
Long. 102°41.8'

SKETCH OF STRUCTURE SHOWING DIMENSIONS



RKS:-General condition of structure (in pencil)

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						-10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	-12	12-14	14-	Open
T-26-PT	FC 050-5(19)	Prowers 50																		

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made TTP

Checked SCH Date Jan '79

Location Sec. 26 Township 22S. Range 47W. Photo. Neg. No.

Bridge over Vista Del Rio Canal Station 1463 + 68 No. and Type of Spans 2-CBC Total length 25'4-17/32

Rating HS-20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 79

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 25° LT Superelevation
Bridge	TAN	500' VC		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	TAN	-0.133%		Between Rail			
Forward approach	TAN	+0.3763%		RDWY 2@ 36'-0"		Minimum	Forward approach pavement and Rdwy
Bearing N84° 37' 30"E				Sidewalks			

Design by DOH Built by DOH Maintained by DOH Plans FC 050-5(14)

Contract No. Contractor POPE-JOY CONST. CO., Fabricator Contract price $107,971.36

WATERWAY Area of Br. opening Area of Relief opening Q10 = 1000 cfs. Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	
Low bridge	
Low water	
Normal high water DHW	3632.8'
Maximum high water	

Drainage area (size and character) 82 sq. mi.

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3624.7'

Nature of stream bottom

Remarks L-26-b REMOVED

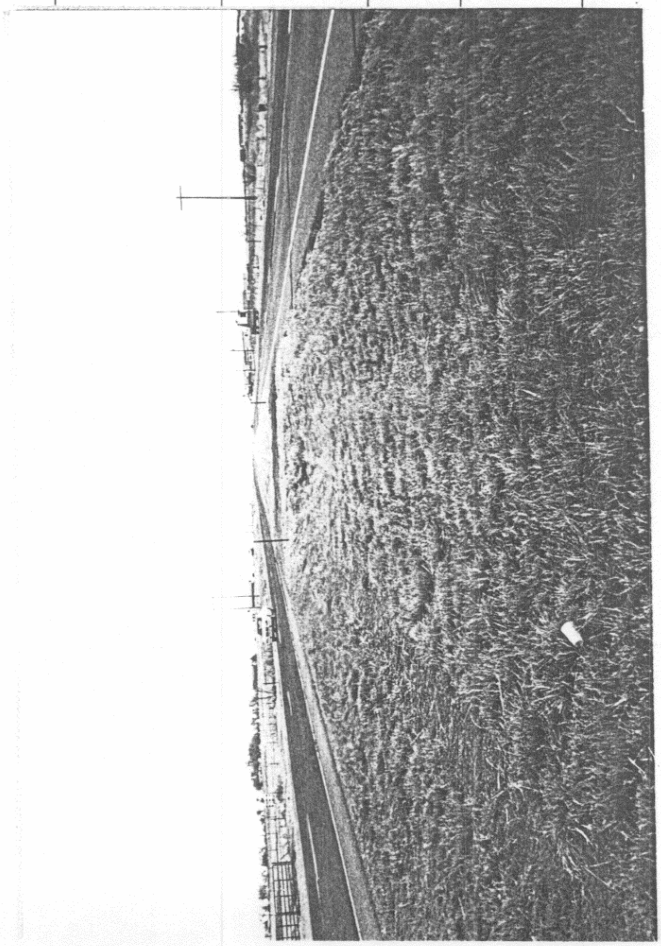
SUBSTRUCTURE

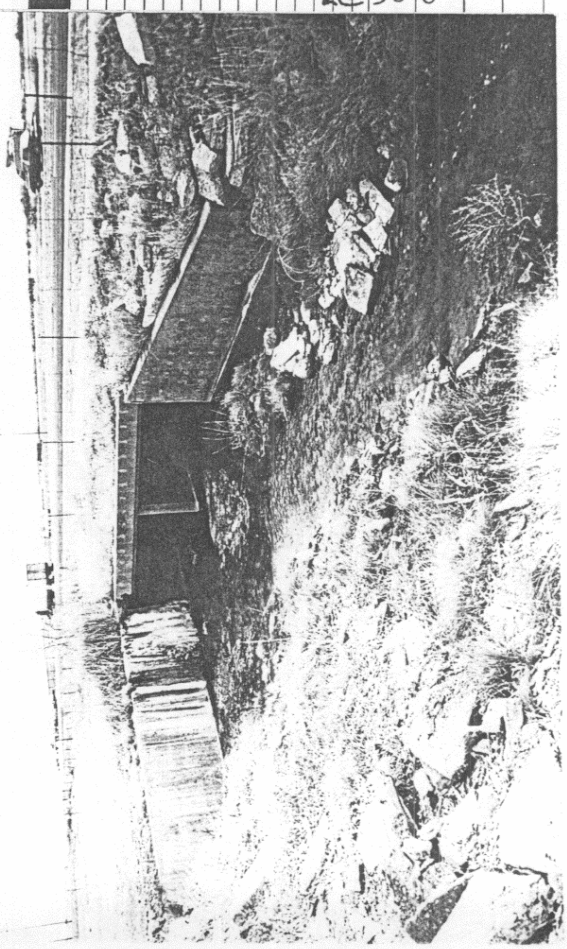
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								1-20' @ 90°
Forward								1-16' @ 30°
Pier	Double	(10'X10')X7'X185' conc. box culv.						1-30' @ 115°
Pier	Type	(10-10-S)						1-20' @ 0° (parallel to ℄ of RDWY

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-B0	FC 050-5(14)	Prowers	50	B431.61	FAS	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							2@36'0"	





SUPERSTRUCTURE

Curbs — Hand rail

Wearing Surface

MAX. HEIGHT OF FILL -5'0"

CONCRETE SLAB - Clear Span — Thickness

10' X 10' — TOP SLAB - 10" / BOTTOM SLAB - 11"

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs — Spacing — Clear Span — Slab Thickness

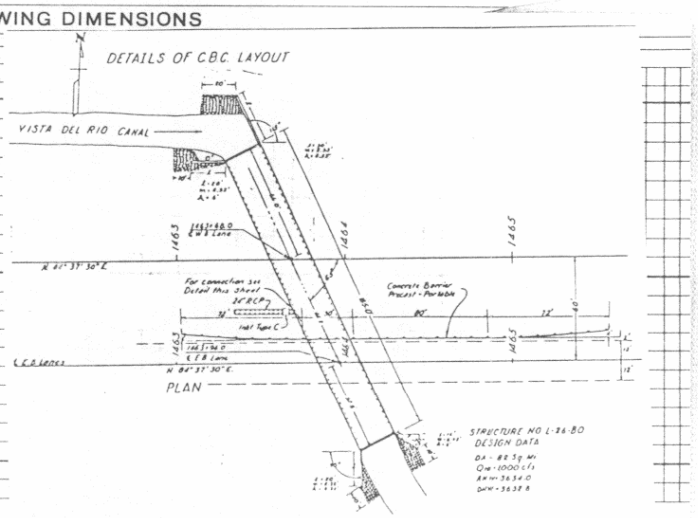
ARCHES:- Material — Rise — Shape

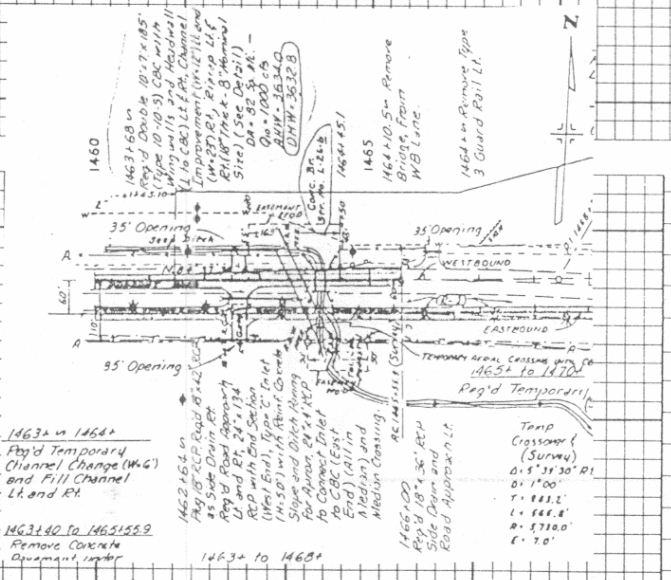
Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

LAT: 38°06.6

LON: 102°38.7

SKETCH OF STRUCTURE SHOWING DIMENSIONS





REMARKS:-General condition of structure (in pencil)

First Bridge — Second Bridge — Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-BO	FC 050-5(14)	Prowers	50	B431.61	FAS	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							2@36'0"	

Colorado State Highway Bridge Dept. — STEEL BEAM and GIRDER BRIDGES — Made [illegible] — Checked — Date 5/66

Location Sec. 30 Township 22S Range 46W Photo. Neg. No. — No. and Type of Spans 9 - CI — Total length 569'-6"

Bridge over Arkansas River Station * — Rating HS20-44 Member — Rating Unit Stress — Design Live Load — Required Live Load — Posted Live Load — Year built 67

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew "0" Superelevation
Bridge	Tangent	1300' V.C.	685'	Rdwy. & Curbs	28'-0"	Maximum	Rear approach pavement and Rdwy 20'-0"x 0'-10"x 28'-0"
Rear approach	"	+2.03%		Between Rail			
Forward approach	"	-1.83%		C to C Truss		Minimum	Forward approach pavement and Rdwy 20'-0"x 0'-10 x 28'-0"
Bearing	N 0° 31'W			Sidewalks	2 @ 2'		

Design by CDH (EFS) — Built by CDH — Maintained by CDH — Plans F 001-5(20)

Contract No. — Contractor A. S. Horner Const. Co. — Fabricator Midwest Steel 66-3229 — Contract price [illegible]

WATERWAY — Area of Br. opening [illegible] — Area of Relief opening — Skew of flow (Normal) — Flood

	Elevation
Grade center of bridge	3625.102
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 19,500 sq.miles

Drift and Ice Hvy. — Dams John Martin & others

Channel width — Depth — Elevation of Stream bed

Nature of stream bottom

Remarks *43+85.0 to 49+54.5

Per MP 17-0050-11 Steel Stringers Painted (1982) by Rocky Mtn. Steel Painters Inc. $7702.00

This struct. in the S.-bnd. lane, parallel to L-26-D.

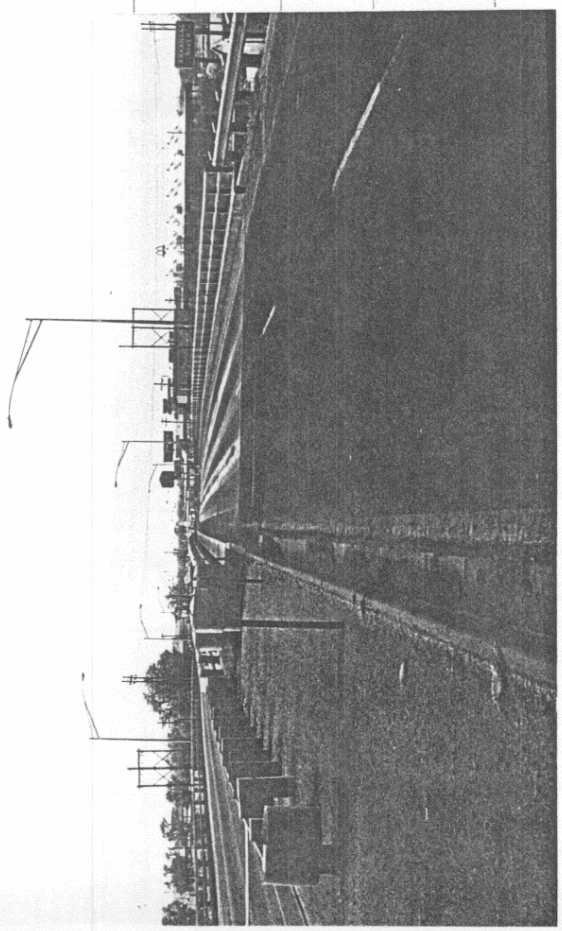
SUBSTRUCTURE

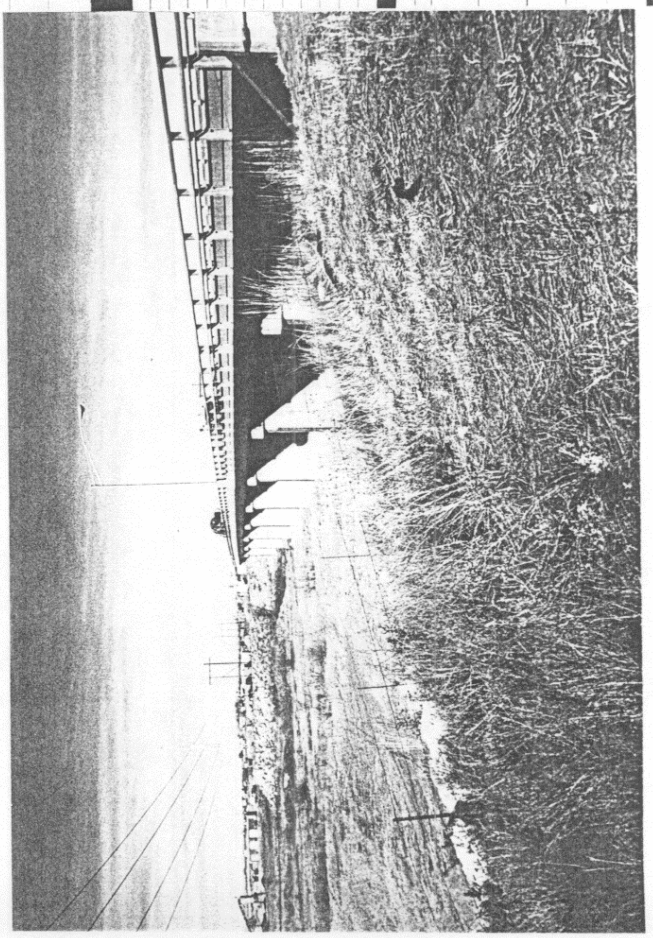
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'6"x 5'4"	Conc.	4	10"	BP @ 42 x 74'			No Wings
Forward	"	"	"	"	"			
Pier	2'6"x Var	"	Semi.Gr.	on 10"BP	@ 42#	Varies		
Pier	"	"	"	"	"	"		Swaybraces
								Backing Plank

First Bridge — Second Bridge — Third Bridge

Traffic Survey Data 7250

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-H	001-5 (20)	PROWERS	50	E 434.13	FA-	10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	12 12-14 14 Open





SUPERSTRUCTURE

Curbs 1'6" Hand rail BRIDGE RAIL TYPE 10

Wearing Surface 2" HBP

CONCRETE SLAB - Clear Span Thickness 8 1/4"

CONCRETE BEAM & SLAB

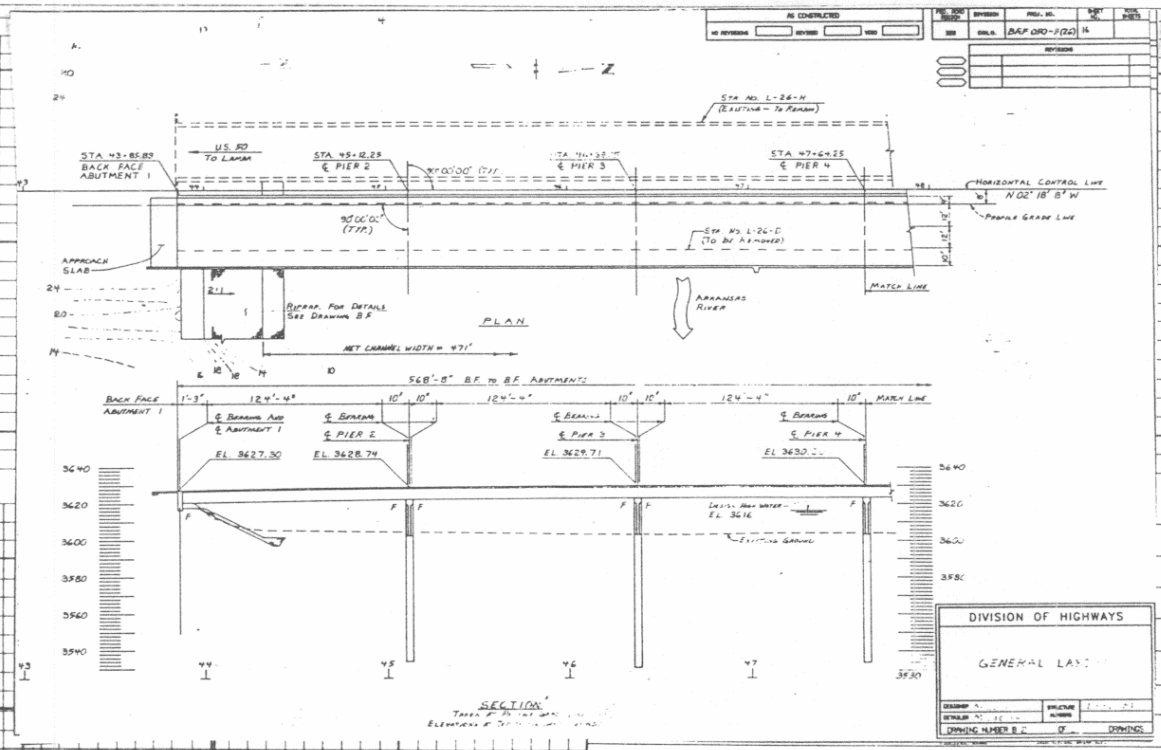
Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

SKETCH OF STRUCTURE SHOWING DIMENSIONS



POD

LAT.	38° 06.3'
LONG	102° 36.7'
RD. SECT.	117
BR. LETTER	B

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED					ROADWAY						CLEARANCE			
					—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-26-BW	RRF 050-5(26)	PROWERS	50	B 1,120 14															

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made AFF 2-42

Checked Date

Location Sec. 31 Township 22S Range 46W Photo. Neg. No. PS 8187

Bridge over Lamar Canal Station 13+47.5 to 13+71.5 No. and Type of Spans 1-CS Total length 25'-0"

Rating H-15 Member Rating Unit Stress Design Live Load H-15 '28 Required Live Load H 20-44 '28 Posted Live Load Year built 1931

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 10° L (on curve) Superelevation
Bridge	10° L	0.0	778'	Between Curbs	2@35'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	tan to 10° L	0.0 to +1.0 to 100' VC to 0	778'	Between Rail			
Forward approach	10° L to tan	0.0 to -0.13	open			Minimum	Forward approach pavement and Rdwy
				Sidewalks	1@6'-0" 1@2'-0"		

Design by CSHD Built by CSHD ? Maintained by CSHD Plans FAP 57 & 57R3

Contract No. Contractor Driscoll Const. Co. Fabricator Contract price

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3202.8
Low bridge	3201.13
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) Canal

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks Bridge in place and widened on one side under F.A.P. 57
Further widening to 49' in 1931 under S.P. 57-R-3
Further widening to 2@35' in 1962 under U 001-5(15)

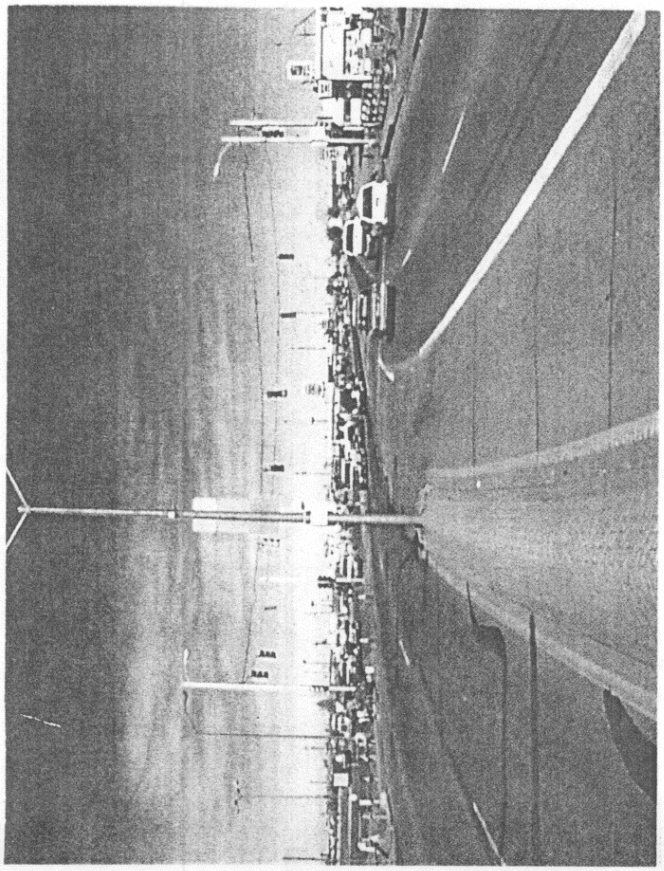
SUBSTRUCTURE

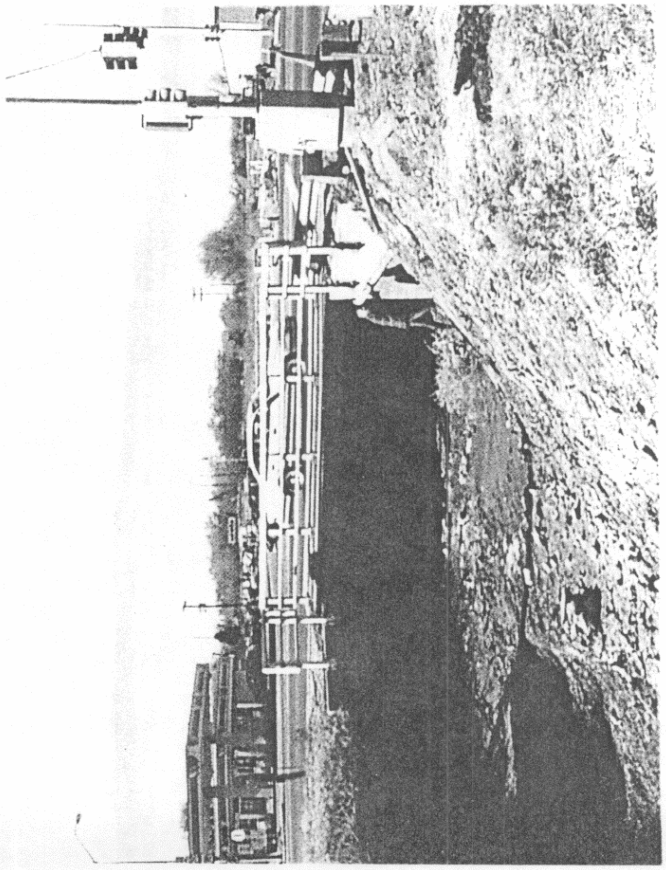
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear					CG	10'-2		8' Conc 45°
Forward					CG	10'-2		
Pier								
Pier								

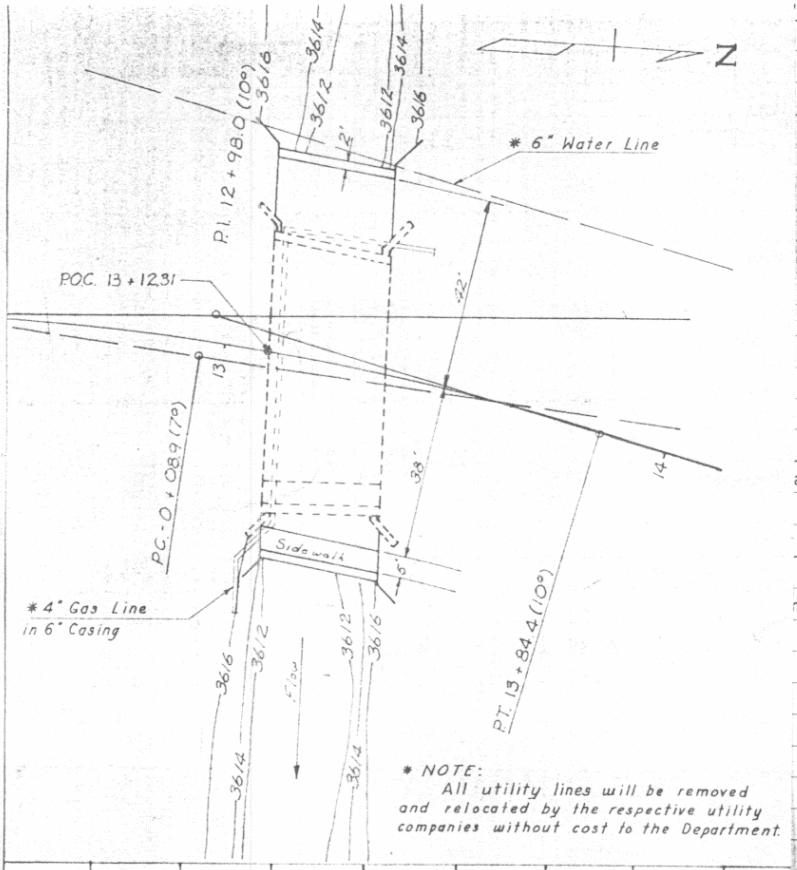
Traffic Survey Data [illegible] 90% Urban

First Bridge Second Bridge Third Bridge

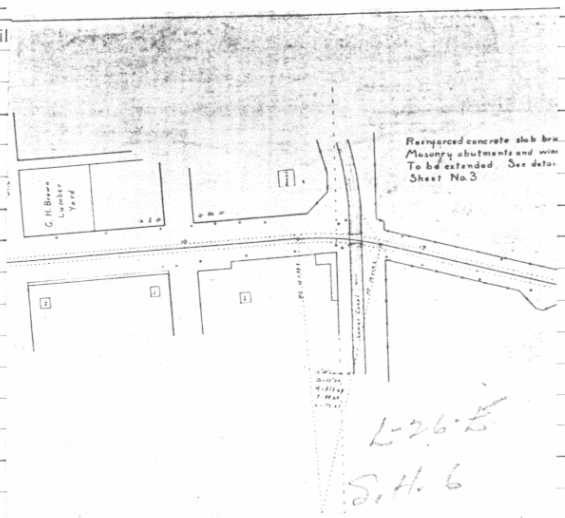
STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
L-26-E	FAP-57 U005-5(15) SP-57R3	Prowers	50	434.83	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open
							2@35'-0"	

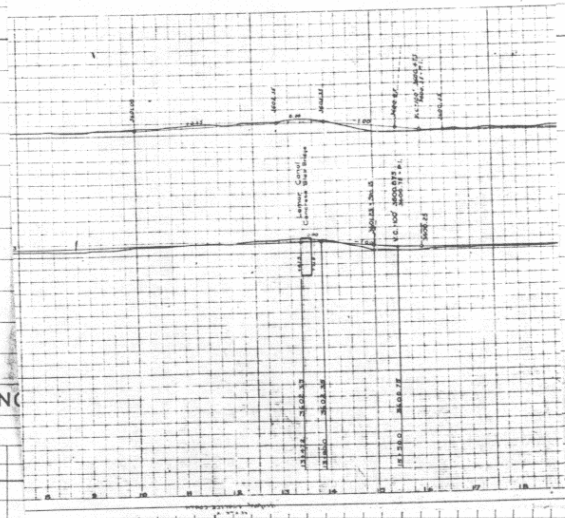


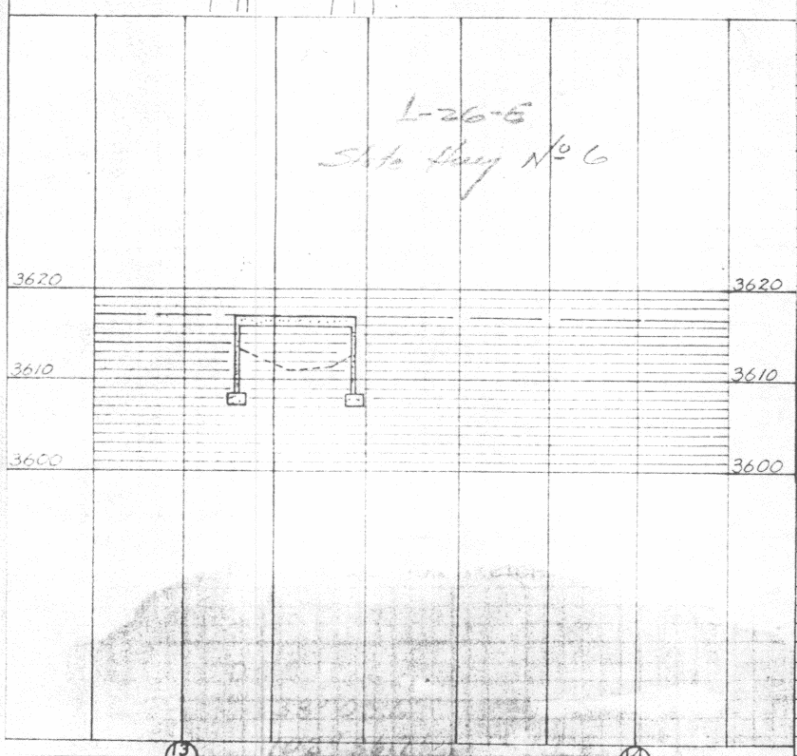




* NOTE:
All utility lines will be removed and relocated by the respective utility companies without cost to the Department.







Rd. Sect. 117
Br. Letter C

REMARKS:-General condition of structure (in pencil)

water to 6" of curb.
Pedestrian rail on E side only. Alum poor 2" o.s. Appr fills fair Variable median 68' '70'

First Bridge | Second Bridge | Third Bridg

Traffic Survey Data IN LAMAR 9450 Urban

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE		
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—
L-26-E	FAP-57 U005-5(15) SP-57 R3	Prowers	50	B 434.83	FA				[redacted]						2@35'-0"				

CONCRETE and STONE MASONRY BRIDGES

Made AM

Location Sec. 33 Township 22S Range 46 W Photo. Neg. No. Checked Date

Bridge over LAMAR CANAL Station 41+94.3 to 42+18.3 No. and Type of Spans 1 - CBC Total length 22'-0"

Rating Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 87

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge				Between Curbs	63'-0"	Maximum	Rear approach pavement and Rdwy	
Rear approach				Between Rail	50'-0"			
Forward approach				OUT TO OUT	65'-0"	Minimum	Forward approach pavement and Rdwy	
				Sidewalks				

Design by SINGH Built by Maintained by CDOH Plans CXBRF17-0050-13

Contract No. Contractor CARDER INC, Fabricator Contract price $ 75,153.51

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood
	Elevation	Drainage area (size and character)		
Grade center of bridge				
Low bridge		Drift and Ice	Dams	
Low water		Channel width Depth	Elevation of Stream bed	
Normal high water		Nature of stream bottom		
Maximum high water		Remarks REPLACES STR. NO. L-26-L		

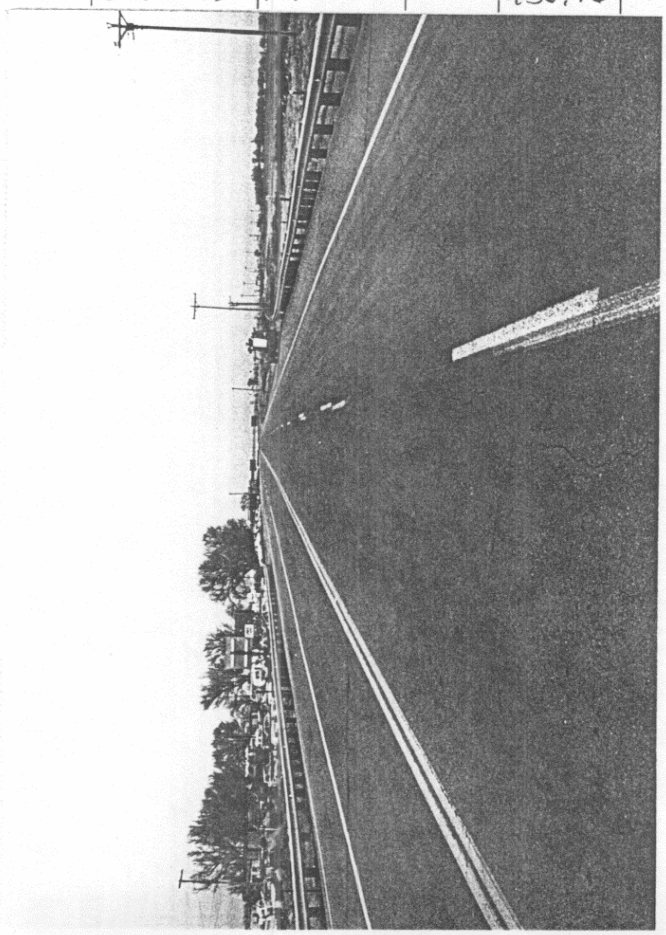
SUBSTRUCTURE

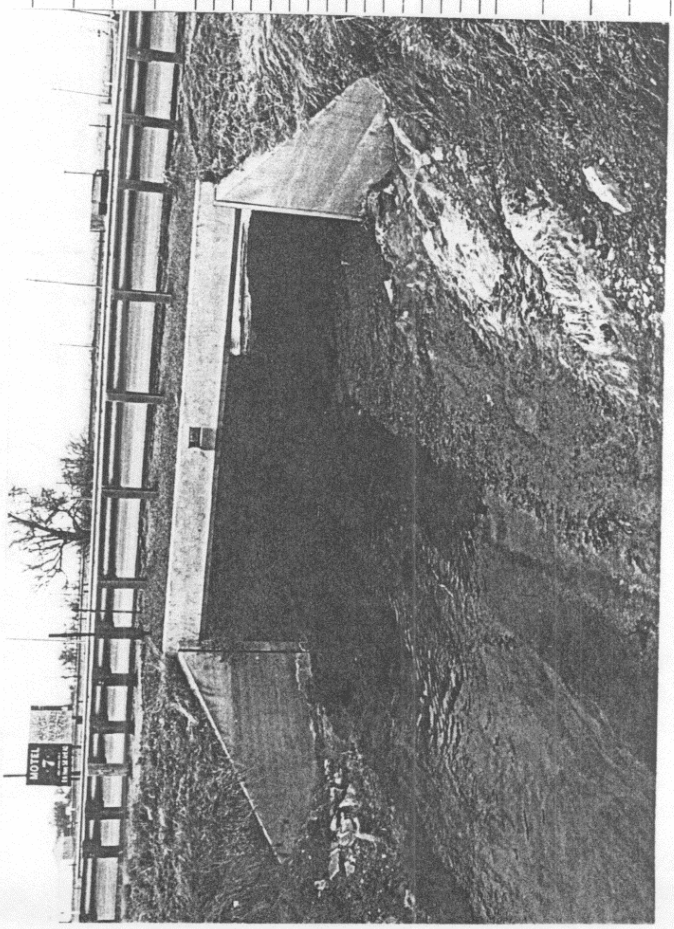
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						–10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	–12	12-14	14–	Open
L-26-BV	CXBRF17-0050-13	PROWERS	50	8 436.76	FAI															





Traffic Survey Data

STR. NO. L-26-BV | PROJECT CX BRF 17-0050-13

DOD LAT. 58 LONG. 102 RD. SECT. 11 (BRUEMER A

RIGID FRAME:- No. of Ribs | Spacing | Clear Span | Slab Thickness

ARCHES:- Material | Rise | Shape

Clear Span	No. Ribs	Spacing	Width	Crown	Spring	Deck Slab	Remarks

SKETCH OF STRUCTURE SHOWING DIMENSIONS

AS CONSTRUCTED	FED. ROAD REGION	DIVISION	PROJECT NUMBER	SHEET NUMBER
NO REVISIONS ☐ REVISED ☐ VOID	VIII	COLO.	CX BRF 17-0050-13 FC 050-5(28)	14

REVISIONS

HEADWALL & TOEWALL QUANTITIES

Z-bars	APPROX. QUANTS. FOR ONE HEADWALL & TOEWALL
#	LBS. PER LINEAR FT.
7	21
Concrete = 0.085 cu.yds./lin.ft.	

GENERAL NOTES

ll work shall be done in accordance with the Standard Specifications applicable to ie project.

or construction details of Structure Excavation and Backfill see Standard M-206-1.

ll construction joints shall be thoroughly cleaned before fresh concrete poured and approved by the Engineer.

plice quantities for longitudinal bars are not included in the table.

ll exposed corners on concrete shall be chamfered 3/4".

ll concrete shall be Class S (Box Culvert). (28 day strength 4000 psi)

ESIGN DATA: AASHTO, 1983
Unit Stresses: f_s = 60,000; f_c = 4000; n = 9

ESIGN CRITERIA: Culvert in trench on unyielding subgrade, or culvert ntrenched on yielding foundation.

OADING DATA:
Live Load = HS 20-44 or Interstate Alternate
Dead Load = Earth Load = 84 lbs./cu.ft.
Equivalent Fluid Pressure = 38 lbs./cu.ft.

The minimum splice length for common bar sizes shall be:

Bar	#4	#5	#6	#7	#8	#9
Length	1'-0"	1'-3"	1'-8"	2'-3"	3'-0"	3'-10"

REINFORCING DETAILS

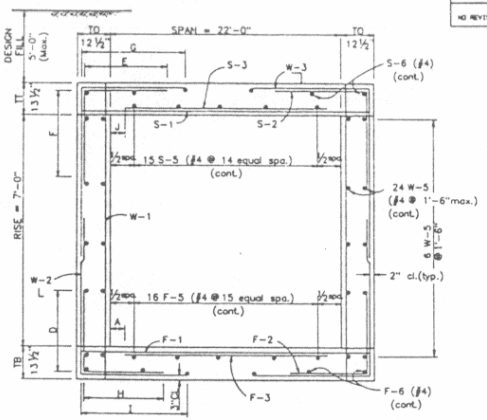
Bar	Size #	Spacing (inches)	Length
F1	7	13.5	23'- 9"
F2	7	12.5	8'- 4"
F3	7	13.5	14'- 0"
W1	5	18.0	8'-10"
W2	6	12.5	9'-11"
W3	6	12.5	10'- 2"
S1	7	13.0	23'- 9"
S2	7	12.5	8'- 3"
S3	7	13.0	14'- 0"

LONGITUDINAL BARS (all #4)

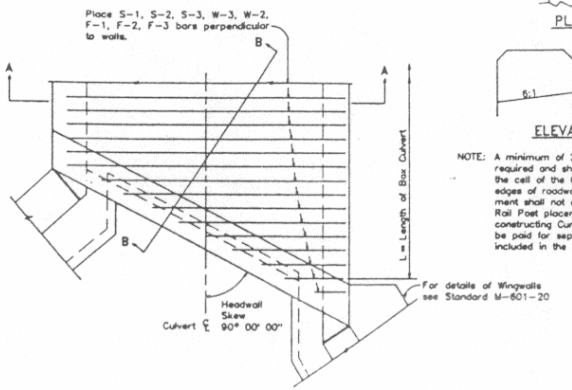
Bar	Number
F5	16
F6	6
W5	24
S5	15
S6	6

BAR DIMENSIONS

Dimension	Length	For Bar
A	4'- 0"	F3
E	3'- 4"	S2
J	4'- 9"	S3
I	4'-10"	W2
F	4'-11"	S2
G	5'- 0"	W3
D	4'-10"	F2
H	3'- 6"	F2

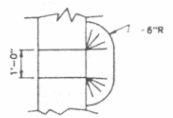


SECTION A-A



PLAN

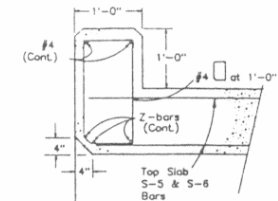
CURB DRAIN DETAIL
(One each side)



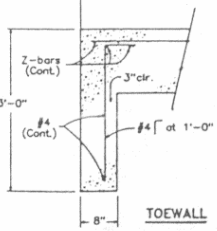
PLAN

ELEVATION

NOTE: A minimum of 2 Curb Drains shall be required and shall be centered over the cell of the CBC at the outside edges of roadway. Curb Drain placement shall not conflict with Guard Rail Post placement. The cost of constructing Curb Drains shall not be paid for separately but shall be included in the work.



HEADWALL



TOEWALL

SECTION B-B

QUANTITIES (Per foot of Barrel)

Concrete	2.55 cu. yds.
Reinforcement	326 lbs.

DIVISION OF HIGHWAYS

SINGLE
CONCRETE BOX CULVERT
LAMAR CANAL

DESIGNED Singh	STRUCTURE NUMBERS	L-26-BV
DETAILED Bruemer		
CHECKED Hilbig B.J.	1 2 3	CHECKED

n pencil)

CLEARANCE	-12	12-14	14-0
	50	40	30

Third Bridg

Colorado State Highway
Bridge Dept.

TIMBER SPANS

Made. A - 2-42

Location Sec. 33 Township 22 S Range 46 W Photo. Neg. No. B-125-1 Checked Date

Bridge over Willow Creek Station 92+10.5 to 92+58.5 No. and Type of Spans 2 ΠD Total length 47'-0"

Rating H 20 S16 Member Str Rating Unit Stress ft 1780 Design Live Load H-15'35 Required Live Load H20S16 44' Posted Live Load Year built 1936

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	0.0	Open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	+0.12 to 0.0 200'VC	✓	Between Rail	31'-0"		
Forward approach	tan	0.0 to -0.616 200'VC	✓	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans AWP4003-1

Contract No. Contractor Peter Kiewit & Sons Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 2621.96

WATERWAY Area of Br. opening 207□' "70" Area of Relief opening See L-26-X Skew of flow (Normal) Flood

	Elevation	
Grade center of bridge	3587.40	Drainage area (size and character) 41□ Mi. Rolling grass & farm land
Low bridge	3585.15	Drift and Ice med drift lightice Dams none
Low water	dry	Channel width Depth Elevation of Stream bed 3582.0
Normal high water		Nature of stream bottom
Maximum high water	3584.7	Remarks

4" O.S. Slab #17 @ fs = 18423 psi Good for H20 ft = 1780 (See L-26-L)

Widened from 20' to 30' Rdwy.

SUBSTRUCTURE

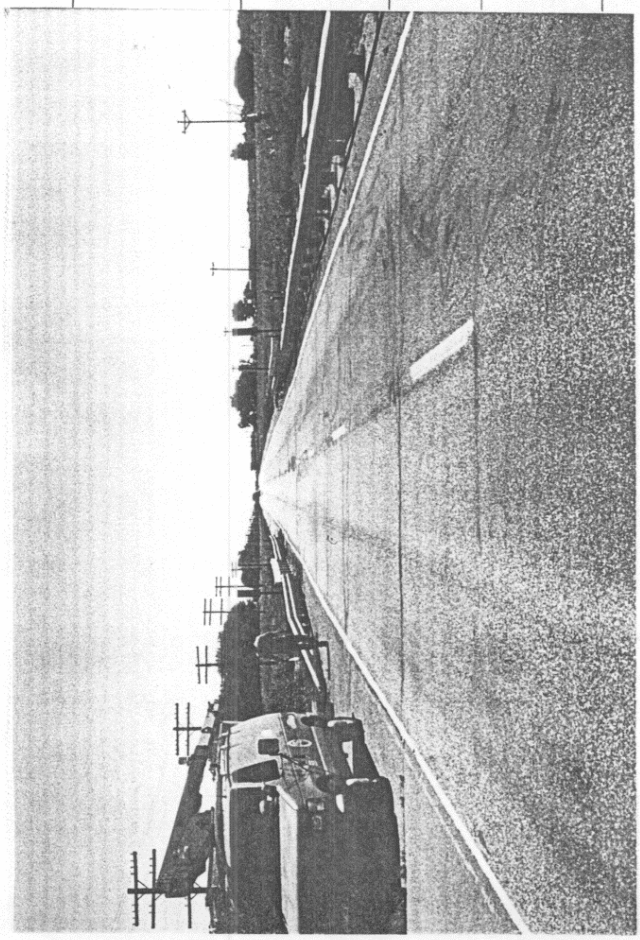
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	10"x12"	ΠC	8	12 ϕ	26' ΠP			10'Π 45°
Forward	10"x12"	ΠC	8	12 ϕ	26' ΠP			
Pier	10"x12"	ΠC	8	12 ϕ	26' ΠP			
Pier	Cap spliced over pile with 4'-0" Corbel							Swaybraces —
								Backing Plank 3"x 8" Π Sheet Piling

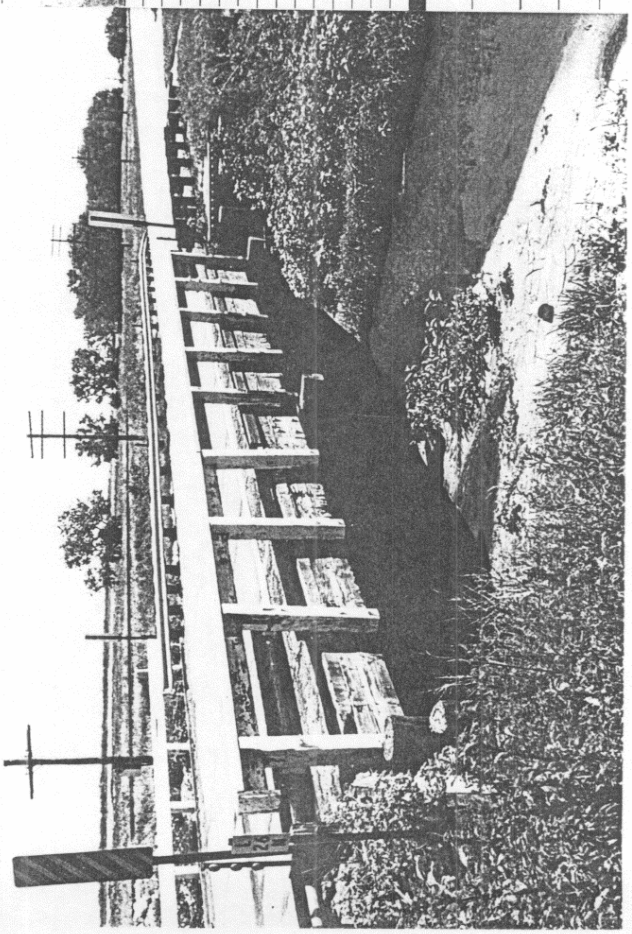
S.E. 1/4, SEC. 33

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-M	AWP-4003-1	Prowers	50	B 437.71	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

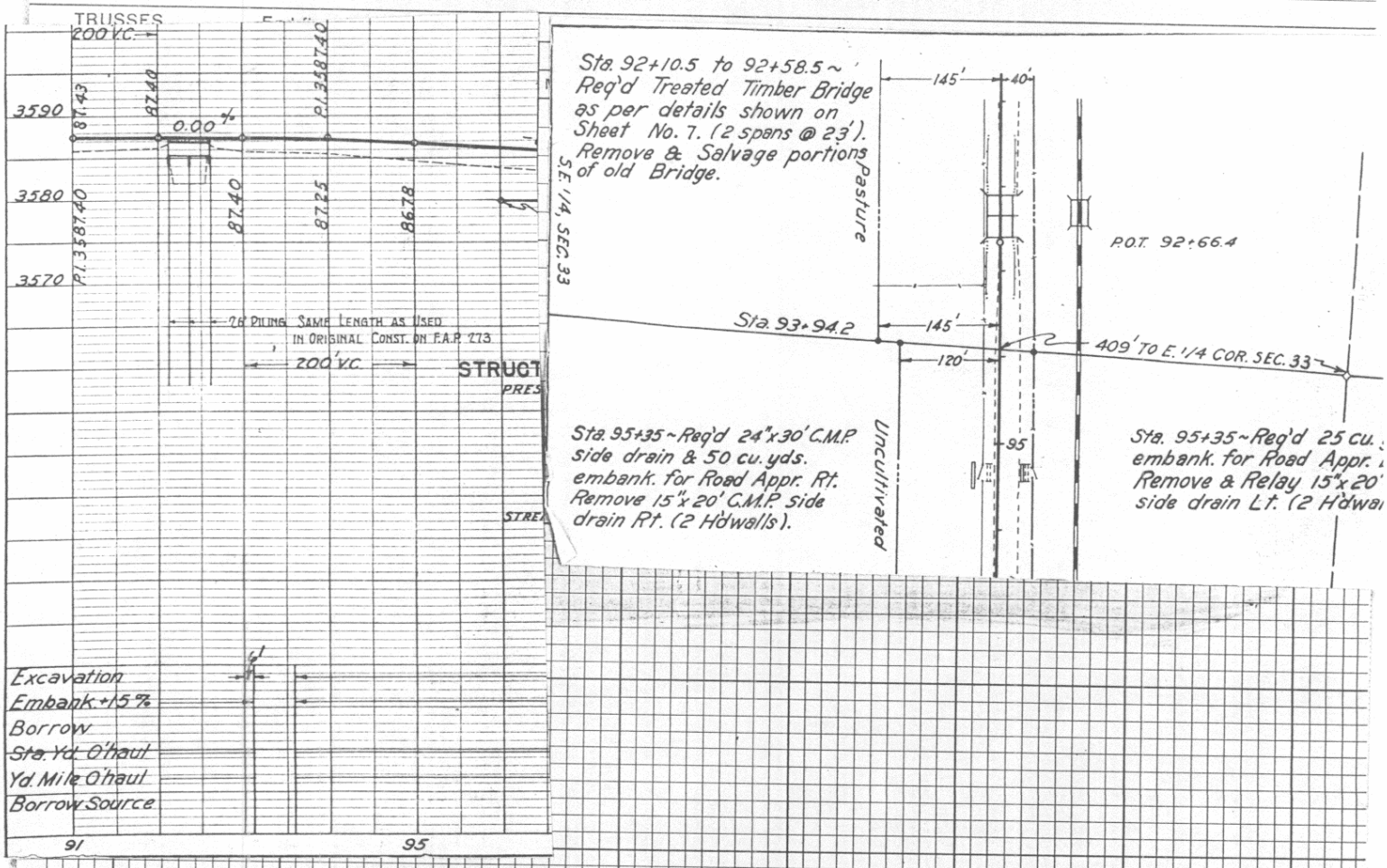
Span No.	FLOOR: Thickness - Type and Material	FLOOR: Wearing Surface	STRINGERS: Effective Span	Number	Size	Material	Spacing	Allowable Stress
A	CS 7"	3/4" Conc Mono	~~25'-0"~~ 23'-0"	24	6"x20"	TS	1'-3" to 1'-10"	1600
B		4" o.s.					Double Stringer	
C		8" o.s.					at ℄	
D							1'-10" for loading	
E								

Fastenings:- Floor to stringer none Stringer to cap none

Stringers Lapped or butted outside butted inside lapped

Wheel guard T - 6"x 6" Hand rail T - 2'-6" hi

Remarks Per C 17-0050-02 type 3 gd rail connected by Popejoy Const Co Inc



LOCATION SKETCH

DOD

LAT. 38°05.4'

LONG. 102°34.3'

Rd. Sect. 118

Br. Letter B

REMARKS:-General condition of structure (in pencil)

Poor paint. BS. 58

1 Broken stringer - East span - B.S. 1964

No wheelguard damaged. 8" o.s. Appr fills ok

NW wing planks rotten '68'

North h.r. replaced after collision. Paint poor. No sways in piers.

SE wing rail has 2 posts split. "70"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-M	AWP-4003-1	Prowers	50	B 437.71	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway
Bridge Dept.

TIMBER SPANS

Made IT - L-4L

Location Sec. 35 Township 22 S Range 46 W Photo. Neg. No. B-124 - 8 Checked Date

Bridge over Willow Creek Overflow Station 187+60 to 188+52.12 No. and Type of Spans 4 - π Total length 92'-1½"

Rating H-20 S16 Member Str Rating Unit Stress ft 1760 Design Live Load H-15 '28 Required Live Load H 20 S16 30' Posted Live Load Year built 1936

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 45° R Superelevation
Bridge	tan	0.0	open	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	0.0	"	Between Rail	31'-0"		
Forward approach	tan	0.0	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans AWP400 3-1

Contract No. Contractor Peter Kiewit & Sons Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 8489.81

WATERWAY Area of Br. opening 180 □' 321 □' 70" Area of Relief opening See L-26-M Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3574.20
Low bridge	3569.91
Low water	dry
Normal high water	
Maximum high water	3571.0

Drainage area (size and character) 41 □ Mi. Rolling grass & farm land

Drift and Ice Med drift Light ice Dams none

Channel width Depth Elevation of Stream bed 3566.0

Nature of stream bottom

Remarks

3" OS. Int. String. H17 Grade H30 ft = 1760
@ fs = 1642. psi.

SUBSTRUCTURE

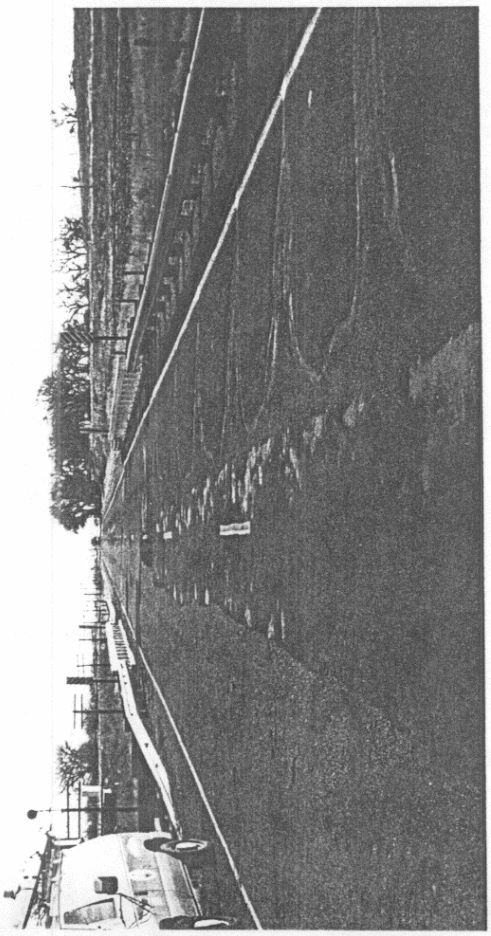
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x12"	πC	9	12 ϕ	24' πP			20' π 45°
Forward	12"x12"	πC	9	12 ϕ	24' πP			
Pier	12"x12"	πC	8	12 ϕ	24' πP			
Pier								Swaybraces 3"x12" π
								Backing Plank 4"x12" π

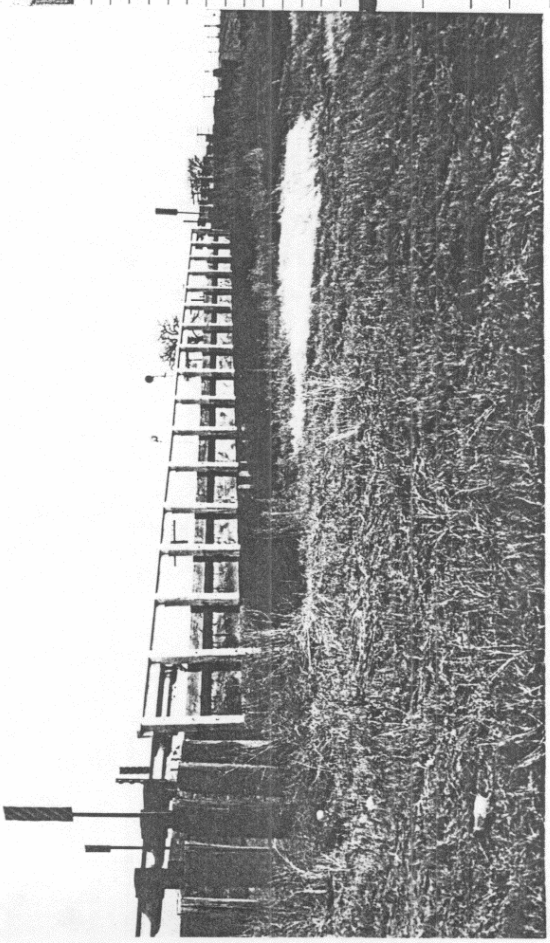
T. 22 S., R. 46 W.

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-X	AWP.4003-1	Prowers	50	B 439.53	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Span No.	FLOOR: Thickness - Type and Material	FLOOR: Wearing Surface	STRINGERS: Effective Span	Number	Size	Material	Spacing	Allowable Stress
A	6 TL	1½" AP 7" -05 on AP	22'-6	14	6"x 20"	TS	2'-4⅛"	1600
B								
C								
D								
E								

Fastenings:- Floor to stringer Spiked Stringer to cap none

Stringers Lapped or butted outside butted inside lapped

Wheel guard T-6"x10" Hand rail T-2'-3"hi

Remarks Per C 17-0050-02 type 3 gd rail connected by Popejoy Const Co Inc

TRUSSES End floor beam

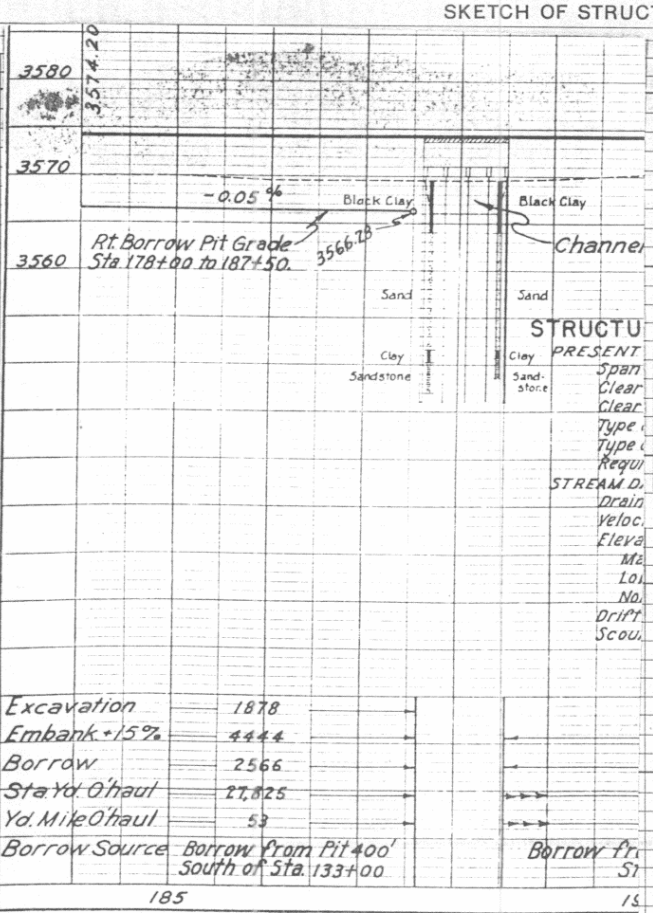
Upper Chord: Member	Material	Size	Lower Chord: Member	Material	Size	Diagonals: Member	Material
LU			LL			LU	
UU			LL			LU	
UU			LL			LU	
UU			LL			LU	

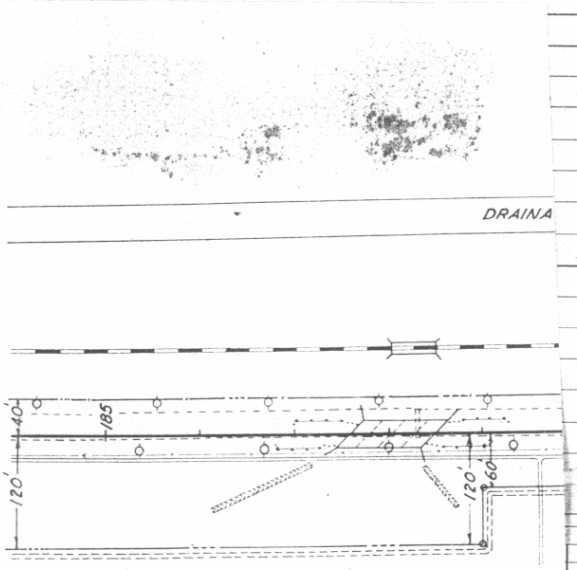
Truss bearing Bolts

Connectors

Remarks

SKETCH OF STRUCTURE S





Sta. 187+60 to 188+52½ Regd Treated Timber Bridge - 4 Spans @ 22'-6" (Skew 45°) as per details shown on Sheet No. 8 Req'd 400 cu. yds. Excav. for Channel Improvement. Excavated material to be used for building Dikes on Rt. Remove 36"x32' C.M.P. Cross Culv. (2 Hdwalls).

S.E. 1/4, SEC. 35, T. 22S, R. 46 W.

Excavation	1878
Embank +15%	4444
Borrow	2566
Sta Yd O'haul	27,825
Yd. Mile O'haul	53
Borrow Source	Borrow From Pit 400' South of Sta. 133+00

STRUCTU
PRESENT
Span
Clear
Clear
Type
Type
Requi
STREAM D.
Drain
Veloc.
Eleva
Ma
Loi
No.
Drift
Scou

REMARKS:-General condition of structure (in pencil)

Poor paint BB 58 Drains clogged w. oil. No. wheelguard bad 7" o.s. Appr fills ok SW wing bowed. Washing behind SE wing Drift caught in bridging. '68'
Surfacing breaking up. West abut pushing. No sways. "70"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-X	AWR 4003-1	Prowers	50	B 439.53	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made EAB

Checked

Date 11-65

Location Sec. 36 Township 22S Range 46W Photo. Neg. No.

Bridge over Clay Creek Station *

No. and Type of Spans 5 CS (Cont.) Total length 305'-8"

Rating HS 20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 66

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0°	Superelevation
Bridge	Tangent	+0.1% to -0.1%		Between Curbs	34'-7"	Maximum	Rear approach pavement and Rdwy 36'-0"x 0'-10"x 20'-0"	
Rear approach	"	"		Between Rail				
Forward approach	"	"		Rdwy.	36'-0"	Minimum	Forward approach pavement and Rdwy 36'-0"x 0'-10"x 20'-0"	
Bearing S 87°01'E P.O.T. 3574.35				Sidewalks				

Design by Meheen Engr. Co. Built by CDH Maintained by CDH Plans ER 34(1)1st Con.

Contract No. Contractor Peter Kiewit Sons Fabricator Contract price $147[illegible].00

WATERWAY Area of Br. opening 3944 [illegible] Area of Relief opening None Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3574.35
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 230 sq. mi. Flat, Rolling, Grass land, Sandy soil.

Drift and Ice Med. Drift Light Ice Dams None

Channel width Depth Elevation of Stream bed 3561.0

Nature of stream bottom

Remarks This structure has washable approaches.

*Sta. 220+68.5 to 223+68.5

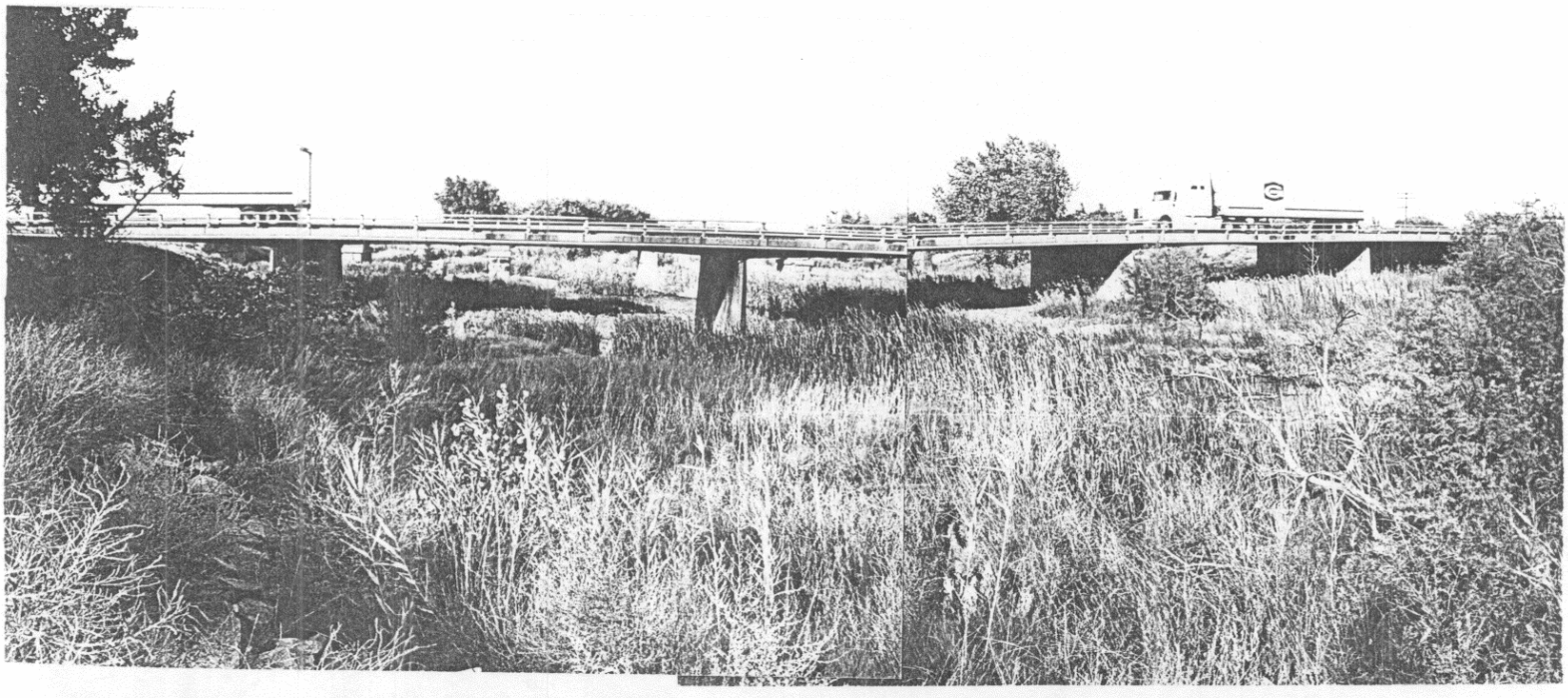
SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	3'6"x 2'6"	Conc.	5	12"	BP @ 53# x 30'0"			No wings
Forward	"	"	"	"	"			
2 Pier 3		Conc. Semi. Grav.	12		BP @ 53# x 14'0"			
4 Pier 5		"	"	"	"			

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

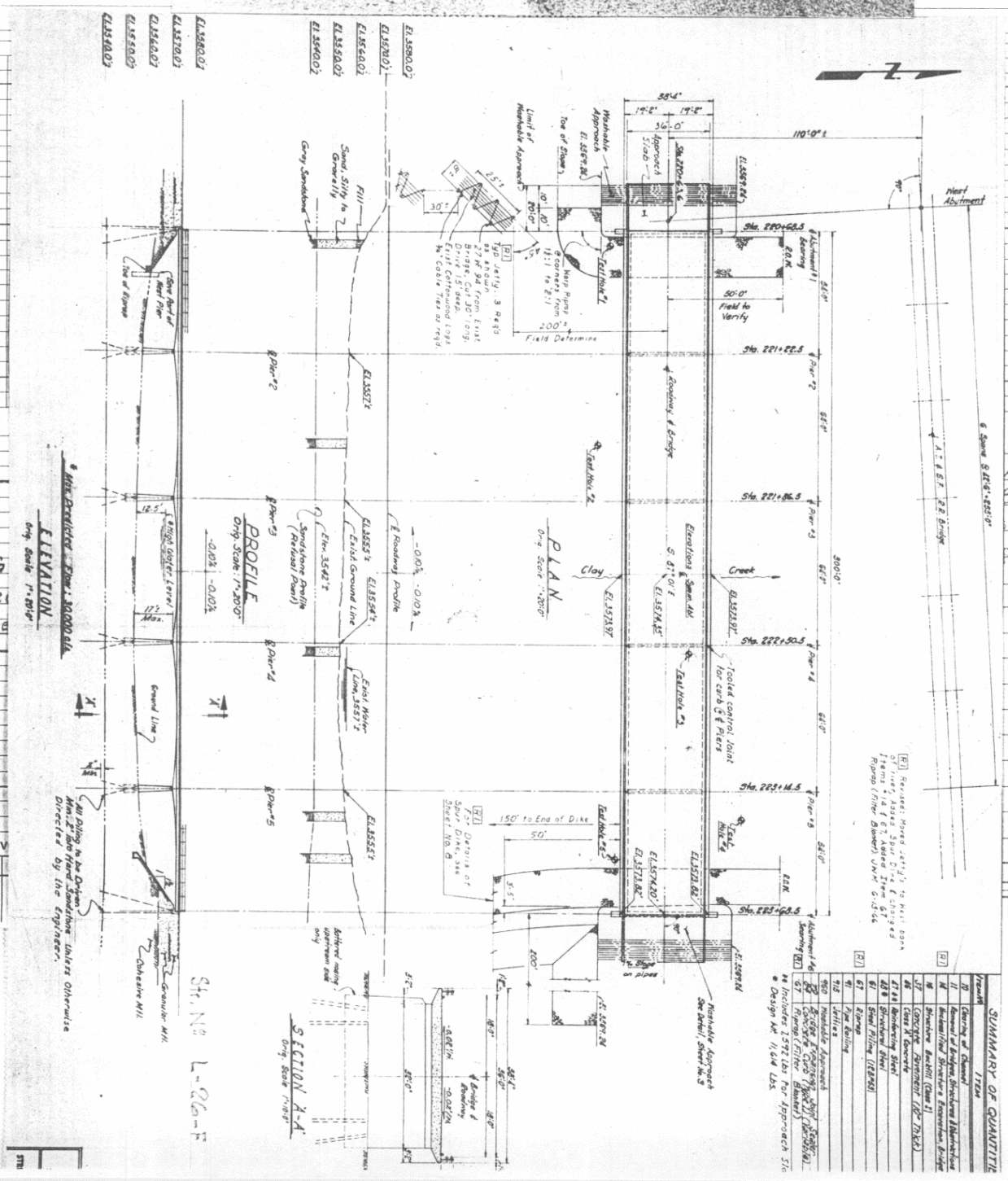
STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-26-F	ER 34(1), 1ST	Prowers	50	B 440.19	FAP	—10 | 10 | 12½ | 15 | 20 ■	15-18 | 19-22 | 23-26 | 27-30 | 36'-0" | 40 | 50	—12 | 12-14 | 14— | Open ■



RIGID FRAME:- No. of Ribs

ARCHES:- Material

Clear Span	Ribs	
	No.	Spacing



Location Sec. 35 Township 22S Range 45W Photo. Neg. No. Checked Date 3-17-88

Bridge over SMITH ARROYO Station 366+88.42 To 367+51.58 No. and Type of Spans 3 - CBC Total length 60'-0"

Rating Member Rating Unit Stress Design Live Load HS 20-44 Required Live Load Posted Live Load Year built 88

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge				Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach				Between Rail			
Forward approach						Minimum	Forward approach pavement and Rdwy
				Sidewalks			

Design by CDOH Built by Maintained by Plans BRF 050-5 (25)

Contract No. Contractor Fabricator Contract price 140,726.98

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks THIS STRUCTURE REPLACES L-27-K

SUBSTRUCTURE

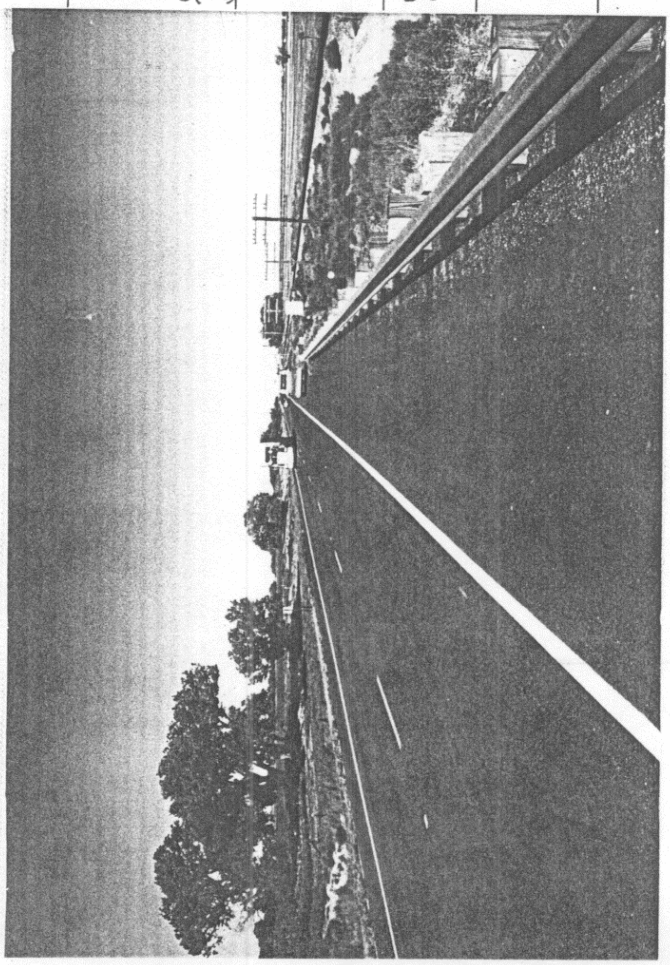
Abut's / Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward								
Pier								
Pier								

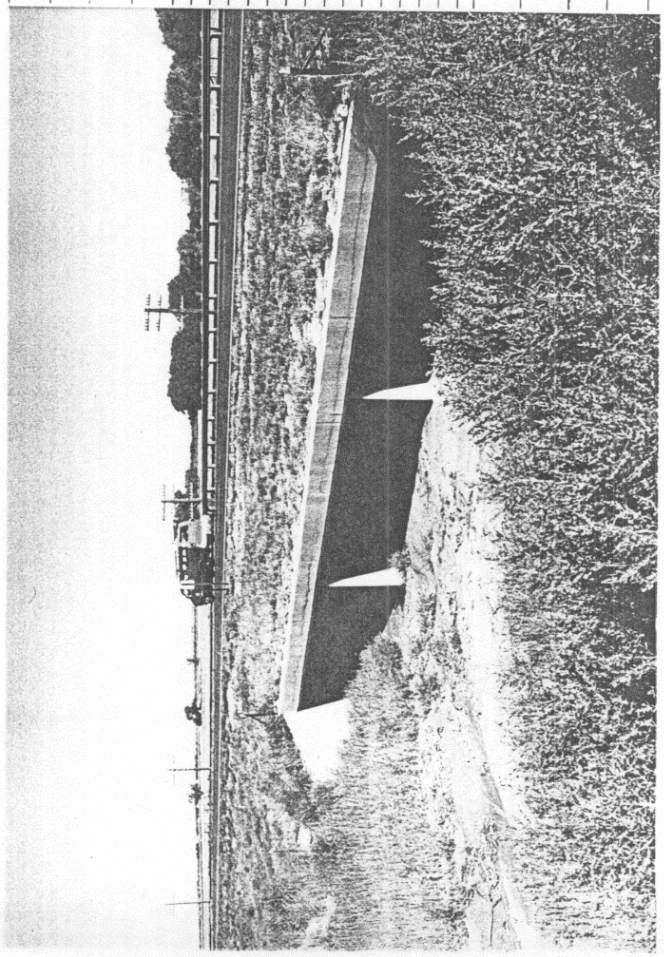
BR. LETTER E

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED	ROADWAY	CLEARANCE
L-27-A	BRF050-5(25)	PROWERS	50	445.22	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open





SUPERSTRUCTURE

Curbs — Hand rail

Wearing Surface

CONCRETE SLAB - Clear Span — Thickness 12½" TOP, 13" BOTTOM

CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks

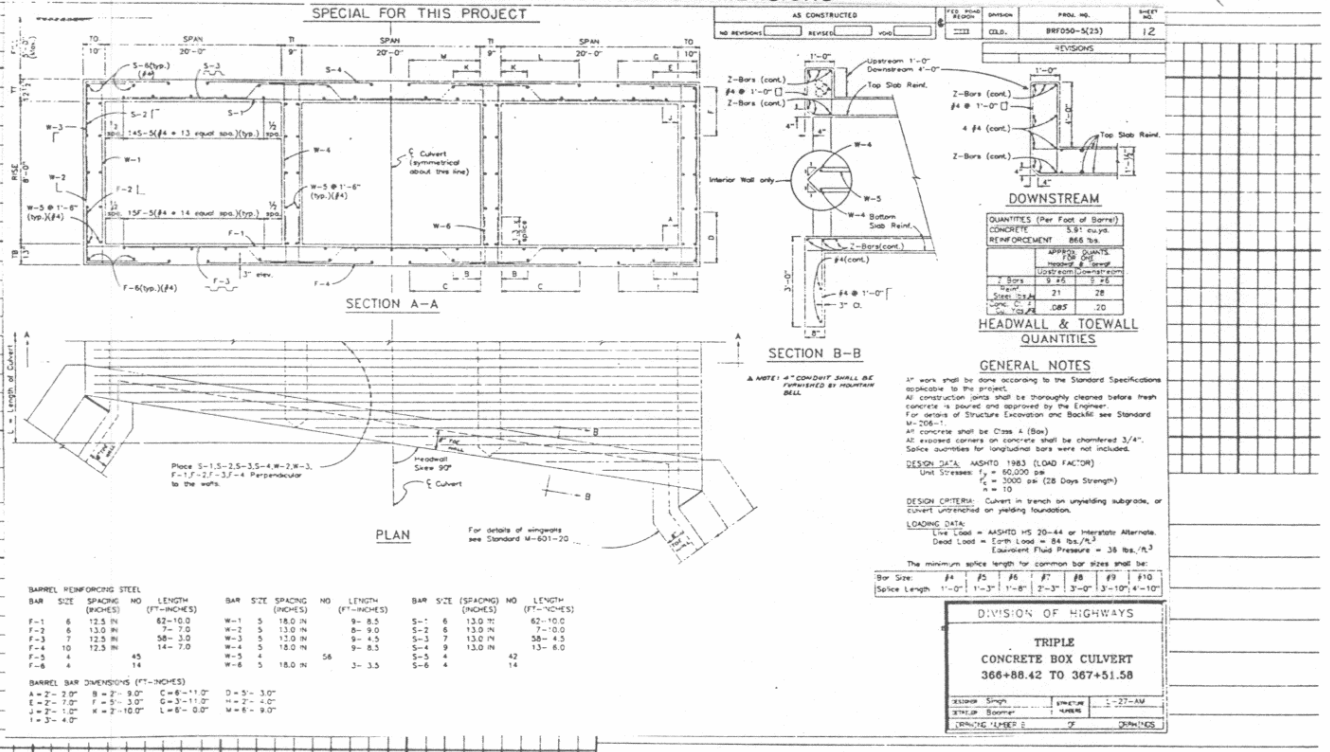
RIGID FRAME:- No. of Ribs — Spacing — Clear Span — Slab Thickness

ARCHES:- Material — Rise — Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

SKETCH OF STRUCTURE SHOWING DIMENSIONS

SPECIAL FOR THIS PROJECT



DOD

LAT. 38°05.3'

LONG. 102° 26.1'

RD. SECT. 1B

BR. LETTER E

First Bridge — Second Bridge — Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED					ROADWAY						CLEARANCE			
					–10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	–12	12-14	14–	Open
L-27-AM	BRF050-5(125)	PROWERS	50	445.22															

Colorado State Highway
Bridge Dept.

TIMBER SPANS

Made ff - 2-42

Checked

Date

Location Sec. 36 Township 22 S Range 45 W Photo. Neg. No. B-124-5

Bridge over Draw Station 521+10 to 521+57.5 No. and Type of Spans 2 - TS Total length 47'-6"

Rating H-15.9 Member St. Rating Unit Stress ff 1298 Design Live Load H-15 '28 Required Live Load H20 S16 44' Posted Live Load Year built 1937

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	-0.14	Open	Between Curbs	29'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	-0.049 to -0.14 200 VC	"	Between Rail	30'-0"		
Forward approach	tan	-0.14	"	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHO Built by CSHO Maintained by CSHO Plans PWA 4002 B

Contract No. Contractor Larson Const. Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 5086.42

WATERWAY Area of Br. opening 240° 117 sq ft "70" Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3525.21
Low bridge	3522.92
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) ¼ Sq. mi. Flat grass land - Sandy

Drift and Ice Light drift noice Dams none

Channel width Depth Elevation of Stream bed 3517.5

Nature of stream bottom

Remarks Per C17-0050-00 Gd rail-type3- connected by Rocky Mtn. Paving

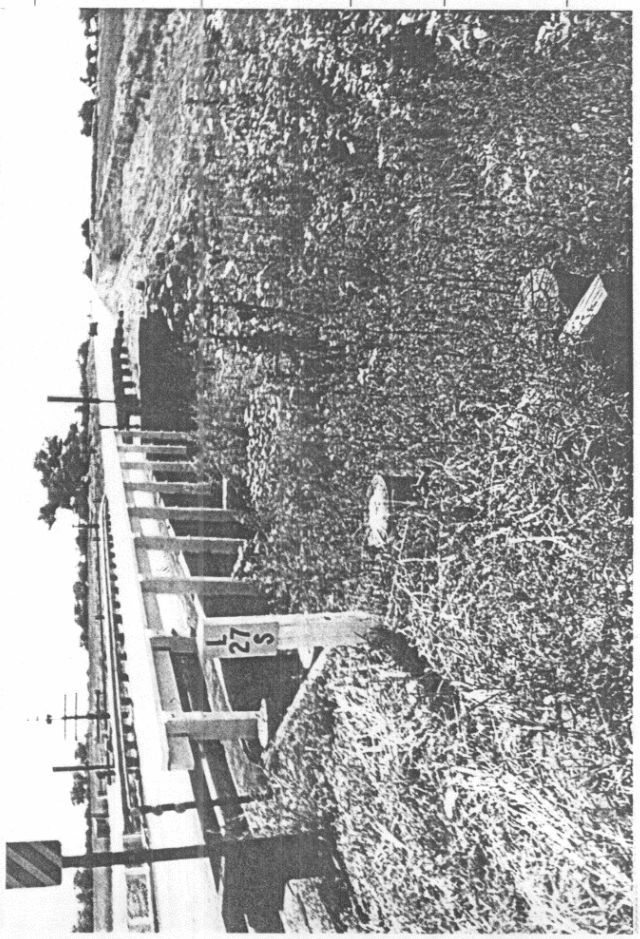
SUBSTRUCTURE

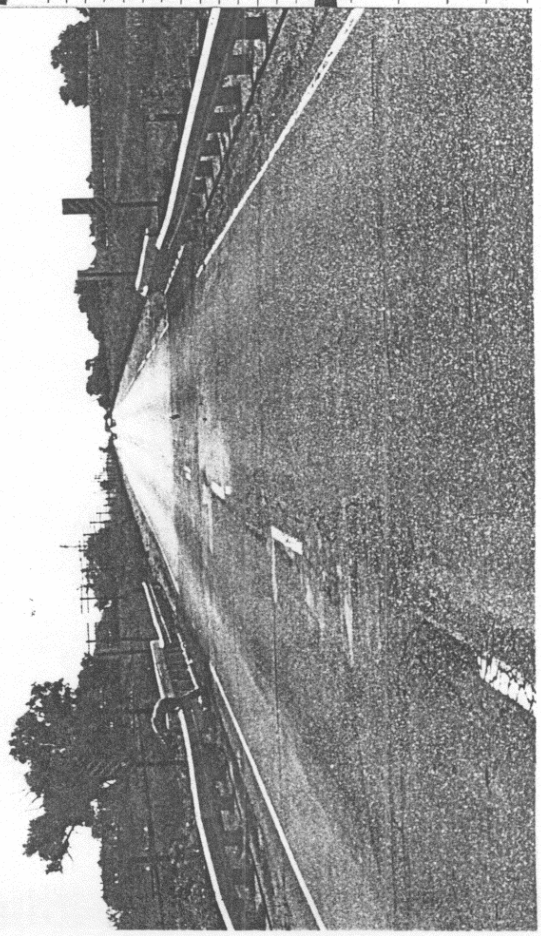
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x12"	TC	7	12 ϕ	26' TP			16' T 45°
Forward	12"x12"	TC	7	12 ϕ	26' TP			
Pier	12"x12"	TC	6	12 ϕ	26' TP			
Pier								Swaybraces —
								Backing Plank 4"x 12" T

Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-27-S	PWA-4002-B	Prowers	50	B 445.83	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Span No.	FLOOR: Thickness - Type and Material	FLOOR: Wearing Surface	STRINGERS: Effective Span	STRINGERS: Number	STRINGERS: Size	STRINGERS: Material	STRINGERS: Spacing	STRINGERS: Allowable Stress
A	6 πL	1½" AP	23'-0	14	6"x20"	πS	2'-3¼"	1600
B		~~2" oil surf~~						
C		3" o.s.						
D								
E								

Fastenings:- Floor to stringer Spiked Stringer to cap none

Stringers Lapped or butted outside butted

Wheel guard

Remarks

TRUSSES

Upper Chord

Member	Material
LU	
UU	
UU	
UU	

Truss bearing

Connectors

Remarks

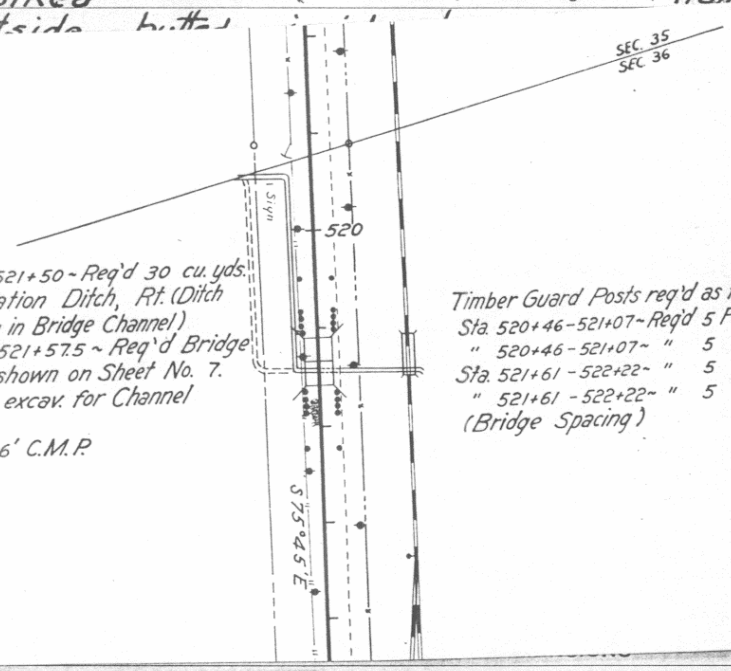
Top Laterals

Bott. Laterals

Portals

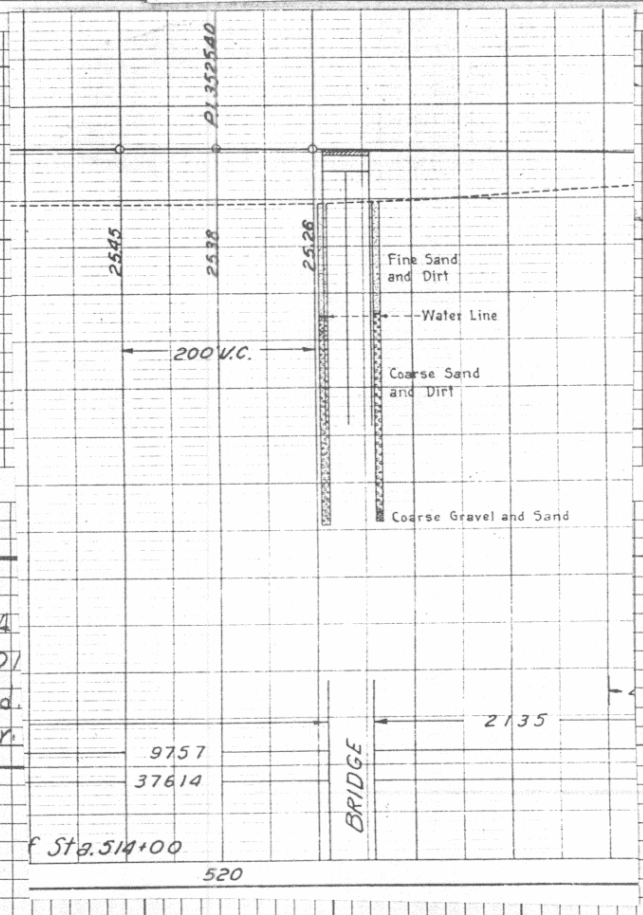
Swaybrace

C to C Chords



Sta. 519+50 to 521+50 ~ Req'd 30 cu. yds. excav. for Irrigation Ditch, Rt. (Ditch to cross roadway in Bridge Channel)
Sta. 521+10 to 521+57.5 ~ Req'd Bridge as per details shown on Sheet No. 7. & 300 cu. yds. excav. for Channel Improvement
Remove 18"x26' C.M.P.

Timber Guard Posts req'd as foll.
Sta. 520+46 - 521+07 ~ Req'd 5 Post.
" 520+46 - 521+07 ~ " 5 "
Sta. 521+61 - 522+22 ~ " 5 "
" 521+61 - 522+22 ~ " 5 "
(Bridge Spacing)



LA
LO
Ro.
Br.

REMARKS:-General condition of structure (in pencil)

Needs paint. 3" o.s on A.P. PLK.
Floor poor in places
Appr fills low. Wings bowed slightly.
Curb PLK on N.W. splintered. '68'
Handrail poor Paint poor. Appr fills poor. '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-27-S	PWA-4002-B	Prowers	50	B 445.83	FA					19										

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made SCH

Checked

Date Jan.67

Location Sec. 11 Township 23S Range 44W Photo. Neg. No.

Bridge over Wolf Creek Station * No. and Type of Spans 3 CSG (Cont.) Total length 165.0

Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built '67

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	Tangent	+0.43%		Between Curbs		Maximum	Rear approach pavement and Rdwy 20'-0"x 0'-10"x 30'-0"
Rear approach	"	300'VC		Between Rail			
Forward approach	"	+ 0.43 %		Rdwy.	30'-0"	Minimum	Forward approach pavement and Rdwy 20'-0"x 0'-10"x 30'-0"
Bearing	S 88° 04'W			Sidewalks	2 @ 2'		

Design by CDH (JG) Built by CDH Maintained by CDH Plans C 17-006-25

Contract No. Contractor Blanchard Kenney, Inc. Fabricator Midwest Stee l 67-109 Contract price $ 54,014.32

WATERWAY Area of Br. opening 3073" x 70" Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3504.63
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed

Nature of stream bottom

Remarks *Sta. 37+15.0 to 38+80.0

Beam on Type 5 Bearing on metal plate

Abutments on spread footings on rock

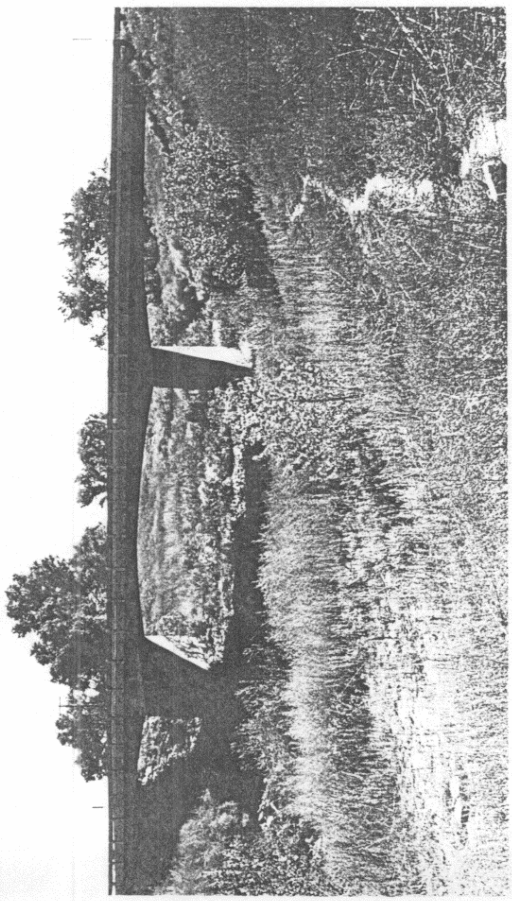
SUBSTRUCTURE

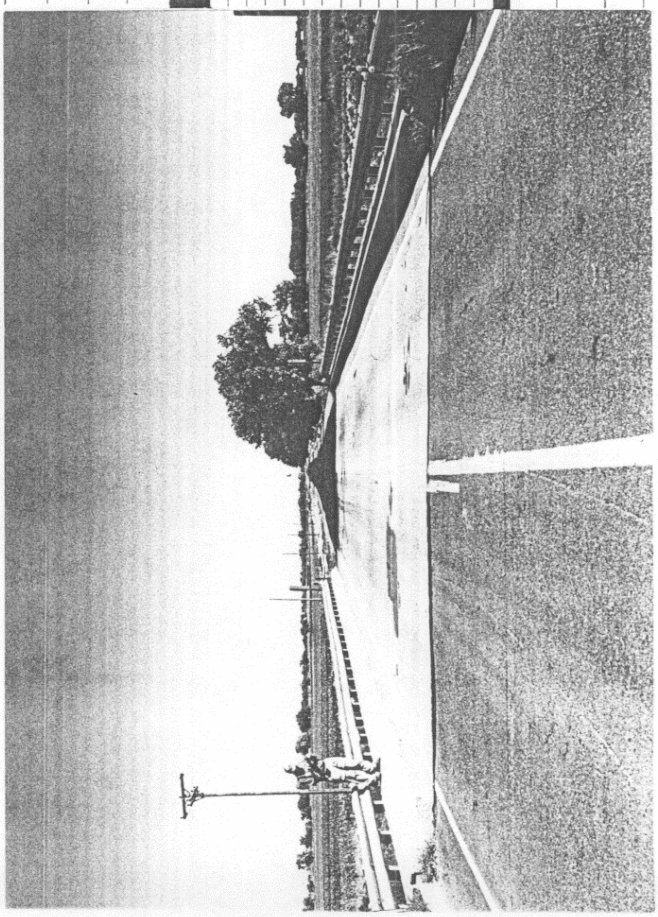
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'x 2'0"	Conc.	4	10"	BP @ 42# x 72'			No wings
Forward	"	Varies "	"	10"	BP @ 42# x 70'			
Pier	1'7"x 2'0"	Conc.	Conc.Semi Grav.on			29'8 3/4"		
Pier	"	"	7-12#BP @ 53#		49'0"			

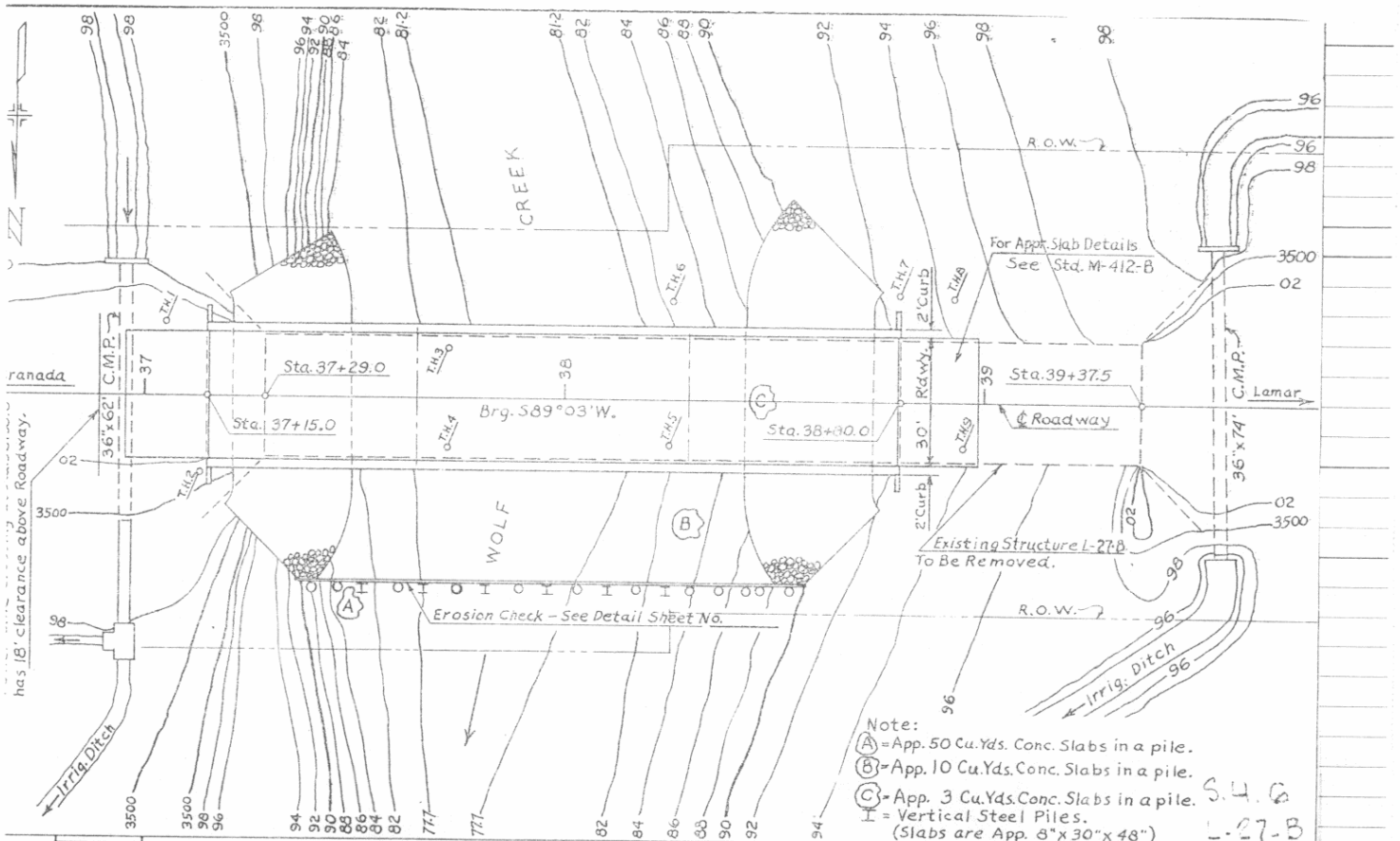
First Bridge Second Bridge Third Bridge

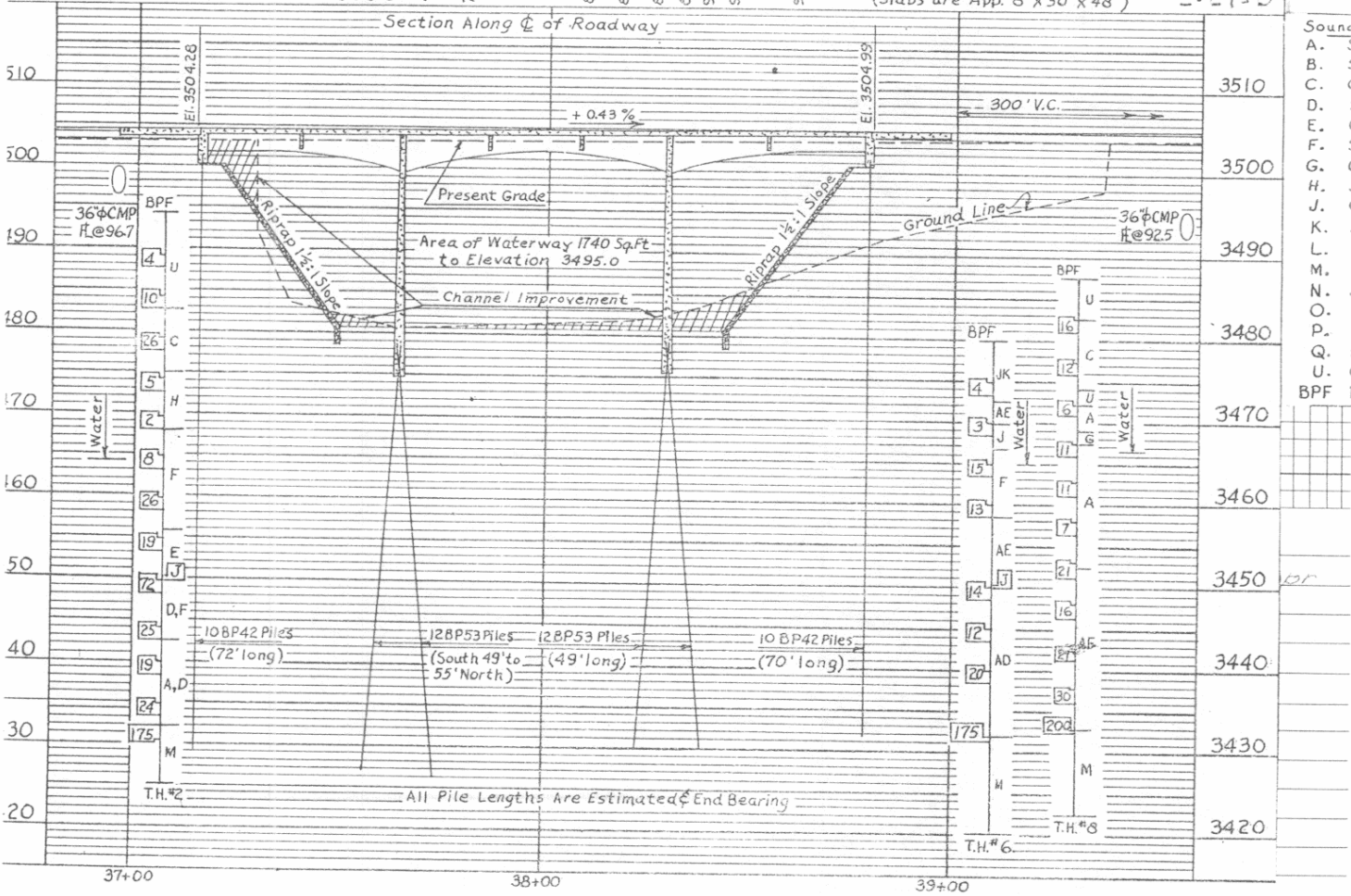
Traffic Survey Data 2650

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-27-B	C17-0006-25	PROWERS	50	B 451.31	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open









GENERAL LAYOUT

Sounding Legend
A. Sand
B. Silt
C. Clay
D. Sand & Gra
E. Gravelly Sa
F. Silty Sand
G. Clayey San
H. Sandy Silt
J. Clayey Silt
K. Sandy Clay
L. Soft Shale
M. Hard Shale
N. Soft Sands
O. Hard Sand
P. Igneous R
Q. Fill Mater
U. Clay, Silty
BPF Blows Per F

First Bridge | Second Bridge | Third Bridge

Traffic Survey Data 2650

BR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-27-B	C17-0006-25	PROWERS	50	B 451.31	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made SCH

Checked

Date May '79

Location Sec. 12 Township 23S Range 44W Photo. Neg. No.

Bridge over Wolf Ck. overflow Station * No. and Type of Spans 3-CSG (cont) Total length 170'3-1/4"

#Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 80

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 7° LT	Superelevation
Bridge	TAN	-0.40%		Between Curbs	44'0"	Maximum	Rear approach pavement and Rdwy	
Rear approach	"	"		Between Rail				
Forward approach	"	"		0 to 0	46'6"	Minimum	Forward approach pavement and Rdwy	
Bearing	S72-45'15" E			Sidewalks				

Design by DOH (SW) Built by DOH Maintained by DOH Plans BRFC 050-5(13)

Contract No. Contractor HLM Const., Inc. Fabricator Contract price 213,935.65

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood

	Elevation
Grade center of bridge	3488.67'
Low bridge	
Low water	
Normal high water design	3479.6'
Maximum high water	

Drainage area (size and character) 120 Sq. MI

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3,475'0"

Nature of stream bottom

Remarks #INT. ALT.; Sta. 1011+20.87 to 1012+91.13; L-27-Q Removed

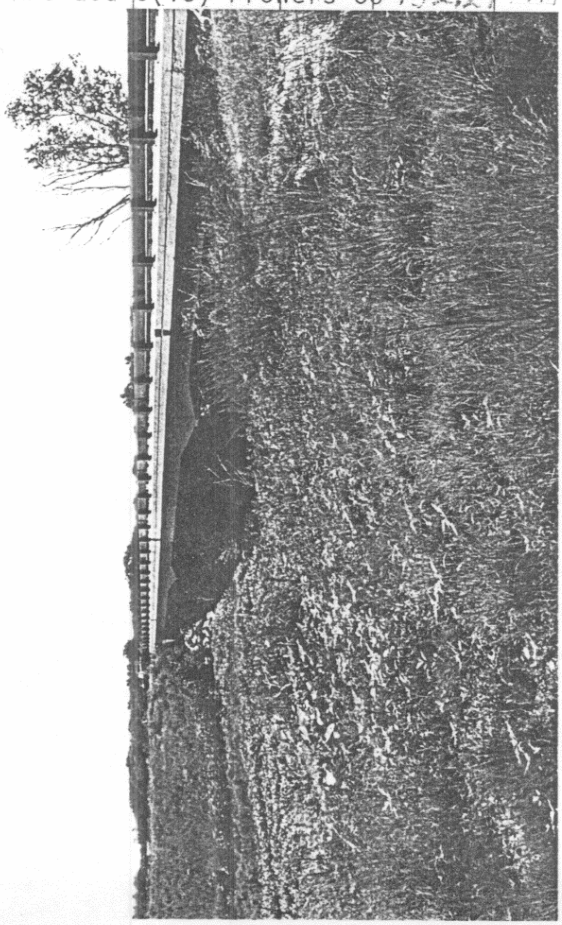
SUBSTRUCTURE

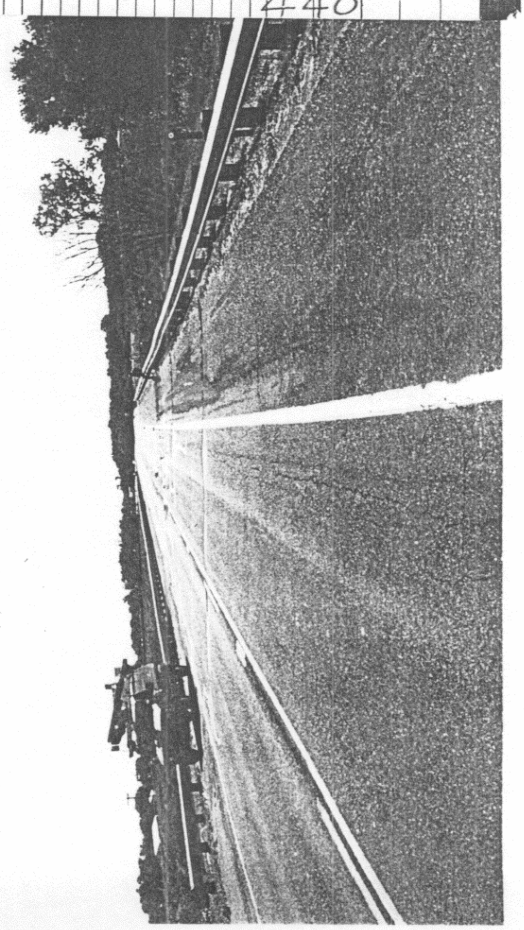
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'6"X	Conc.	5	HP	12 X 53			4-15'0" parallel to ℄ Rdwy
Forward	"	"						
Pier		Conc. Semi ℄ on	HP		12 X 53			
Pier		"	"		"			

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG	H - LOADING - RATED	ROADWAY	CLEARANCE
					—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50	—12 | 12-14 | 14— | Open
L-27-AL	BRFC 050-5(13)	Prowers 50		452.27 FAP		44'0"	





SUPERSTRUCTURE

Curbs 2 @ 1'3"X 8"

Wearing Surface 2" HBP

Hand rail Metal plate gd.rail on 6" WF @ 20# posts 2'3" high, galv. mounted thru curb

CONCRETE SLAB - Clear Span Thickness

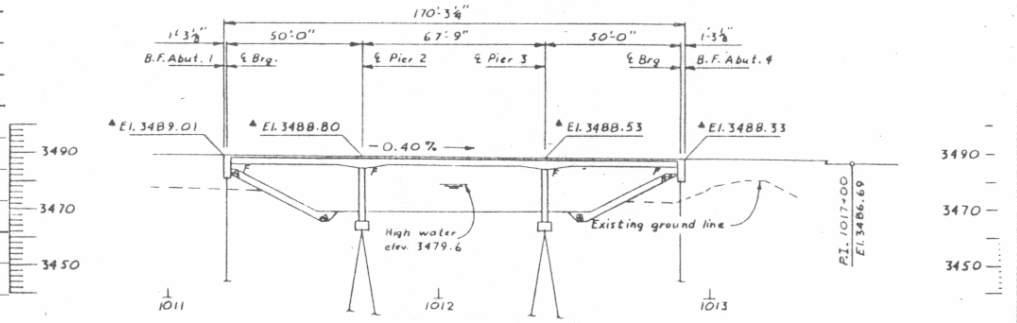
CONCRETE BEAM & SLAB

Clear Span	No. of Beams	Spacing *	Size (including Slab)	Slab Thickness	Remarks
50'0"	5	9'9"	1'9"X3'0"	8-1/2"	* Min.-Max. 1'9" X 4'3" at Piers
67'0"					
50'0"					

RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material

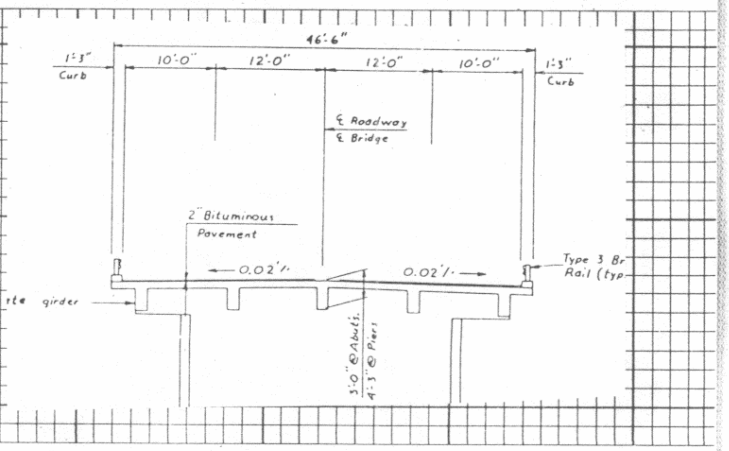
Clear Span	Ribs			
	No.	Spacing	Width	Crown



LAT. 38-03.7

102-18.7

SKETCH OF STRUCTURE SHOWING DIMENSIONS



LOCATION SKETCH

REMARKS:-General condition of structure (in pencil)

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-27-AL	BRFC 050-5(13)	Prowers 50	B	452.27	FAP					■					44'0"					■

Colorado State Highway
Bridge Dept.

TIMBER SPANS

Made AF 2-42

Location Sec. 16 Township 23S Range 43W Photo. Neg. No. PS 59 B-4537 Checked Date

Bridge over Granada Creek Station 189+38 to 191+00 No. and Type of Spans 7-T Total length 162'-0"

Rating H-20 S16 Member Str Rating Unit Stress fs 1800 Design Live Load H-15 '28 Required Live Load H 20 S16 '28' Posted Live Load Year built 1933

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	tan	0.0	707	Between Curbs	30'-0	Maximum	Rear approach pavement and Rdwy
Rear approach	tan	41.195 to 00 200'VC	707	Between Rail	30'-6"		
Forward approach	tan to 4°30'L	0.0 to +0.12	open	C to C Truss		Minimum	Forward approach pavement and Rdwy
				Sidewalks	none		

Design by CSHD Built by CSHD Maintained by CSHD Plans NRH-216-D

Contract No. Contractor Driscoll Const. Co. Fabricator Nat'l. Lbr. & Creo. Co. Contract price 7297.20

WATERWAY Area of Br. opening 900 sq ft 913 sq ft '70' Area of Relief opening none Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3460.92
Low bridge	3458.67
Low water	dry
Normal high water	
Maximum high water	

Drainage area (size and character) 60 sq mi Flat to rolling grass land. Sandy

Drift and Ice Med. drift noice Dams none

Channel width Depth Elevation of Stream bed 3452.8

Nature of stream bottom

Remarks

f'c = 5100 @ 45 yr

fs = 18-S = 17750 PSI

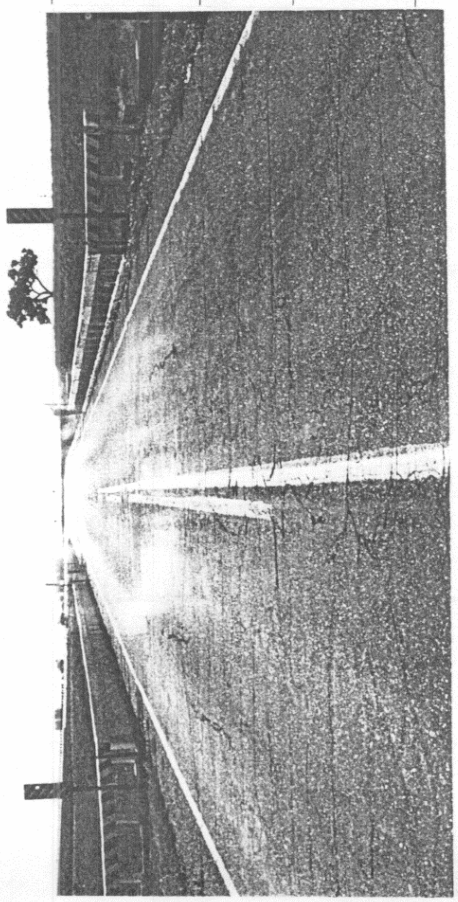
SUBSTRUCTURE

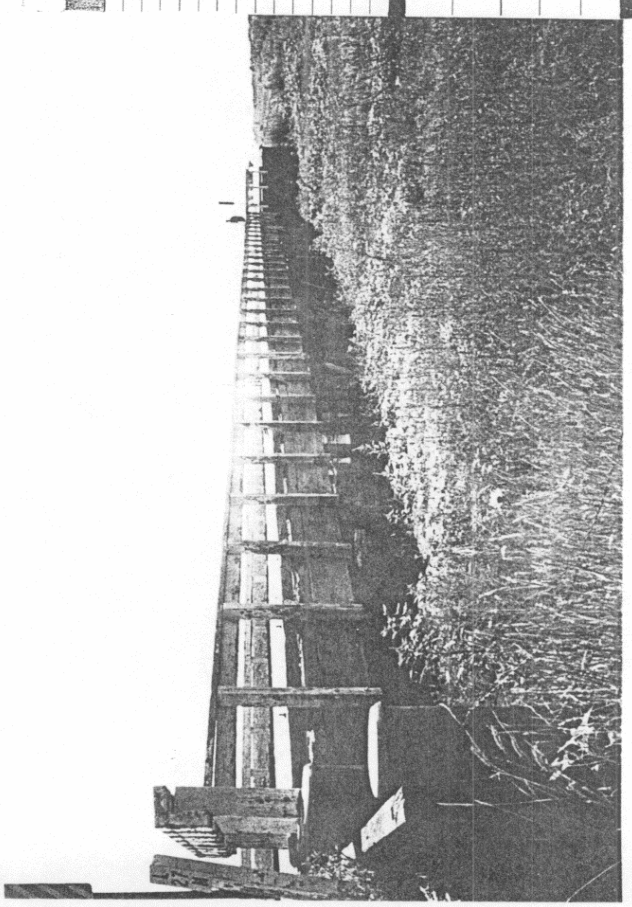
Abut's Piers	CAP or SILL Size	CAP or SILL Material	PILING - FRAME BENTS - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	12"x 12"	TC	7	12"	28' TP			16' T 45°
Forward	12"x 12"	TC	7	12"	28' TP			
Pier	12"x 12"	TC	7	12"	28' TP			
Pier								Swaybraces —
								Backing Plank 4"x 12"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED	ROADWAY	CLEARANCE
L-27-M	NRH-216-D	Prowers	50	B 455.65	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Span No.	FLOOR: Thickness - Type and Material	FLOOR: Wearing Surface	STRINGERS: Effective Span	STRINGERS: Number	STRINGERS: Size	STRINGERS: Material	STRINGERS: Spacing	STRINGERS: Allowable Stress
A	7" C S	3/4" Conc Mono	23' 0	20	6"x20"	TS	1'-7 1/4"	1600
B		4" o. s.						
C								
D								
E								

Fastenings:- Floor to stringer none Stringer to cap none

Stringers Lapped or butted outside butted inside lapped

Wheel guard T-6"x6" Hand rail T-2'-6" hi.

Remarks

TRUSSES End floor beam Interior floor beam

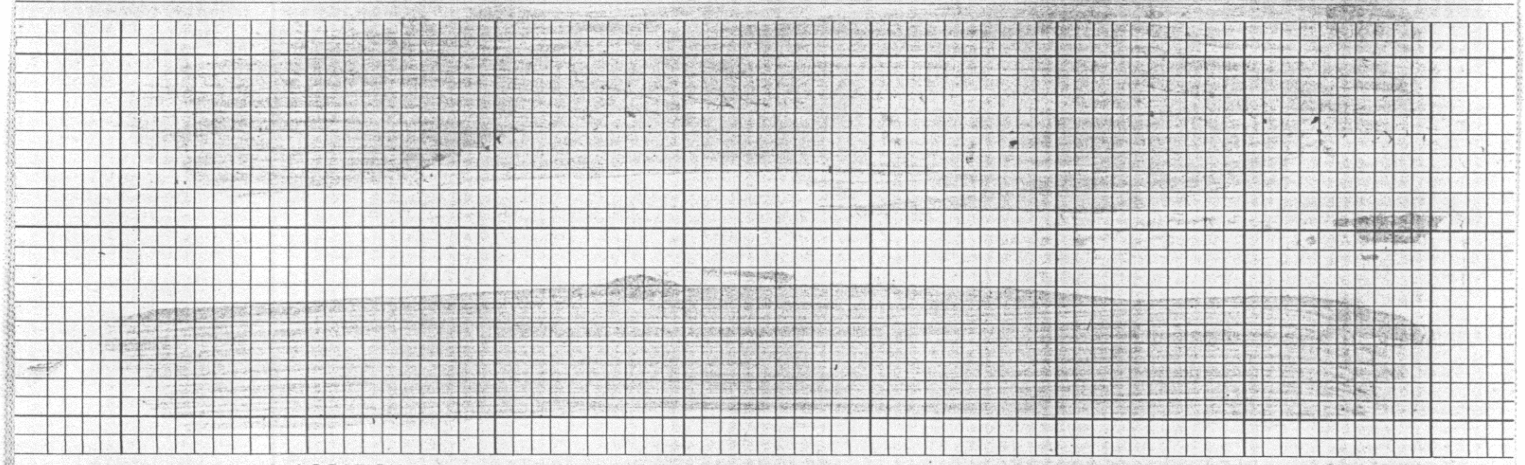
Upper Chord: Member	Upper Chord: Material	Upper Chord: Size	Lower Chord: Member	Lower Chord: Material	Lower Chord: Size	Diagonals: Member	Diagonals: Material	Diagonals: Size	Verticals: Member	Verticals: Material	Verticals: Size	Top Laterals
LU			LL			LU			LU			Bott. Laterals
UU			LL			LU			LU			Portals
UU			LL			LU			LU			Swaybrace
UU			LL			LU			LU			
												C to C Chords

Truss bearing Bolts Pins

Connectors

Remarks

SKETCH OF STRUCTURE SHOWING DIMENSIONS



LOCATION SKETCH

DOD

LAT.	38°02.8'
LONG.	102°15.2'
Rd. Sect.	119
Br. Letter	A

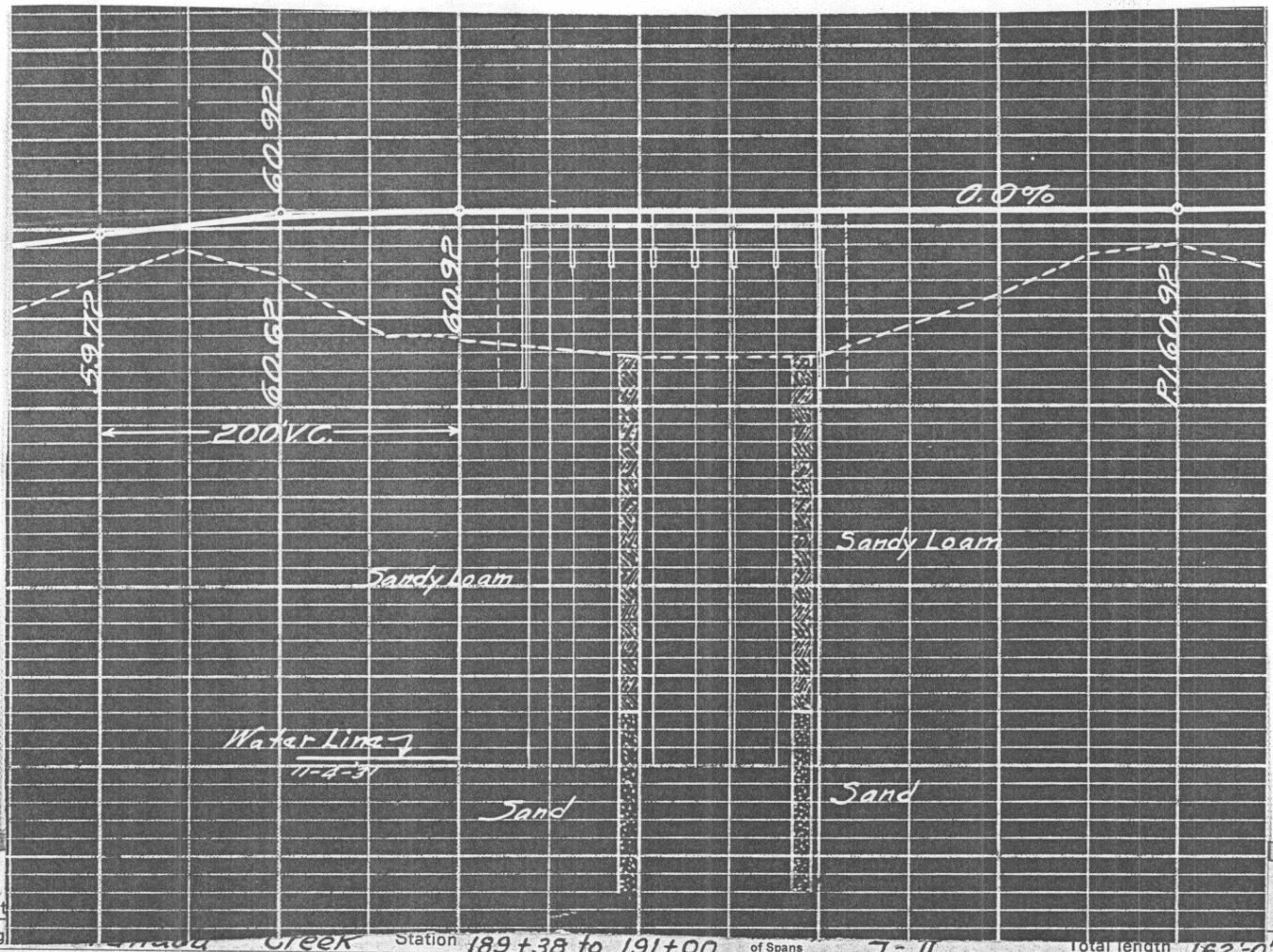
REMARKS:-General condition of structure (in pencil)

Evidence that this struct. has been ½ full of water, if full would overflow to west BS. 58 2nd bent from East cap split and badly splintered on North end. Needs watching. B. S. 1964 No worse 68 H.R., curbs, paint, surfacing, & appr fills are all poor. Curb Rks. poor '68' Curbs very poor. Hole in deck starting @ NW corner. No sways. "70"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-27-M	NRH·216·D	Prowers	50	B 455.65	FA	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open



Locat

Bridg ... Creek Station 189+38 to 191+00 of Spans 7-11 Total length 162'-0"

Rating H-20 S16 Member Str Rating Unit Stress ... Design Live ... Required Live H 20 S16 Posted Live Year built 1933

GENE

Bridge

Rear approach

Forward approach

Design

Contra

WATERV

Grade c of bridg

Low b

Low w

Normal high wat

Maximu high wat

4" O.S

H 16

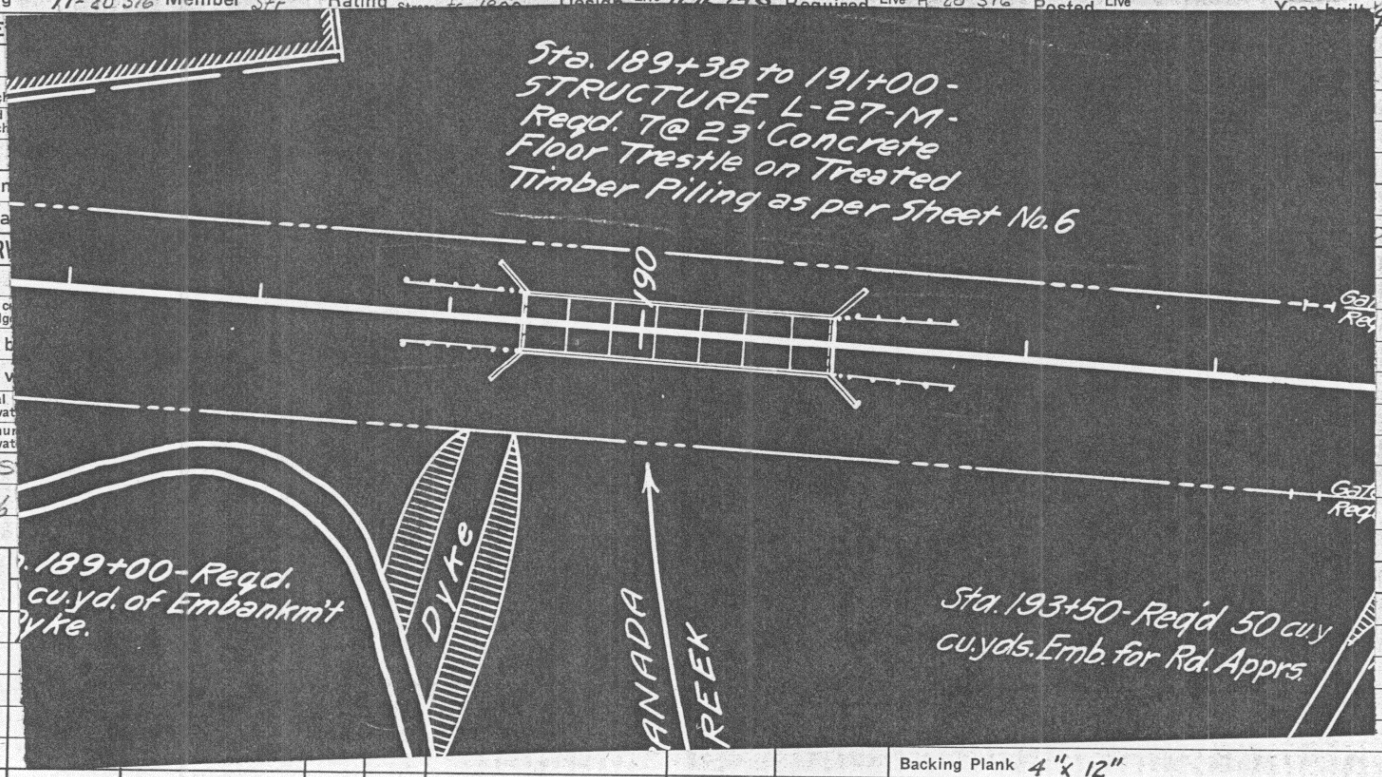
Abut's Piers

Rear

Forward

Pier

Pier



Backing Plank 4" x 12"

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-27-M	NRH·216·D	Prowers	50	B 455.65	FA															

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made JE

Location Sec. 14/15 Township 23S Range 43W Photo. Neg. No.

Checked SCH Date 1/74

Bridge over Arkansas River Station *285+55 No. and Type of Spans 9-CPG Total length 1084'-2 1/2"

#Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 73

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 30°Lt. Superelevation
Bridge	Tan	120'VC	1300'	Between Curbs	42'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	"	+0.2%		Between Rail			
Forward approach	"	-0.2%		0. to 0.	44'-6"	Minimum	Forward approach pavement and Rdwy
Bearing N80°52'30"E				Sidewalks			

Design by Meheen Eng. Built by DOH Maintained by DOH Plans Br-F050-5(7)(8)

Contract No. Contractor Ramsour Brothers Inc Fabricator Midwest 73-5318 Contract price $878,174.88

WATERWAY Area of Br. opening Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3449.21'
Low bridge	
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 22,000 sq. mi. Rolling Plains

Drift and Ice Dams

Channel width 880' Depth Elevation of Stream bed 3428.0'

Nature of stream bottom

Remarks *280+12.90 to 290+97.10 #Int. Alt. L-28-J Removed

Riprap at abuts with spur dikes; June 1976 S.E. Power attached power line

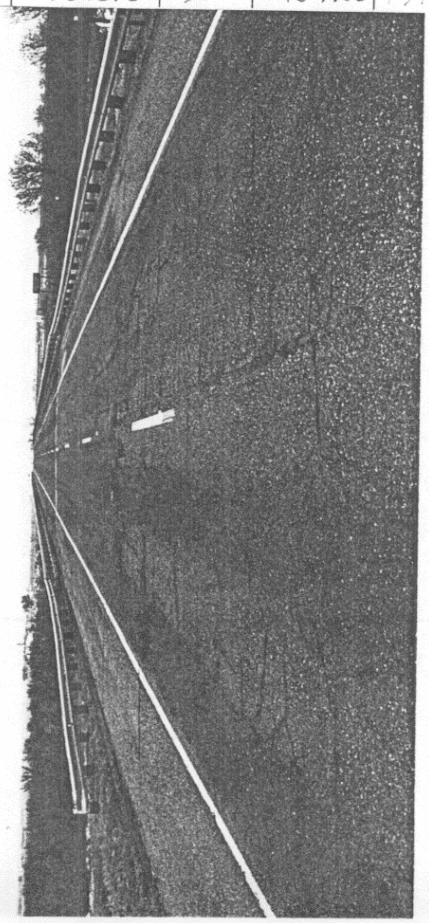
SUBSTRUCTURE

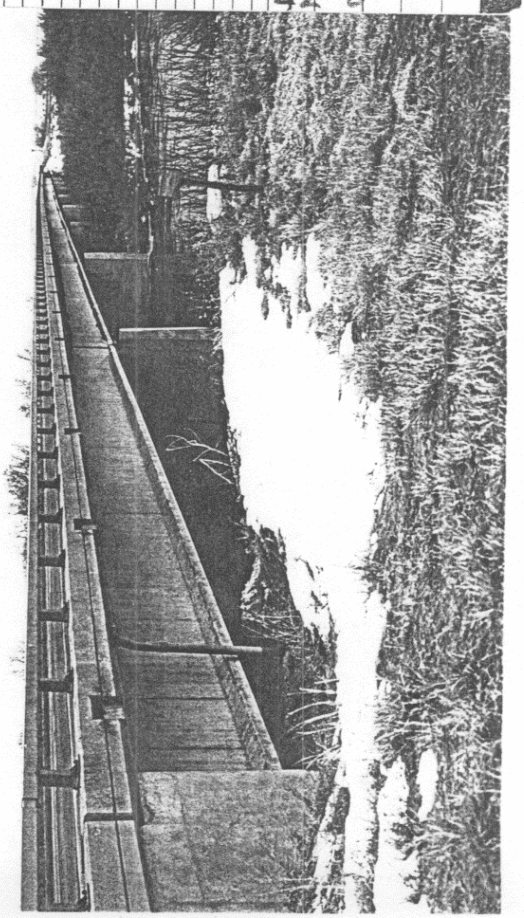
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	4'-2 1/2" X Varies	conc.	9	12"	HP53#x59'			4-17'-9" Parallel to CL Rdwy
Forward	"	"	"	"	" x76'			
Pier	2'-10 1/2" X Varies	"	14	12"	HP74#x45'avr.	Pier #2-#9		
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-28-AQ	BR-F-050-5(7)	Prowers	50	B 457.38	FAP	—10 | 10 | 12½ | 15 | 20	15-18 | 19-22 | 23-26 | 27-30 | 40 | 50 = 42'-0"	—12 | 12-14 | 14— | Open





SUPERSTRUCTURE

Curbs 2-1'-3"x11"

Hand rail 1-8"x6"x1/2" tube rail on 5"x5"x1/2"tube Posts,1'-9" high galv. mounted partway thru curb (Br. Rail Type 5)

Wearing Surface 2"HBP

CONCRETE SLAB - Clear Span Thickness

CONCRETE BEAM & SLAB Colorado S-68 Prestressed Gdr.

Clear Span	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
119'-2 1/2"	6	7'-6"	2'-0"x5'-8"	6 1/2"	
7-120'-0"	"	"	"	"	
119'-2 1/2"	"	"	"	"	

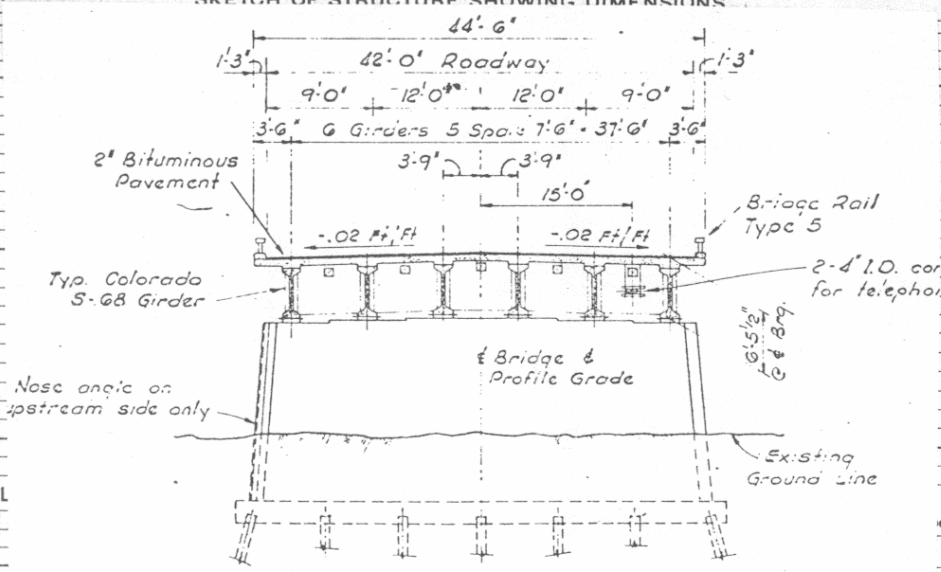
RIGID FRAME:- No. of Ribs Spacing Clear Span Slab Thickness

ARCHES:- Material Rise Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	

Lat 38-03.3
Long 102-13.4

SKETCH OF STRUCTURE SHOWING DIMENSIONS



TYPICAL SECTION AT PIER

Orig. Scale: 1" = 10'

Traffic Survey Data

First Bridge Second Bridge Third Bridge

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY					CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40 50	—12	12-14	14—	Open
L-28-AD	BR-F-050-5(7)	Prowers	50	B 457.38	FAD														

DOH 456
(Dec 1968)

CONCRETE and STONE MASONRY BRIDGES

Made JWB

Location Sec. 16 Township 23-S Range 42-W Photo. Neg. No.

Checked SCH Date FEB. 1977

Bridge over DITCH Station 535 + 11 No. and Type of Spans 2 -CBC Total length 24' 10 11/16

Rating HS-20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 77

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 42° LT. Superelevation
Bridge	TAN.	-0.069%		Between Curbs		Maximum	Rear approach pavement and Rdwy
Rear approach	"	"		Between Rail			
Forward approach	"	"		RDWY.	40'0"	Minimum	Forward approach pavement and Rdwy
BEARING	S.80-56 E.			Sidewalks			

Design by DOH (J.E.S.) Built by DOH Maintained by DOH Plans C 17-0050-05

Contract No. Contractor HIM CONST. CO. Fabricator Contract price ~~$30,002.50~~

WATERWAY	Area of Br. opening	Area of Relief opening	Skew of flow (Normal)	Flood $31,389.05
	Elevation	Drainage area (size and character)		
Grade center of bridge				
Low bridge		Drift and Ice	Dams	
Low water		Channel width Depth	Elevation of Stream bed 91.1'	
Normal high water		Nature of stream bottom		
Maximum high water		Remarks		

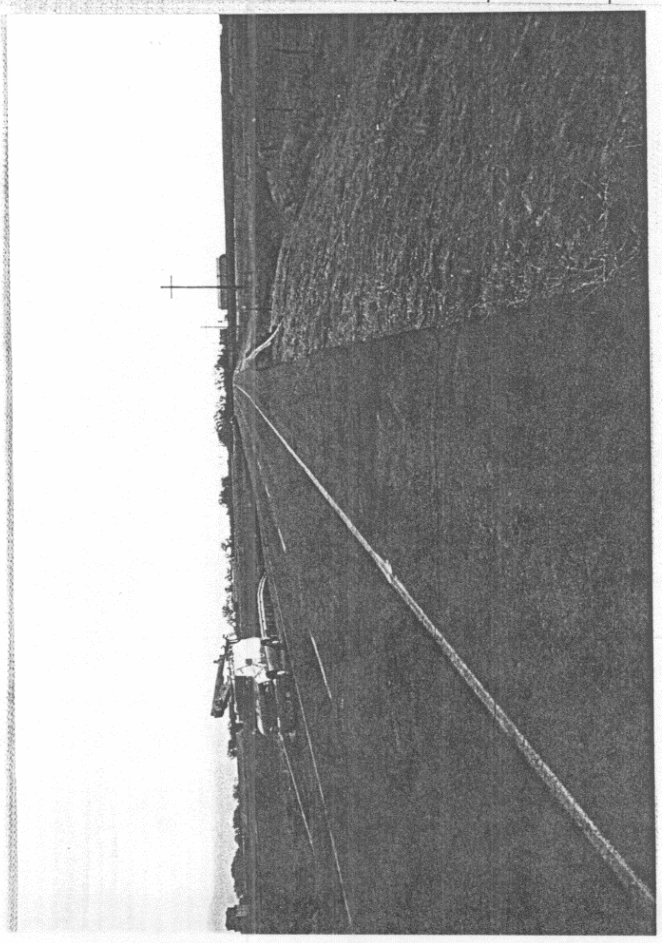
SUBSTRUCTURE

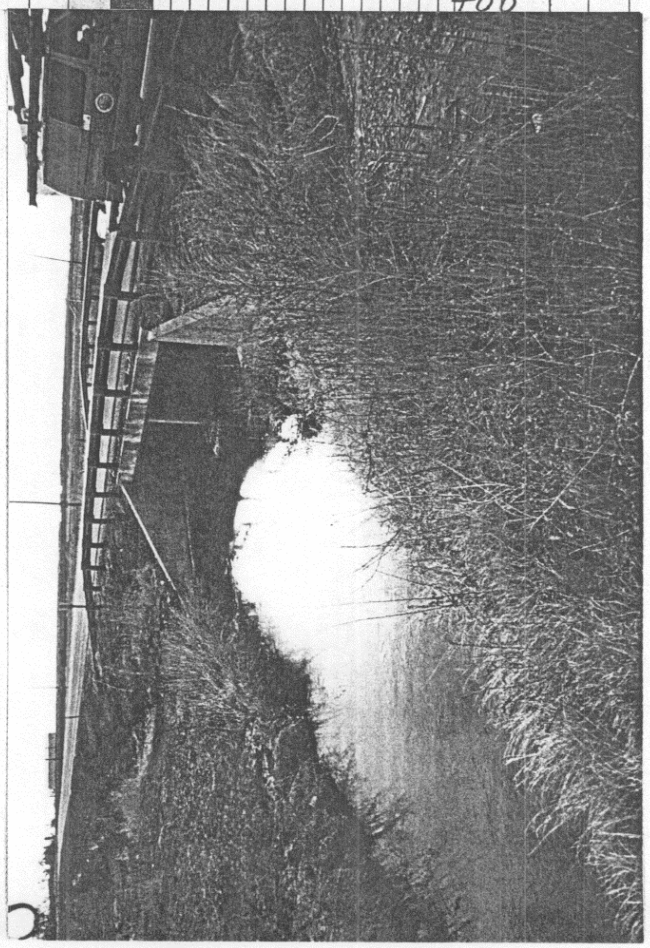
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear								
Forward	DOUBLE	(8' x 8') x	6'	x 65'				2 - 16'0" @ 105°
Pier	TYPE	8-8-A						2 - 30'0" @ 30°
Pier								

First Bridge Second Bridge Third Bridge

Traffic Survey Data

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						-10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	-12	12-14	14-	Open
L-28-AR	C 17-0050-05	PROWERS	50	B 462.13	FAP										40'0"					





Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made J.R.J. 4-60

Checked Date

Location Sec. 16 Township 23 S Range 42 W. Photo. Neg. No.

Bridge over WILDHORSE CREEK Station 545+84.00 to 548+00.25 No. and Type of Spans 7-C36 Total length 216'-3"

Rating H20S16 Member Rating Unit Stress fs 20000 fc 1200 Design Live Load H20S16-44 Required Live Load #20 S16 30' Posted Live Load Year built '60

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 0° Superelevation
Bridge	TANGENT	300' V.C.	1015'	Between Curbs	30'-0"	Maximum	Rear approach pavement and Rdwy
Rear approach	2° Lt. CURVE	"		Between Rail			
Forward approach	TANGENT	"				Minimum	Forward approach pavement and Rdwy
BEARING	S89°51'E	P.I. 546+50		Sidewalks	2@2'-0"		

Design by CDH. Built by C.D.H. Maintained by CDH. 60-1744 Plans F 001-5(13)

Contract No. Contractor PIONEER CONST. CO. Fabricator Midwest Steel & Iron Wks. Co. Contract price $62,632.90

WATERWAY Area of Br. opening 1365 sq ft 1326 sq ft '70 Area of Relief opening Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3390.636
Low bridge	3387.876
Low water	
Normal high water	
Maximum high water	

Drainage area (size and character) 1300 # 17i

PER/HHS 0002(2), GD. RAIL TYPE-3 CONNECTED TO STR. BY TAYLOR FENCE CO. (1976)

Drift and Ice Dams

Channel width Depth Elevation of Stream bed 3379.00

Nature of stream bottom

Remarks

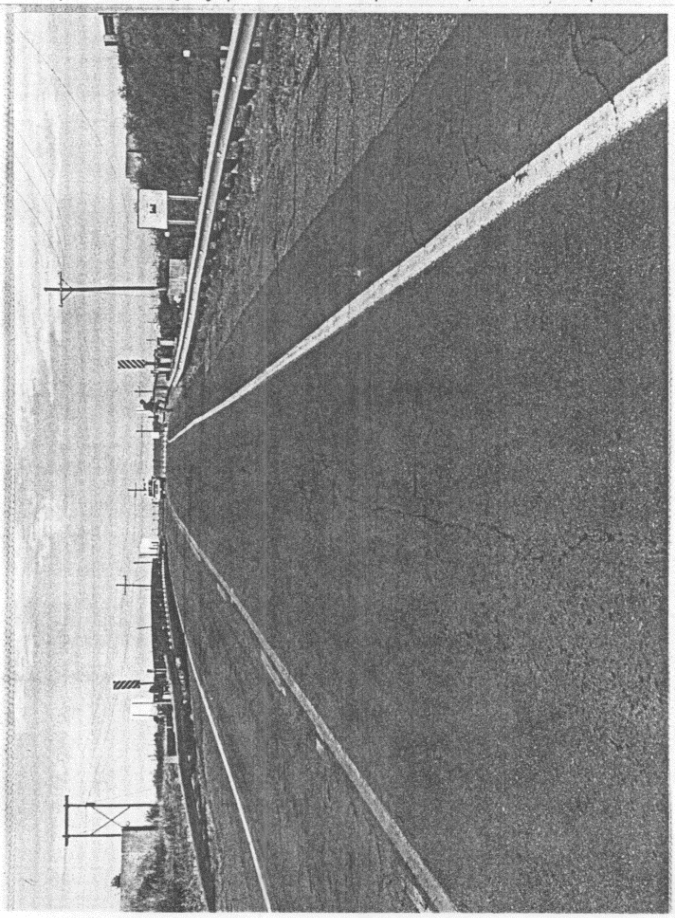
SUBSTRUCTURE

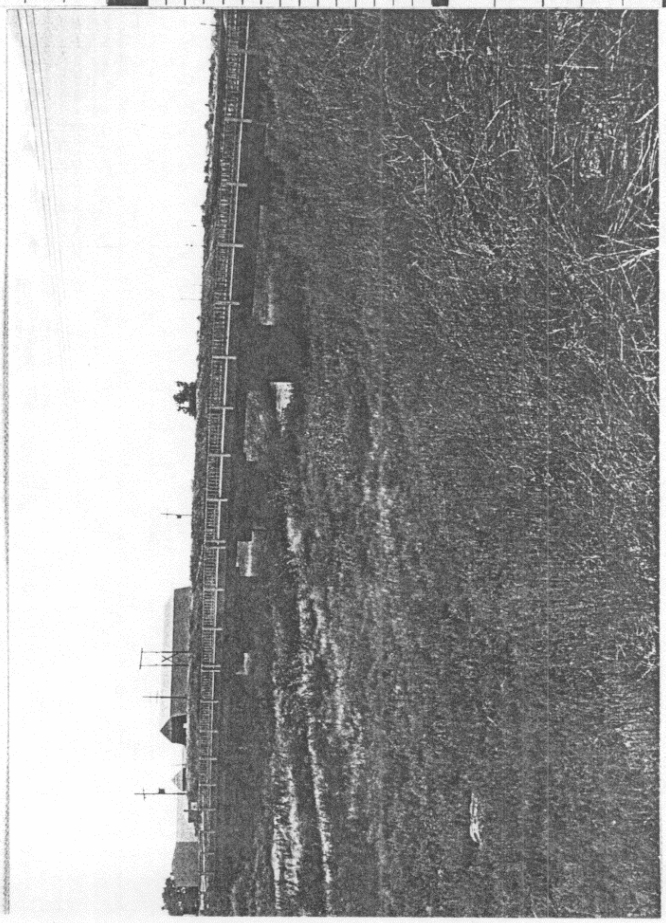
Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	1'-9" x 3'-9"	CONC.	4	12"	BP 53#	43'-0"		NO WINGS
Forward	"	"	"	"	"	"		
Pier 1-2-4	2'-3" x 2'-6"	"	4	12"	BP 53#	41'-0"		
Pier 3			CONC. SEMI. SEAL ON 4-12" BP 53#			38'-0"		

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG		H-LOADING-RATED (—10 / 10 / 12½ / 15 / 20)	ROADWAY (15-18 / 19-22 / 23-26 / 27-30 / 40 / 50)	CLEARANCE (—12 / 12-14 / 14— / Open)
28-AP	F001-5(13)	PROWERS	50	B 462.32	FA			





SUPERSTRUCTURE

Curbs 12" Conc. Hand rail Std. Steel 2'-6" High

Wearing Surface ½" Conc. Mono.

CONCRETE SLAB - Clear Span Thickness

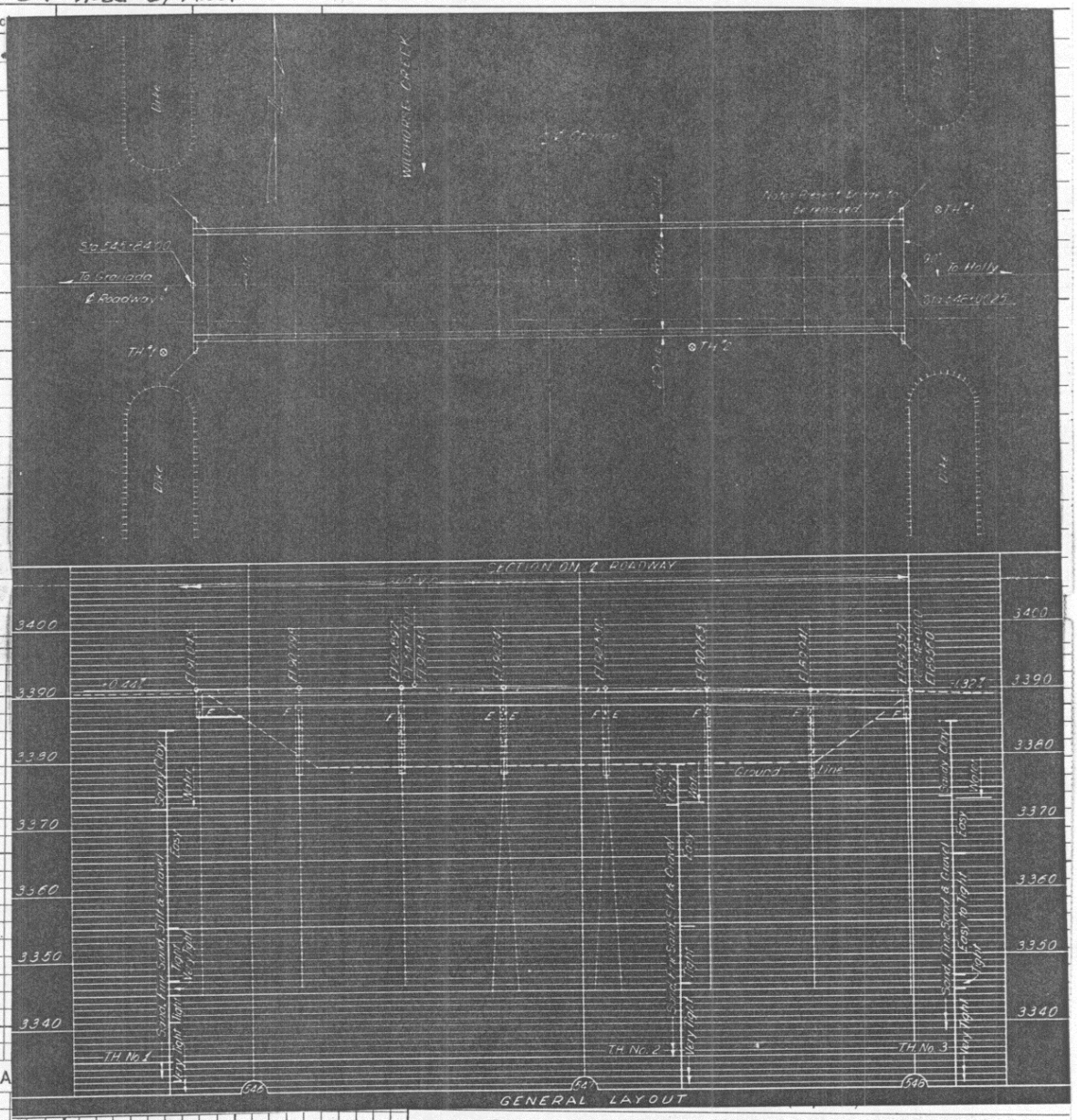
CONCRETE BEAM & SLAB Simple Spans.

~~Clear~~ c.to.c. Span	No. of Beams	Spac
30'-0"	4	9'-

RIGID FRAME:- No. of Ribs

ARCHES:- Material

Clear Span	Ribs	
	No.	Spacing



LOCA

	OOD
LAT.	38° 03.1'
LONG.	102° 08.1'
Rd. Sect.	119
Br. Letter	D

S.W. end post has been hit. B.S. 1964
Slab cracked & spalling. Header fair, SW curb broken. Alum poor. Appr fills low. Drift on top of piers. 3rd pier from E. Cap is broken rebar exposed. '68'
Handrail repaired. Slab cracked both ways. Being painted '70'

First Bridge Second Bridge Third Bridge

Traffic Survey Data 3100

STR. NO.	PROJECT	COUNTY	Highway	LOG	
I-78-AD	F 001-5(13)	Prowers	50	B 462.32	EA

H - LOADING - RATED					ROADWAY						CLEARANCE			
—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open

Colorado State Highway Bridge Dept.

CONCRETE and STONE MASONRY BRIDGES

Made SWH

Checked

Location Sec. 17 Township 23S Range 41W Photo. Neg. No.

Date 4/66

Bridge over Cheyenne Creek Station * No. and Type of Spans 3 CSG Total length 124'-2 7/8"

Rating HS20-44 Member Rating Unit Stress Design Live Load Required Live Load Posted Live Load Year built 66

GENERAL	Alinement	Grade	Sight Distance	Width		Vertical Clearance	Skew 18° Lt. to Tan. Superelevation
Bridge	2° Cur.Rt.	0.2017%	1300'	Rdwy. ~~Between Curbs~~	30'-0"	Maximum	Rear approach pavement and Rdwy 20'-0"x 0'-10"x 30'-0"
Rear approach	"	"		Between Rail			
Forward approach	"	"				Minimum	Forward approach pavement and Rdwy 20'-0"x 0'-10"x 30'-0"
PI	1100+35.6			Sidewalks	2 @ 2'		

Design by CDH (LDP) Built by CDH Maintained by CDH Plans F 001-5(19)

Contract No. Contractor Peter Kiewit, Sons. Fabricator Burkhardt & Sons 2028,29 Contract price 40473.--

WATERWAY Area of Br. opening 1[illegible] Area of ~~Relief opening~~ 30 Sq. Mi. Skew of flow (Normal) Flood

	Elevation
Grade center of bridge	3373.69'
Low bridge	
Low water	3350.0
Normal high water	
Maximum high water	3359.0

Drainage area (size and character) /30 sq.mi. Rolling Grass & Farmland

Drift and Ice Med. drift Dams

Channel width Depth Elevation of Stream bed 3348.5

Nature of stream bottom

Remarks * 1104+72.00 to 1105+96.241

SUBSTRUCTURE

Abut's Piers	CAP Size	CAP Material	PILING - CONCRETE No.	Butt Size	Material	Grade to Footing	Footing Material	Wing (Lengths, angles, etc.)
Rear	2'0"x 4'0"	Conc.	4	10"	BP @ 42 x 32'0"			No wings
Forward	"	"	"	"	"			
2 Pier	1'6"x 2'1"	"	~~4~~ Conc. Cyl. Grout 4 Col.	C. on 10"	BP @ 42	20'	½"	
3 Pier	"	"	"	"	"	19'	8 7/8"	

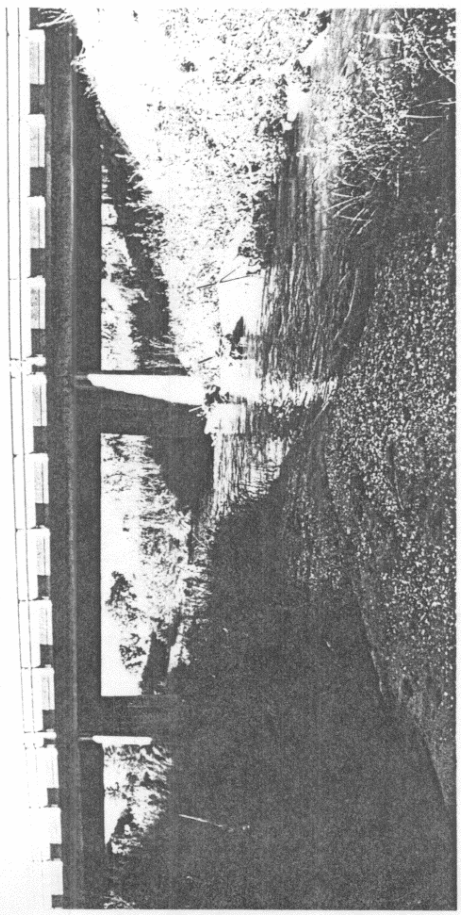
1104+00 (Surv.) 1105+00 (Surv.) 1106+00 (Surv.)

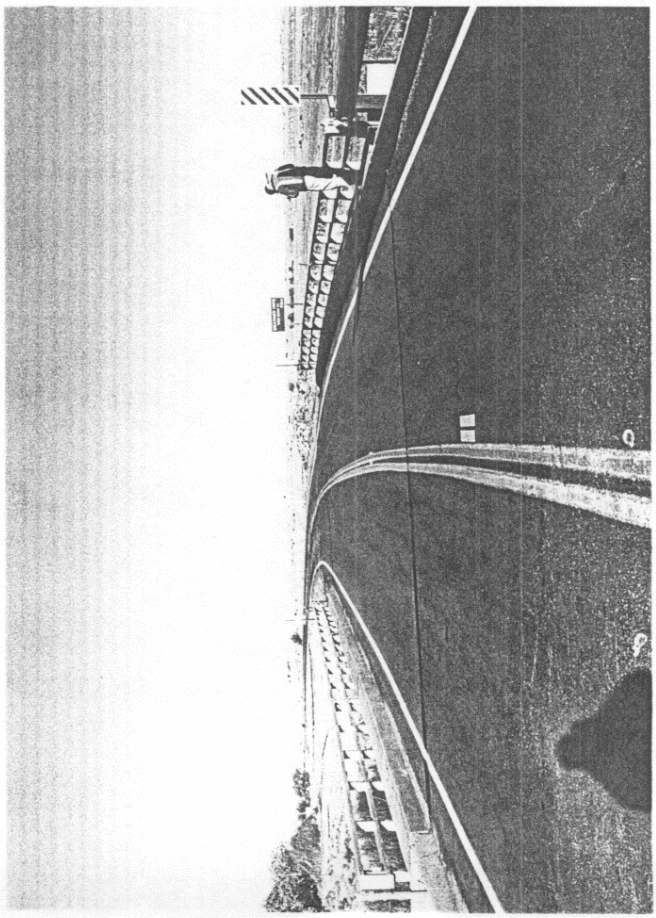
GENERAL LAYOUT

First Bridge Second Bridge Third Bridge

Traffic Survey Data /400

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED	ROADWAY	CLEARANCE
L-28-E	F-001-5 (19)	PROWERS	50	8 467.33	AP	—10 10 12½ 15 20	15-18 19-22 23-26 27-30 40 50	—12 12-14 14— Open





SUPERSTRUCTURE

Curbs 1'-0" Safety Curb — Hand rail 2'-8" channel rails; 2'-3" High

Wearing Surface ~~1½"~~ Conc. Mono. 2" o.s. (by maintenance) — Galv. 5"x 5" Tube Posts

CONCRETE SLAB - Clear Span — Thickness

CONCRETE BEAM & SLAB Simple Spans

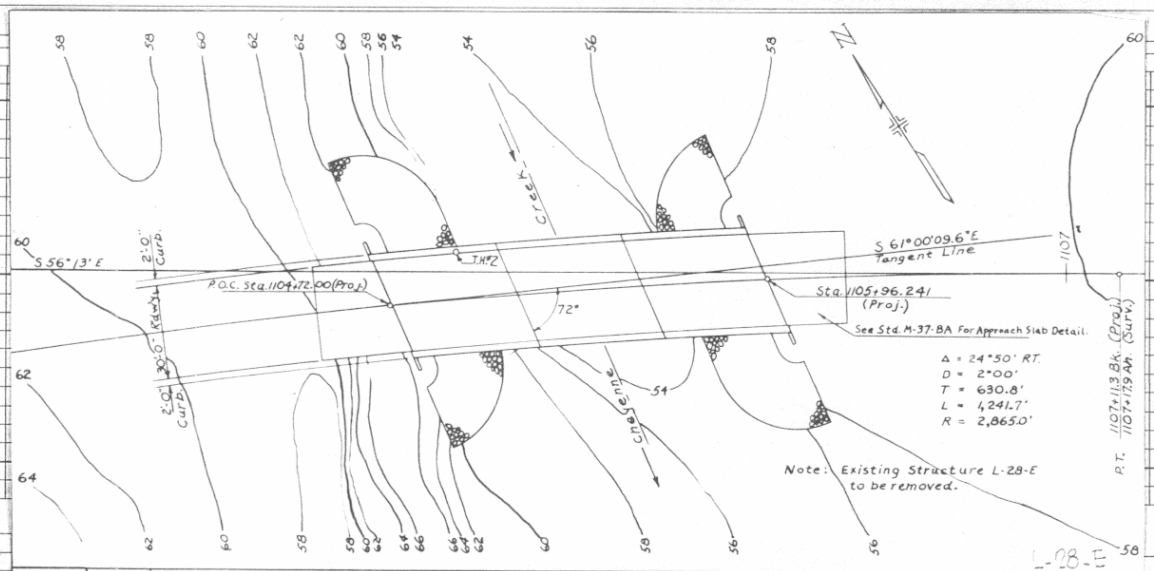
c. to c.	No. of Beams	Spacing	Size (including Slab)	Slab Thickness	Remarks
3 @ 40'0"	4	8'-6"	1'-4"x 2'7"	0'-7"	*

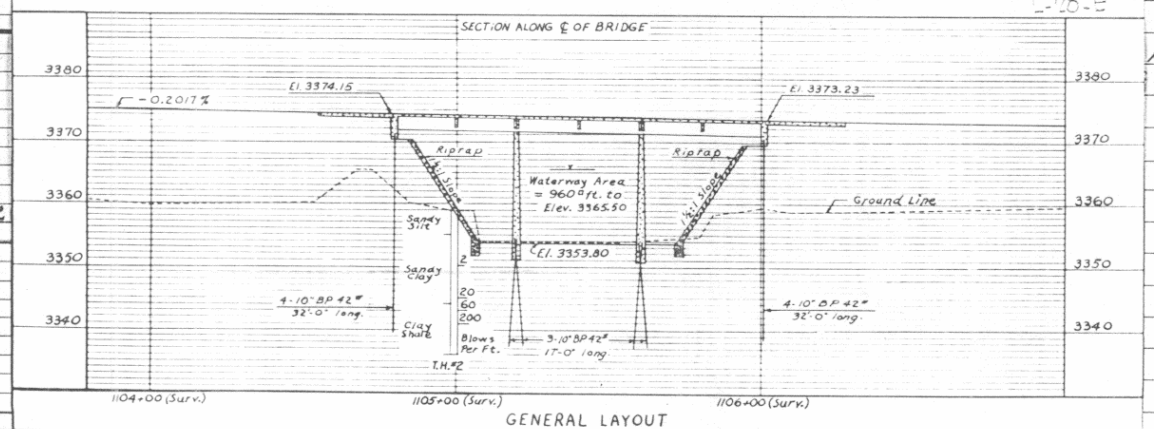
* Include ½" Conc. Mono. W. S.

RIGID FRAME:- No. of Ribs — Spacing — Clear Span — Slab Thickness

ARCHES:- Material — Rise — Shape

Clear Span	Ribs			Thickness			Remarks
	No.	Spacing	Width	Crown	Spring	Deck Slab	





GENERAL LAYOUT

strand
nap '68'
drift. '70'

LAT.
LONG.
Rd. Sect.
Br. Letter

First Bridge — Second Bridge — Third Bridge

Traffic Survey Data 1400

STR. NO.	PROJECT	COUNTY	Highway	LOG		H - LOADING - RATED					ROADWAY						CLEARANCE			
						—10	10	12½	15	20	15-18	19-22	23-26	27-30	40	50	—12	12-14	14—	Open
L-28-E	F-001-5 (19)	PROWERS	50	8 467.33	EAD															