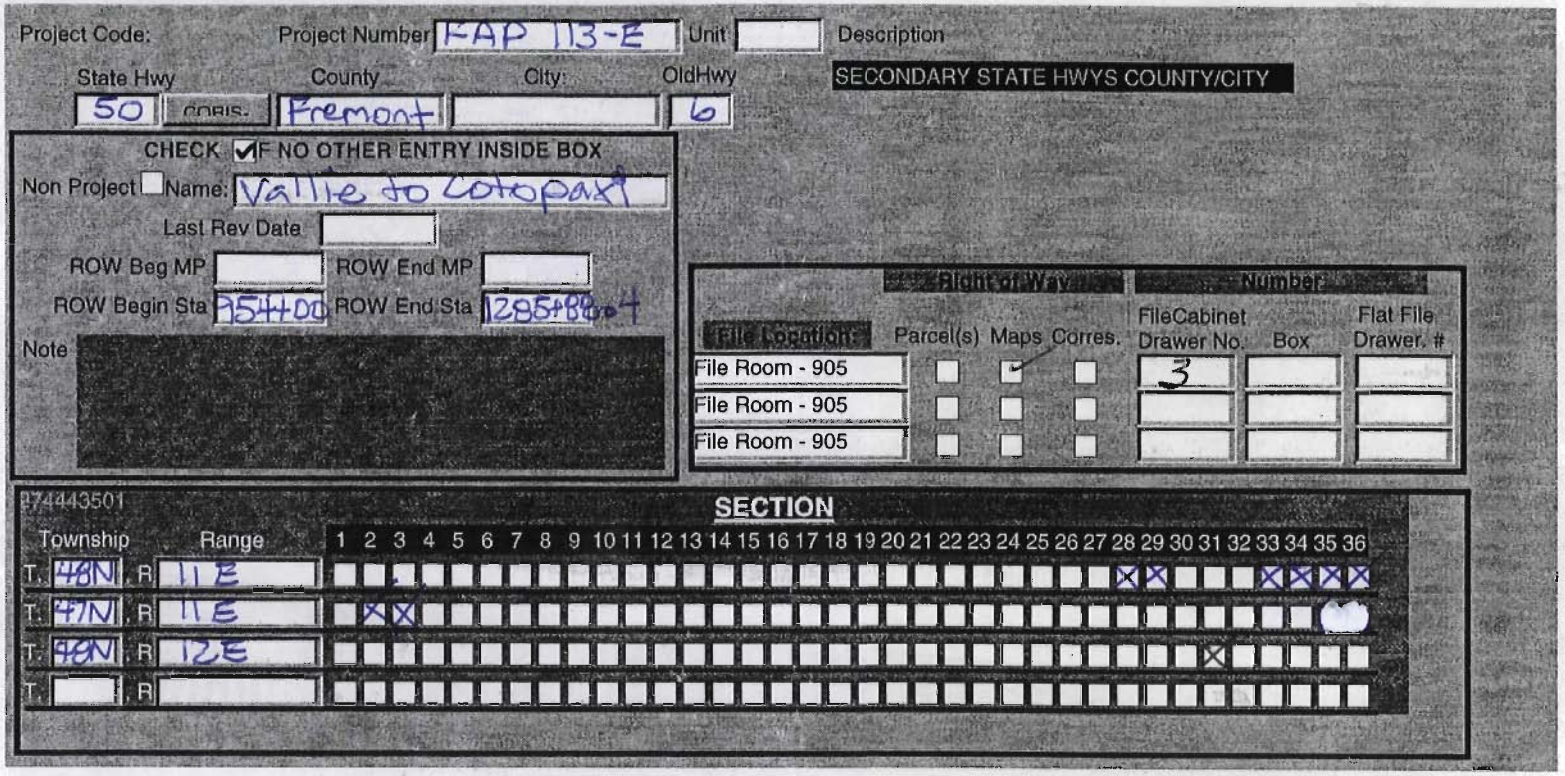

Project Code:
Project Number: FAP 113-E
Unit:
Description
State Hwy
County
City:
OldHwy
50
CORIS
Fremont
6
SECONDARY STATE HWYS COUNTY/CITY
CHECK IF NO OTHER ENTRY INSIDE BOX
Non Project
Name: Valley to Cotopaxi
Last Rev Date
ROW Beg MP
ROW End MP
ROW Begin Sta 954+00
ROW End Sta 1285+80
Note
Rights of Way
Number
File Location
Parcel(s)
Maps
Corres.
FileCabinet Drawer No.
Box
Flat File Drawer. #
File Room - 905
3
File Room - 905
File Room - 905
274443501
SECTION
Township
Range
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
T. 48N R 11E
T. 47N R 11E
T. 48N R 12E
T.
R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P. 113-E AND F.L.H.P. NO. 2-C	1	

COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. 113-E
& FEDERAL LANDS HIGHWAY PROJECT NO. 2-C
STATE HIGHWAY NO. 6
FREMONT COUNTY

INDEX OF SHEETS

1. Title Sheet
2. Typical Cross Section & Summary of Quantities
3. List of Structures
4-6. Details of Bridge, Sta. 1043+
7-8. " " " " 1054+
9-11. " " " " 1096+
12-14. " " " " 1126+
15-17. " " " " 1206+
18-20. " " " " 1274+
21. Concrete Box Culvert M-103-D
22. " " " M-104-D
23. Double Concrete Box Culvert M-110-B
24. Standard Headwalls for C.M.P. Culverts M-102-E
25. " Wire Cable Guard Fence M-20-G
26. " Wire Fence & Marker Posts M-24-FX
27. " Structure Number Lettering M-10-A
28. " Methods for Superelevation & Widening M-1-A
29. Typical Approach Roads & Traffic Signs M-2-B
30-40. Plan & Profile
41-161. Cross-Sections

SCALES OF ORIGINAL TRACINGS:

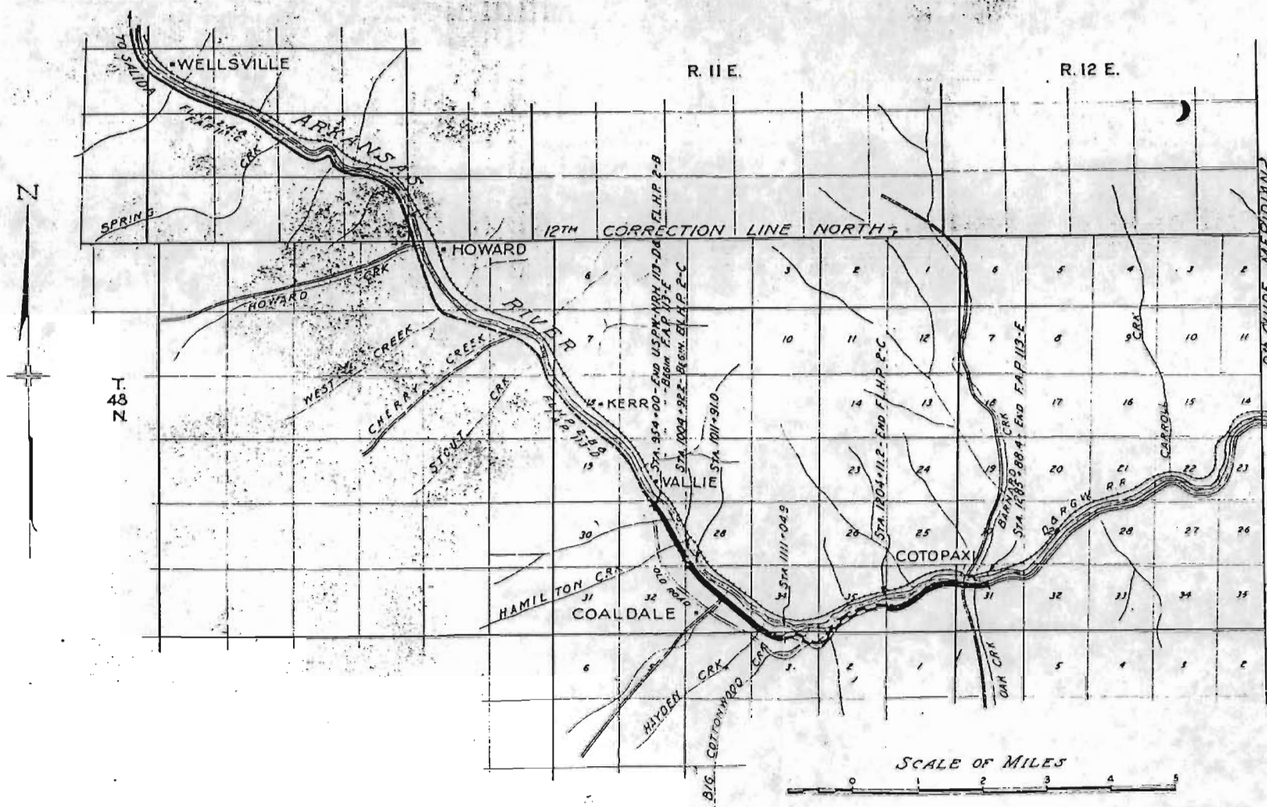
ON PLAN, 1 IN. = 100 FT.
ON PROFILE (1 IN. = 100 FT. HORIZONTAL
(1 IN. = 10 FT. VERTICAL

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

	F.A.P. 113-E.	F.L.H.P. 2-C
GROSS LENGTH OF PROJECT	33210.4 FT. = 6.289 MI.	19910.7 FT. = 3.771 MI.
NET LENGTH OF PROJECT	23197.0 FT. = 4.393 MI.	10013.4 FT. = 1.896 MI.

CONVENTIONAL SIGNS

Center Line of Survey
Right of Way Lines
Township Lines
Section Lines
Quarter Section Lines
Railroads
Barbed Wire Fence
Wire Cable Guard Fence
Pole Lines



LEGEND
F.A.P. 113-E
F.L.H.P. 2-C

NOTE
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this Department.
J.D. Bell, Division Eng. Pueblo, Colo.
J.W. Robertson, Res. Eng. Salida, "

RECOMMENDED FOR APPROVAL 12/20/35
J. E. Hilsbery
ASSISTANT ENGINEER
APPROVED
Chas. D. Hair
STATE HIGHWAY ENGINEER
RECOMMENDED FOR APPROVAL
DIST. ENG. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL
CHIEF ENG. BUREAU PUBLIC ROADS
APPROVED
DIRECTOR BUREAU PUBLIC ROADS

LIST OF STRUCTURES

Location	Description	Remove Struct. No.	Excavation Cu. Yds. Uncl.	Excavation Cu. Yds. Emb.	Structural Excavation Cu. Yds.	Concrete Cu. Yds. Cl. A	Concrete Cu. Yds. Cl. E	Reinf. Steel Lbs	Corrugated Metal Culvert Pipe Lin. Ft. 15"	18"	24"	30"	36"	Misc.
957+70	6'x7'x32' Conc. Box Culv., Channel		100		155	68.1		4310						
962+67	Cross Culvert, Channel (Skew 60°)		20		15		1.1			50				
970+00	" "				10		1.1			44				
970+00 - 972+80	Ditch Change		150											
972+00	Side Drain and Approaches			50	5					26				
973+20	Cross Culvert				5		1.65				46			
980+06⁷ - 980+33³	Dble 10'x8'x38' C.B.C. Chan. (TYPE 10-A)(Skew 60)		(See Summary for Quantities)											
984+00	Cross Culvert, Ditches		100		15		1.1			44				
992+00	" " "		100		20		1.1			44				
997+50	" " "		50		15		1.1			44				
1001+40	6'x7'x34' Conc. Box Culv., Channel		500		400	69.9		4461						
1003+76	Cross Culvert, Channel		30		15		1.65				48			
1008+48	10'x8'x38' C.B.C. Chan. (TYPE 10-1)(Skew 70)		200		240	108.0		9494						
1013+00	Cross Culvert, Ditches		100		20		1.1			44				
1020+00	6'x7'x34' Conc. Box Culv., Channels		500		385	69.9		4461						
1022+00	Cross Culvert				10		1.1			44				
1025+75	" "				10		1.1			42				
1027+50	4'x3'x34' Conc. Box Culv.				50	29.2		2455						
1027+50	Remove Hog Pen	1												
1029+30	Cross Culvert (Skew 45°)				15		1.1			60				
1037+10	" "				15		1.1			44				
1037+76	6'x7'x34' Conc. Box Culv., Channel		200		120	69.9		4461						
1040+00	Cross Culvert				5		1.1			44				
1043+23² - 1043+56³	Bridge		(See Summary for Quantities)											
1045+70	Cross Culvert				5		1.1			46				
1049+40	" "				25		1.65				46			
1054+10² - 1054+43³	Bridge		(See Summary for Quantities)											
1054+70	Approaches, Left & Right			5000										
1055+80	Cross Culvert, Intercepting Ditch		100		10		3.0						84	
1057+30	" "				15		1.1			44				
1066+32	" " (Skew 70°)				10		3.0						74	
1069+29	" "				15		1.1			44				
1079+40	" "				10		3.0						70	
1080+53	" "				15		1.65				54			
1084+00	" "				25		1.65				46			
1096+45² - 1097+08³	Bridge		(See Summary for Quantities)											
1103+90	Cross Culvert				10		1.65				64			
1126+72² - 1127+35³	Bridge		(See Summary for Quantities)											
1132+10	Remove C.M.P. Culvert	1												
1138+09	" " " , 6'x4'x34' C.B.C.	1			100	45.8		3341						
1142+64	" " "	1												
1151+00	Cross Culvert				20		1.65				56			
1155+25	" "				10		1.65				46			
1164+95	" " , Remove C.M.P. Culvert	1			15		2.25					68		
1170+48	Remove C.M.P. Culvert	1												
1180+05	" " " , Cross Culvert	1			5		1.65				52			
1194+85	" " " , " "	1			10		1.65				52			
1206+68² - 1207+31²	Bridge, Channel		(See Summary for Quantities)											
1218+75 - 1220+80	Ditch change (Rock Embank.)			200										
1237+00	Remove C.M.P. Culvert, Cross Culvert	1			5		1.65				42			
1245+10	" " "	1												
1249+94	" " "	1												
1252+00 - 1254+50	Ditch change		(Quantities in Cross Sections)											
1253+00	Cross Culvert				5		1.65				56			
1256+50	Remove Barn from R.O.W. (FORCE ACCOUNT)													Rem. Barn
1261+24	" C.M.P. Culvert	1												
1268+35	Cross Culvert				5		1.65				54			
1270+60	Move Gas Pumps off R.O.W. (FORCE ACCOUNT)													Move Pumps
1271+70	" Ice House " " " "													" Ice House
1272+65	Remove C.M.P. Culvert	1												
1274+33³ - 1275+16³	Bridge, Remove old Bridge		(See Summary for Quantities)											
1275+90	Remove C.M.P. Culvert	1												
1278+00	" " "	1												
1283+40	" " "	1												
1048+00	Cross Culvert				10		1.10			46				
1052+60	" "				10		1.10			44				
TOTAL - F.A.P. 113-E		9	1950	5250	1460	307.0	41.45	20148		754	456		228	
" - FLHP 2-C		7	200		400	153.8	8.85	12835			206	68		
GRAND TOTAL		16	2150	5250	*1860	460.8	50.30	32983		754	662	68	228	

* Structural Excavation is estimated to be 50% Rock & 50% Common, each of which is estimated to be 75% Dry and 25% Wet.

PROJECT MARKERS

Location	F.A.P. 113-E	F.L.H.P. 2-C
954+00	1	
1004+92.2		1
1011+91		1
1111+04.9		1
1204+11.2		1
1285+88.4	1	
TOTAL - F.A.P. 113-E	2	
" - FLHP 2-C		4
GRAND TOTAL		6

R.O.W. MARKERS

Location	Side	No.
955+25	L	1
956+55	R	1
981+48	R	1
982+05	L	1
1004+00	L	1
1005+90	R	1
1011+65	R	1
1012+18	L	1
1045+00	R	2
1048+30	R	1
1049+78	L	1
1066+00	R	2
1079+63	L	1
1080+44	R	1
1096+70	L	2
1097+27	R	2
1105+58	L & R	4
1110+73	R	1
1111+17	L	1
1127+00	R	2
1129+50	R	2
1131+50	R	2
1141+75	R	1
1142+42	L	1
1145+00	R	2
1150+00	R	2
1153+95	L	1
1154+78	R	1
1155+52.8	R	2
1162+00	L	2
1176+40	R	1
1177+28	L	1
1180+00	R	2
1161+50	R	2
1203+86	L	1
1204+36	R	1
1225+00	L	2
1227+60	L	1
1227+84	L	1
1229+00	R	1
1229+40	R	1
1233+00	R	2
1259+27	L	1
1259+56	R	1
1262+50	R	2
1264+00	R	2
1268+96	R	2
1273+00	R	2
1285+58	R	1
1286+18	L	1
TOTAL - F.A.P. 113-E		44
" - FLHP 2-C		28
GRAND TOTAL		72

GATES

Location	Side	Barb Wire	Drive Way	Walk
959+00	L		1	
" "	R	1		
972+00	L		1	
" "	R	1		
1001+00	R & L		2	
1019+00	" "		2	
1025+00	" "		2	
1036+00	L	1		
" "	R		1	
1041+00	L	1		
" "	R		1	
1049+00	L	1		
" "	R		1	
1056+80	L	1		
" "	R		1	
1057+00	L	1		
" "	R		1	
1069+00	L	1		
" "	R		1	
1082+00	R		1	
1097+75	R		1	
1097+75	L	1		
1255+80	L		1	
1257+50	L			1
1026+50	L		1	
TOTAL - F.A.P. 113-E		9	18	1
" F.L.H.P. 2-C				
GRAND TOTAL		9	18	1

GUARD FENCE

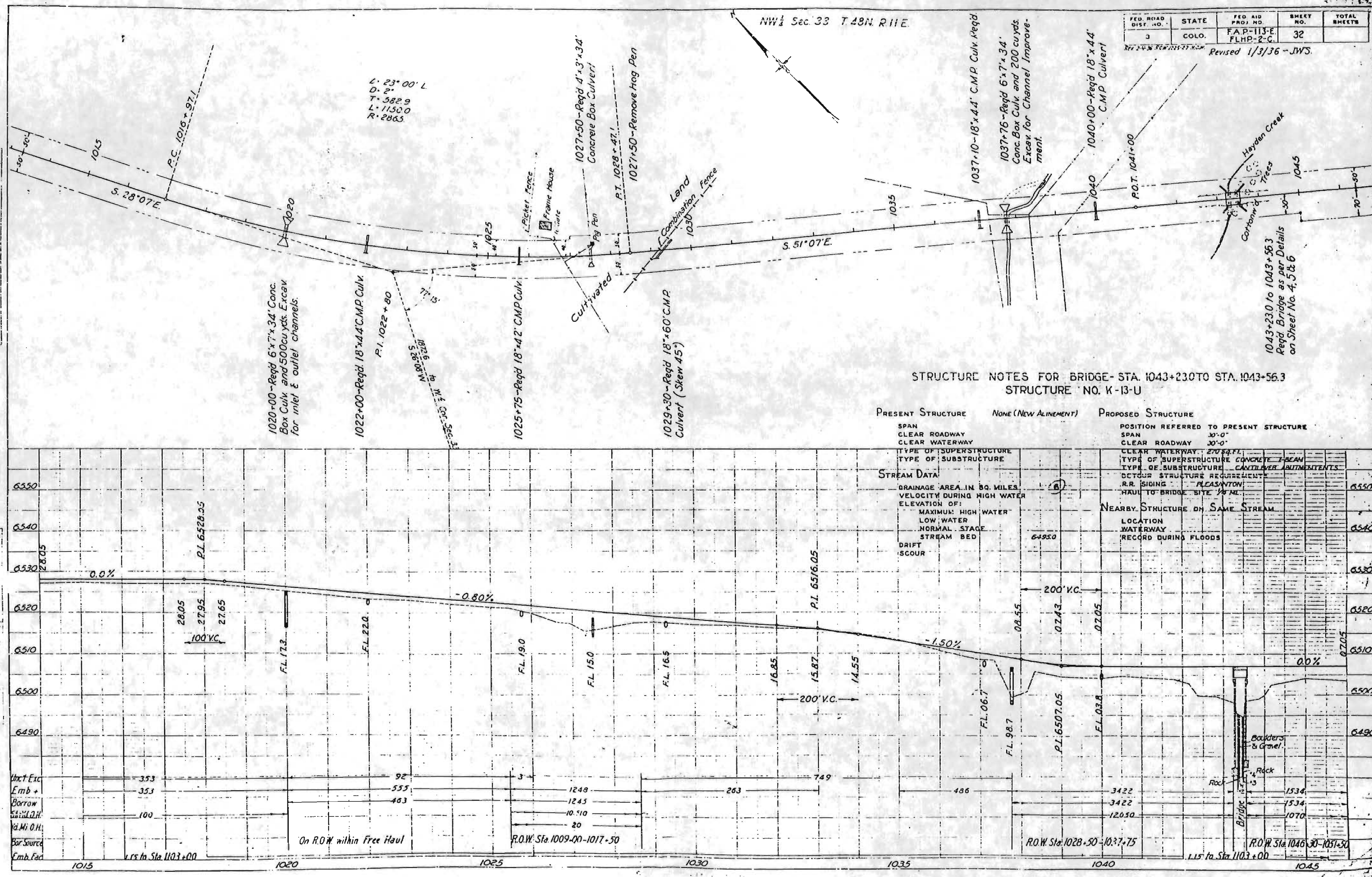
Location	Left	Right
1042+54.5 - 1043+20.5	66	66
1043+58.8 - 1044+24.8	66	66
1053+41.5 - 1054+07.5	66	66
1054+45.8 - 1055+11.8	66	66
1095+76.5 - 1096+42.5	66	66
1097+10.8 - 1097+76.8	66	66
1102+00 - 1104+48		248
1102+00 - 1125+36.8	2344	
1126+03.5 - 1126+69.5	66	66
1127+37.8 - 1128+03.8	66	66
1132+00 - 1137+92.9	600	
1146+50 - 1158+58	1208	
1160+50 - 1168+58	808	
1172+70 - 1175+98	328	
1178+40 - 1183+44	504	
1193+66 - 1205+80	1208	
1205+99.8 - 1206+65.8	66	66
1207+34.1 - 1208+00.1	66	66
1208+20 - 1221+24	1304	
1273+64.5 - 1274+30.5	66	66
1275+18.8 - 1275+84.8	66	66
TOTAL - F.A.P. 113-E	3037	908
" F.L.H.P. 2-C	6055	132
GRAND TOTAL	10136	

FENCING REQUIREMENTS

Location	Side	Remove Fence Lin. Ft.	Galv. B.W. Fence Lin. Ft.	Comb. Wire Fence Lin. Ft.
955+90	X	170		
955+25 - 1005+15	L			4948
956+50 - 981+50	R		2472	
962+60	X	120		
981+76	X	110		
981+50 - 1005+15	R			2351
988+75 - 990+20	L	330		
998+90	X	120		
1012+00 - 1029+25	R & L			3380
1029+25 - 1043+23	R			1370
1029+25 - 1043+23	L			1370
1043+56 - 1053+90	R			1040
1043+56 - 1054+10	L			1040
1026+00 - 1027+50	R & L	265		
1029+25	X	150		
1037+00 - 1040+00	R & L	470		
1049+20	X	110		
1050+50 - 1054+00	R & X	470		
1055+05	X	130		
1054+75 - 1096+45	R			4120
1055+25 - 1096+45	L		4064	
1056+80	X	120		
1067+25	X	100		
1074+00 - 1080+35	X & L	680		
1087+20 - 1090+00	X	310		
1093+70	X	100		
1097+00	X	130		
1221+00 - 1227+80	L	665	710	
1240+00 - 1258+40	R & L	1950		
1240+00 - 1258+40	L			1030
1261+55 - 1268+95	R	775		760
1277+80 - 1285+60	R	860		780
1097+08 - 1104+50	R.			755
" "	L.		742	
TOTAL F.A.P. 113-E		8185	7988	23744
" FLHP 2-C				
GRAND TOTAL		8185	7988	23744

Revised 1/3/36 - JWS

Fed. Road Div. No.	State	Project No.	Sheet No.	Total Sheets
3	COLO	[illegible]	3	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P.-113-E. FLHP-2-C.	32	

STRUCTURE NOTES FOR BRIDGE- STA. 1043+23.0 TO STA. 1043+56.3
STRUCTURE NO. K-13-U

PRESENT STRUCTURE — NONE (NEW ALINEMENT)
- SPAN
- CLEAR ROADWAY
- CLEAR WATERWAY
- TYPE OF SUPERSTRUCTURE
- TYPE OF SUBSTRUCTURE

STREAM DATA
- DRAINAGE AREA IN SQ. MILES — 6
- VELOCITY DURING HIGH WATER
- ELEVATION OF:
  - MAXIMUM HIGH WATER
  - LOW WATER
  - NORMAL STAGE
  - STREAM BED — 6495.0
- DRIFT
- SCOUR

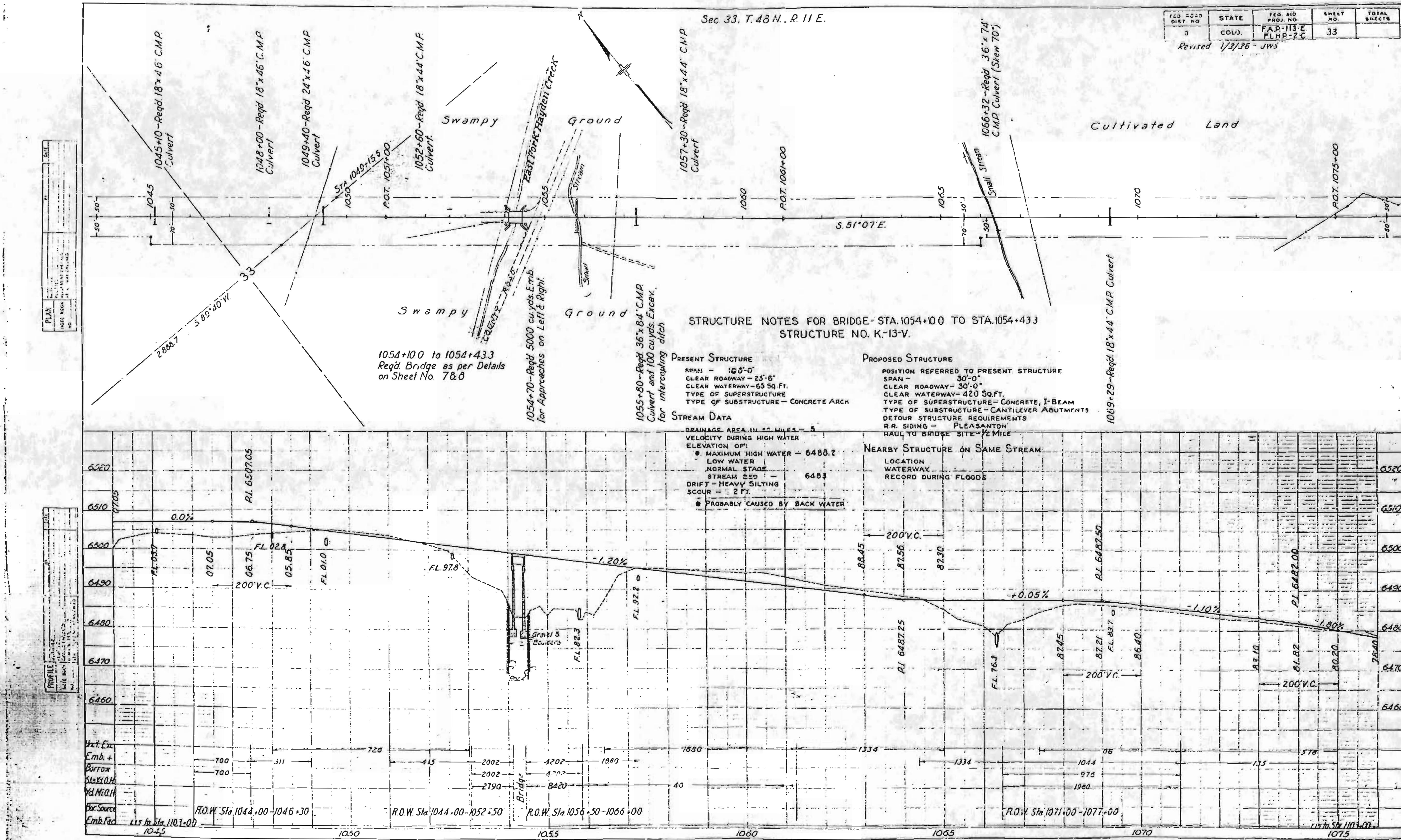
PROPOSED STRUCTURE
- POSITION REFERRED TO PRESENT STRUCTURE
- SPAN 30'-0"
- CLEAR ROADWAY 30'-0"
- CLEAR WATERWAY 270 SQ. FT.
- TYPE OF SUPERSTRUCTURE CONCRETE I-BEAM
- TYPE OF SUBSTRUCTURE CANTILEVER ABUTMENTS
- DETOUR STRUCTURE REQUIREMENTS
- R.R. SIDING PLEASANTON
- HAUL TO BRIDGE SITE ¼ MI.

NEARBY STRUCTURE ON SAME STREAM
- LOCATION
- WATERWAY
- RECORD DURING FLOODS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P.-113-E F.L.H.P.-2-C	33	

Revised 1/3/36 - JWS

Sec 33, T.48 N., R.11 E.


1045+10-Reqd. 18"x46' C.M.P. Culvert
1048+00-Reqd. 18"x46' C.M.P. Culvert
1049+40-Reqd. 24"x46' C.M.P. Culvert
1052+60-Reqd. 18"x44' C.M.P. Culvert
Swampy Ground
East Fork Hayden Creek
1057+30-Reqd. 18"x44' C.M.P. Culvert
1066+32-Reqd. 36"x74' C.M.P. Culvert (Skew 70°)
Cultivated Land
Sta. 1049+15.5
P.O.T. 1051+00
P.O.T. 1061+00
P.O.T. 1075+00
S. 51°07' E.
Small Stream
S. 89°10' W.
2808.7
33
1054+10.0 to 1054+43.3 Reqd. Bridge as per Details on Sheet No. 7 & 8
1054+70-Reqd. 5000 cu.yds. Emb. for Approaches on Left & Right
1055+80-Reqd. 36"x84' C.M.P. Culvert and 100 cu.yds. Excav. for intercepting ditch
1069+29-Reqd. 18"x44' C.M.P. Culvert
0.0%
-1.20%
+0.05%
-1.10%
-1.80%
200' V.C.
P.I. 6507.05
P.I. 6487.25
P.I. 6487.50
P.I. 6482.00
F.L. 97.8
F.L. 92.2
F.L. 82.3
F.L. 76.3
Gravel & Boulders
Bridge
R.O.W. Sta. 1044+00-1046+30
R.O.W. Sta. 1044+00-1052+50
R.O.W. Sta. 1056+50-1066+00
R.O.W. Sta. 1071+00-1077+00
Incl. Exc.
Emb. +
Borrow
Sta.Yd.O.H.
Yd.Mi.O.H.
Bor. Source
Emb. Fac.
1045
1050
1055
1060
1065
1070
1075
PLAN
PROFILE

STRUCTURE NOTES FOR BRIDGE - STA. 1054+10.0 TO STA. 1054+43.3
STRUCTURE NO. K-13-V.

PRESENT STRUCTURE

SPAN - 10'-0"
CLEAR ROADWAY - 23'-6"
CLEAR WATERWAY - 65 Sq.Ft.
TYPE OF SUPERSTRUCTURE
TYPE OF SUBSTRUCTURE - CONCRETE ARCH

STREAM DATA

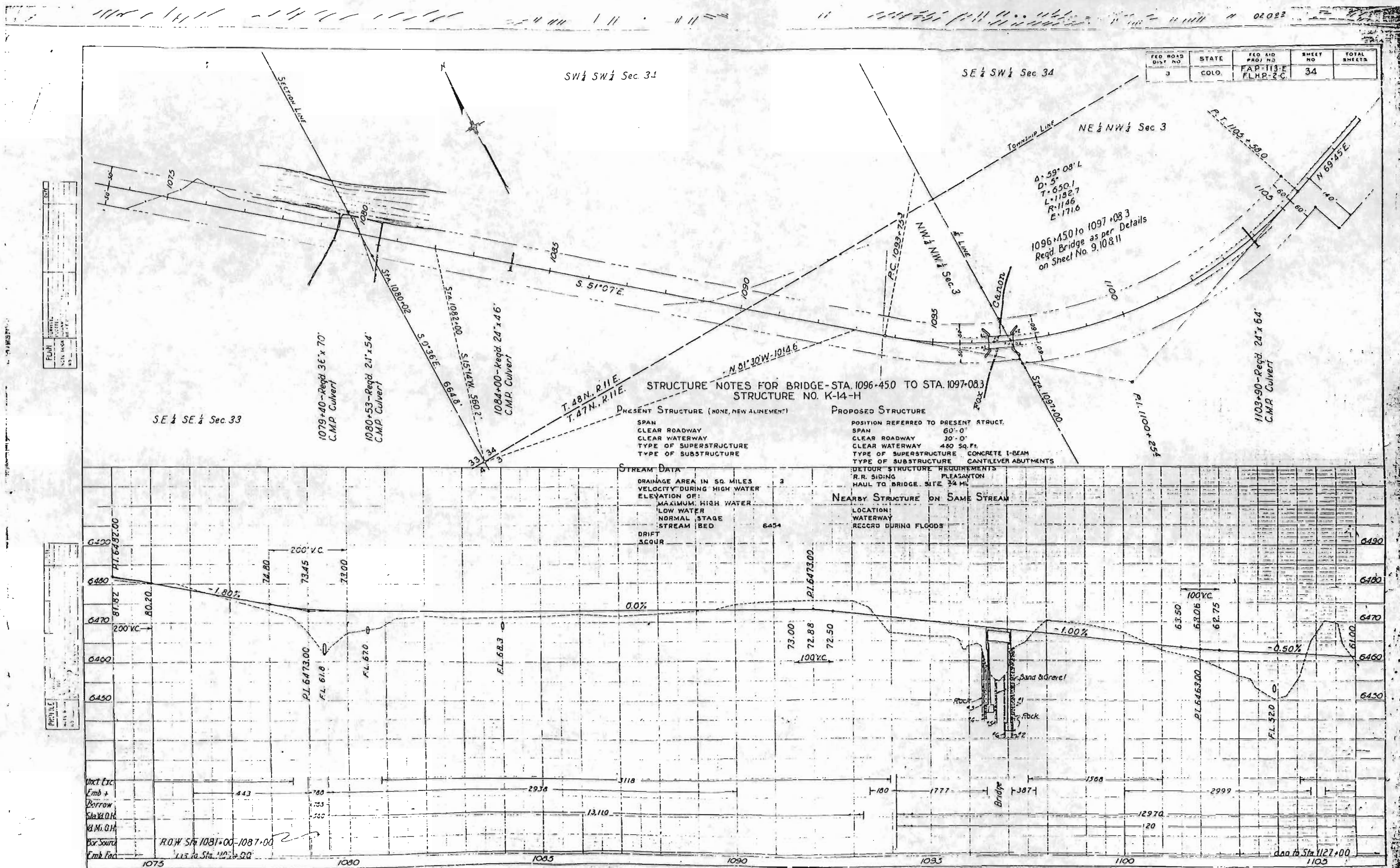
DRAINAGE AREA IN SQ. MILES - 5
VELOCITY DURING HIGH WATER
ELEVATION OF:
* MAXIMUM HIGH WATER - 6488.2
LOW WATER
NORMAL STAGE
STREAM BED - 6483
DRIFT - HEAVY SILTING
SCOUR - 2 FT.
* PROBABLY CAUSED BY BACK WATER

PROPOSED STRUCTURE

POSITION REFERRED TO PRESENT STRUCTURE
SPAN - 30'-0"
CLEAR ROADWAY - 30'-0"
CLEAR WATERWAY - 420 SQ.FT.
TYPE OF SUPERSTRUCTURE - CONCRETE, I-BEAM
TYPE OF SUBSTRUCTURE - CANTILEVER ABUTMENTS
DETOUR STRUCTURE REQUIREMENTS
R.R. SIDING - PLEASANTON
HAUL TO BRIDGE SITE - ½ MILE

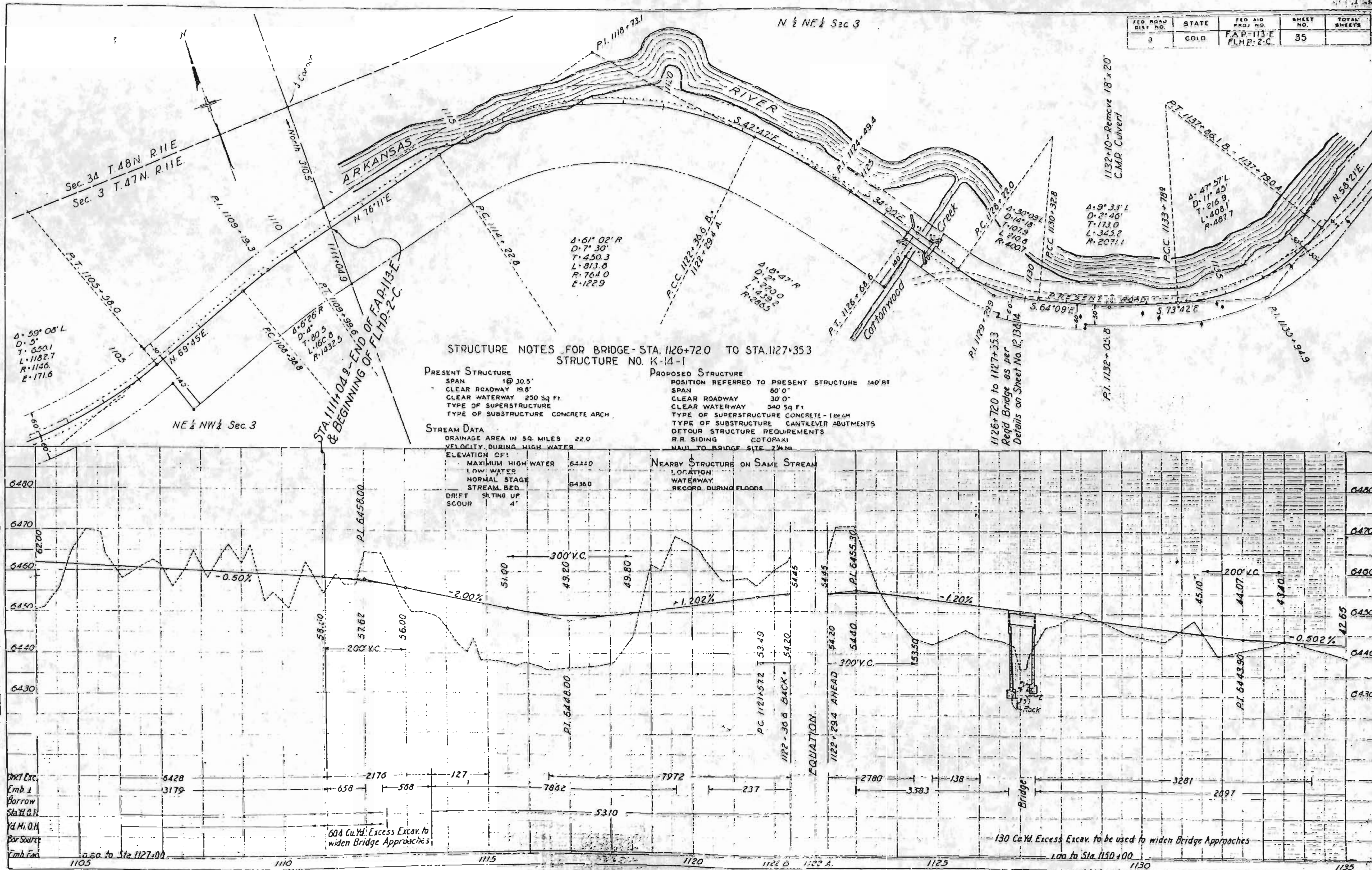
NEARBY STRUCTURE ON SAME STREAM

LOCATION
WATERWAY
RECORD DURING FLOODS



FED ROAD DIST NO | STATE | FED AID PROJ NO | SHEET NO | TOTAL SHEETS
3 | COLO. | F.A.P.-113-E F.L.H.P.-2-C | 34 |
SW¼ SW¼ Sec. 34
SE¼ SW¼ Sec 34
NE¼ NW¼ Sec 3
NW¼ NW¼ Sec. 3
S.E.¼ SE.¼ Sec. 33
SECTION LINE
TOWNSHIP LINE
¼ LINE
N
1075
1080
1085
1090
1095
1100
1105
S. 51°07'E.
N. 81°30'W.-1014.6
T. 48N., R.11E.
T. 47N., R.11E.
33 34 4 3
STA. 1080+02
S. 0°36'E. 664.8'
STA. 1082+00
S.15°14'W. 560.2'
1079+40-Reqd. 36"x 70' C.M.P. Culvert
1080+53-Reqd. 24"x 54' C.M.P. Culvert
1084+00-Reqd. 24"x 46' C.M.P. Culvert
P.C. 1093+75.3
Canon
Fox
STA. 1097+00
P.I. 1100+25±
Δ-59°08' L
D-5°
T-650.1
L-1182.7
R-1146
E-171.6
1096+45.0 to 1097+08.3
Reqd. Bridge as per Details
on Sheet No. 9,10 & 11
P.T. 1105+58.0
N 69°45'E.
1103+90-Reqd. 24"x 64' C.M.P. Culvert
60' 60' 40'
STRUCTURE NOTES FOR BRIDGE-STA. 1096+45.0 TO STA. 1097+08.3
STRUCTURE NO. K-14-H
PRESENT STRUCTURE (NONE, NEW ALINEMENT)
SPAN
CLEAR ROADWAY
CLEAR WATERWAY
TYPE OF SUPERSTRUCTURE
TYPE OF SUBSTRUCTURE
PROPOSED STRUCTURE
POSITION REFERRED TO PRESENT STRUCT.
SPAN 60'-0"
CLEAR ROADWAY 30'-0"
CLEAR WATERWAY 480 Sq. Ft.
TYPE OF SUPERSTRUCTURE CONCRETE I-BEAM
TYPE OF SUBSTRUCTURE CANTILEVER ABUTMENTS
DETOUR STRUCTURE REQUIREMENTS
R.R. SIDING PLEASANTON
HAUL TO BRIDGE. SITE ¾ MI.
STREAM DATA
DRAINAGE AREA IN SQ. MILES 3
VELOCITY DURING HIGH WATER
ELEVATION OF:
MAXIMUM HIGH WATER
LOW WATER
NORMAL STAGE
STREAM BED 6454
DRIFT
SCOUR
NEARBY STRUCTURE ON SAME STREAM
LOCATION:
WATERWAY
RECORD DURING FLOODS
PLAN
PROFILE
6490
6480
6470
6460
6450
P.I. 6482.00
81.82
80.20
200' V.C.
-1.80%
74.80
73.45
73.00
P.I. 6473.00
F.L. 61.8
F.L. 67.0
E.L. 68.3
0.0%
P.I. 6473.00
73.00
72.88
72.50
100' V.C.
-1.00%
Sand & Gravel
Rock
Rock
100' V.C.
63.50
63.06
62.75
P.I. 6463.00
-0.50%
F.L. 52.0
61.00
Unxt. Exc.
Emb +
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
Emb. Fac.
443
2938
3118
13,110
180
1777
Bridge
387
1568
2999
12970
120
R.O.W. Sta. 1081+00-1087+00
1.15 to Sta. 1105+00
dna to Sta. 1127+00
02023

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P.-113-E FLH.P.-2-C.	35	


N ½ NE ¼ Sec. 3
ARKANSAS
RIVER
Sec. 34 T.48N. R.11E.
Sec. 3 T.47N. R.11E.
NE ¼ NW ¼ Sec. 3
North 310.5'
N. 76°11'E.
N. 69°45'E.
S. 42°47'E.
S. 34°00'E.
S. 64°09'E.
S. 73°42'E.
N. 58°21'E.
P.I. 1118+73.1
P.I. 1109+19.3
P.T. 1105+58.0
P.C. 1108+38.8
P.C. 1114+22.8
P.C.C. 1122+36.6 B. = 1122+29.4 A.
P.I. 1124+49.4
P.T. 1126+68.6
P.C. 1128+22.0
P.C.C. 1130+32.8
P.C.C. 1133+72.8
P.T. 1137+86.1 B. = 1137+79.0 A.
P.I. 1135+94.9
P.I. 1132+05.8
P.I. 1129+29.9
Δ-59°08' L. D-5° T-650.1 L-1182.7 R-1146 E-171.6
Δ-6°26' R D-4° T-80.5 L-160.8 R-1432.5
Δ-61°02' R D-7°30' T-450.3 L-813.8 R-764.0 E-122.9
Δ-8°47' R D-2° T-220.0 L-439.2 R-2865
Δ-30°09' L D-14°18' T-107.9 L-210.8 R-400.7
Δ-9°33' L D-2°46' T-173.0 L-345.2 R-2071.1
Δ-47°57' L D-11°45' T-216.9 L-408.1 R-487.7
STA. 1111+04.9 - END OF F.A.P.-113-E & BEGINNING OF F.L.H.P.-2-C.
1132+10 - Remove 18"x20" C.M.P. Culvert
1126+72.0 to 1127+35.3 Reg'd Bridge as per Details on Sheet No. 12,13&14
Cottonwood Creek
PRESENT ROAD
6480
6470
6460
6450
6440
6430
-0.50%
-2.00%
+1.202%
-1.20%
-0.502%
300' V.C.
200' V.C.
P.I. 6458.00
P.I. 6448.00
P.I. 6455.30
P.I. 6443.90
P.C. 1121+57.2
1122+36.6 BACK =
1122+29.4 AHEAD
EQUATION
Bridge
Rock
Unclf. Exc.
Emb.
Borrow
Sta.Yd. O.H.
Yd.Mi. O.H.
Bor. Source
Emb. Fac.
6428
3179
2176
658
588
127
7862
7972
237
5310
2780
3383
138
3281
2897
604 Cu.Yd. Excess Excav. to widen Bridge Approaches
130 Cu.Yd. Excess Excav. to be used to widen Bridge Approaches
.60 to Sta. 1127+00
1.00 to Sta. 1150+00
1105
1110
1115
1120
1122 B.
1122 A.
1125
1130
1135

STRUCTURE NOTES FOR BRIDGE - STA. 1126+72.0 TO STA. 1127+35.3
STRUCTURE NO. K-14-1

PRESENT STRUCTURE
- SPAN 1@ 30.5'
- CLEAR ROADWAY 19.8'
- CLEAR WATERWAY 250 Sq. Ft.
- TYPE OF SUPERSTRUCTURE
- TYPE OF SUBSTRUCTURE CONCRETE ARCH

STREAM DATA
- DRAINAGE AREA IN SQ. MILES 22.0
- VELOCITY DURING HIGH WATER
- ELEVATION OF:
  - MAXIMUM HIGH WATER 6444.0
  - LOW WATER
  - NORMAL STAGE
  - STREAM BED 6436.0
- DRIFT SILTING UP
- SCOUR 4'

PROPOSED STRUCTURE
- POSITION REFERRED TO PRESENT STRUCTURE 140' RT.
- SPAN 60'0"
- CLEAR ROADWAY 30'0"
- CLEAR WATERWAY 540 Sq. Ft.
- TYPE OF SUPERSTRUCTURE CONCRETE - I BEAM
- TYPE OF SUBSTRUCTURE CANTILEVER ABUTMENTS
- DETOUR STRUCTURE REQUIREMENTS
- R.R. SIDING COTOPAXI
- HAUL TO BRIDGE SITE 2¼ MI.

NEARBY STRUCTURE ON SAME STREAM
- LOCATION
- WATERWAY
- RECORD DURING FLOODS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P.-113-E F.L.H.P.-2-C	36	

NE¼ Sec. 3 — NW¼ Sec 2 — SW¼ Sec 35

Section 3 / Section 2

Pole — 50 — 50

P.C.C. 1133+78.0 — Δ-47°57' L. D-11°45' T-216.9 L-408.9 R-487.7

P.T. 1137+86.1 B. / 1137+79.0 A.

P.C. 1141+81.4 — Δ-23°27' L. D-8° T-148.6 L-293.1 R-716.3

P.T. 1144+74.5 — P.O.T. 1145+80

Δ-0°20' L. 150

P.I. 1135+94.9 — S 73°42' E — N 58°21' E — N. 34°54' E — N. 34°34' E — PRESENT ROAD

P.I. 1143+30.0 — P.I. 1149+22

P.C. 1152+52.8 — Δ-26°20' R. D-6° T-223.4 L-438.9 R-955.0 — P.T. 1159+91.7

P.I. 1157+76.2 — N. 60°54' E

P.C. 1163+62.9 — Δ-12°05' L. D-3° T-202.1 L-402.8 R-1910.0 — N 48°49' E

P.I. 1165+65

1138+09—Remove 24" x 24" CMP Culv. Regd 6'x4'x34' Conc. Box Culvert

1142+64—Remove 18" x 24" C.M.P. Culvert

1151+00—Regd. 24" x 56" C.M.P. Culvert

1155+25—Regd 24" x 46" C.M.P. Culvert

1164+95—Remove 18" x 24" C.M.P. Culv. Regd. 30" x 68" C.M.P. Culvert

Sec. 35, T. 48 N., R. 11 E. / Sec. 2, T. 47 N., R. 11 E.

PLAN

PROFILE

6460 / 6450 / 6440 / 6430 / 6420 / 6410

43.15 — -0.502% — 41.21 — P.I. 6440.10 — -0.70% — 41.21 — EQUATION — 1137+86.1 Back — 1137+79.0 Ahead — FL. 34.7

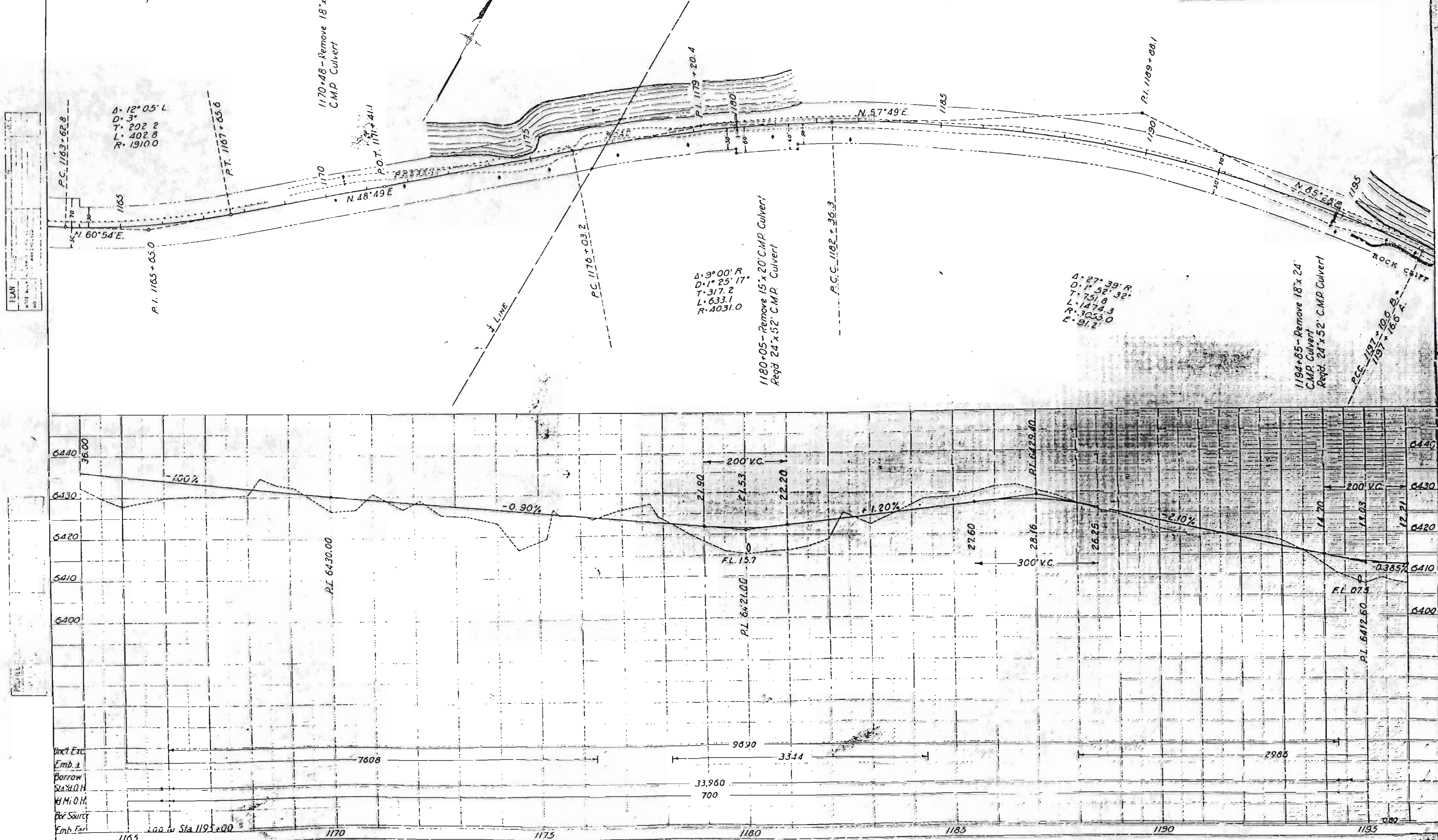
200' V.C. — 35.20 — 34.60 — 34.20 — P.I. 6434.50 — FL. 24.0

-0.30% — 200' V.C. — 32.70 — 32.68 — 33.20 — P.I. 6432.40 — FL. 28.0

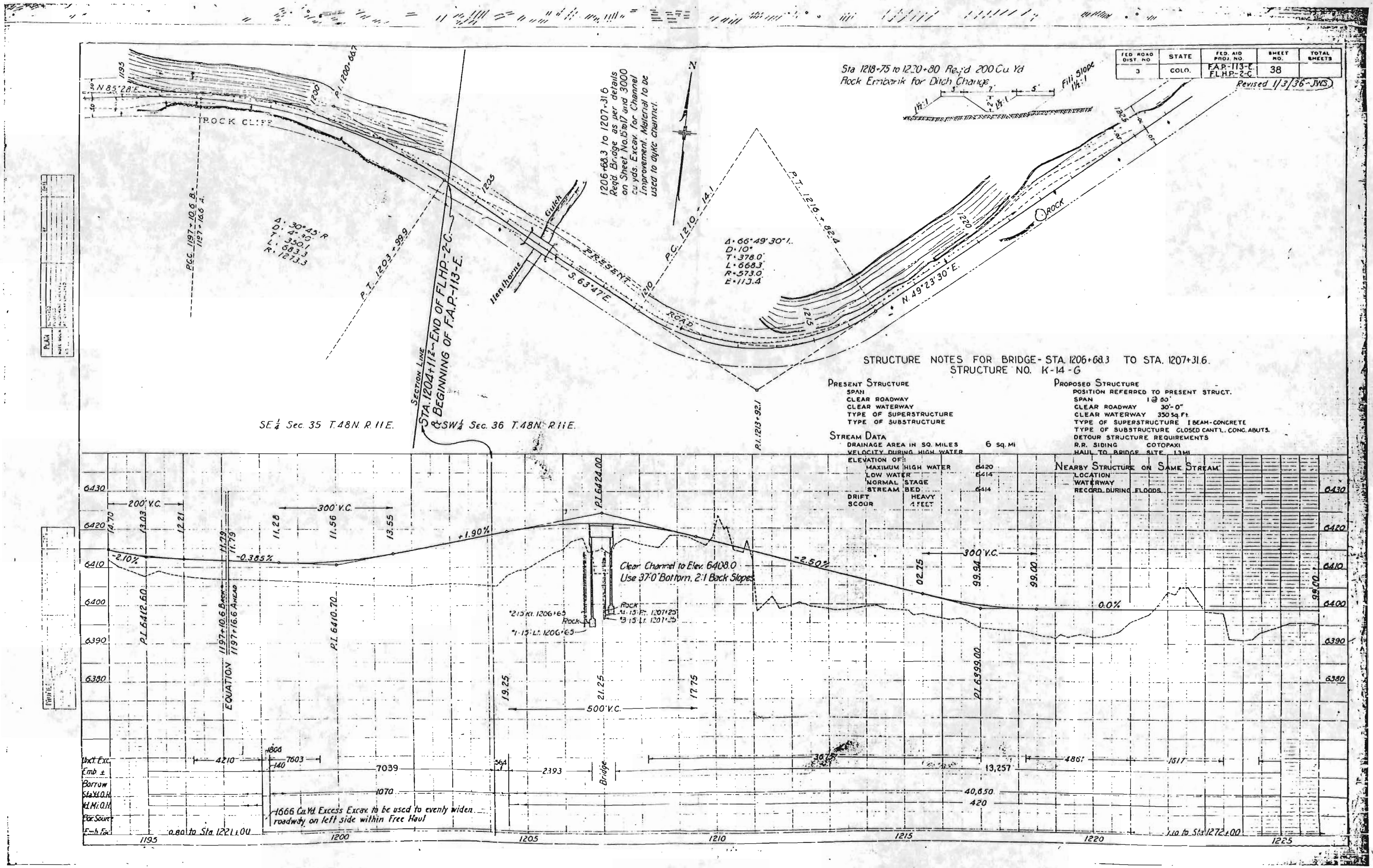
+0.80% — P.I. 6438.00 — 200' V.C. — 37.20 — 37.55 — 37.00 — -1.00% — 35.00 — FL. 24.3

	1135	1137 B.	1137 A.	1140	1145	1150	1155	1160	1165
Unct. Exc.	211	62		20	4476	3999	1294	391	603	38
Emb. ±		697			8474		12	1294	994	
Borrow		635				16,400			20	
Sta. Yd. O.H.		1040				10				
Yd. Mi. O.H.										
Bor. Source		R.O.W. Sta. 1128+00-1132+00								
Emb. Exc.		1.00 to Sta. 1130+00					a.aa to Sta. 1160+00		1.00 to Sta. 1195+00	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F.A.P.-113-C F.L.H.P.-2-C	37	



SW¼ Sec. 35 T.48N. R.11E.
SE¼ Sec. 35 T.48N. R.11E.
N
1170+48 - Remove 18"x20" C.M.P. Culvert
Δ: 12°05' L.
D: 3°
T: 202.2
L: 402.8
R: 1910.0
P.C. 1163+62.8
P.T. 1167+65.6
P.O.T. 1171+41.1
P.I. 1165+63.0
N. 60°54' E.
N. 48°49' E.
P.I. 1179+20.4
N. 57°49' E.
P.I. 1189+88.1
N. 85°28' E.
P.C. 1176+03.2
¼ LINE
Δ: 9°00' R.
D: 1°25' 17"
T: 317.2
L: 633.1
R: 4031.0
1180+05 - Remove 15"x20" C.M.P. Culvert Reqd. 24"x52" C.M.P. Culvert
P.C.C. 1182+36.3
Δ: 27°39' R.
D: 1°52' 32"
T: 751.8
L: 1474.3
R: 3053.0
E: 91.2
1194+85 - Remove 18"x24" C.M.P. Culvert Reqd. 24"x52" C.M.P. Culvert
P.C.C. 1197+10.6 B.
1197+16.6 A.
ROCK CLIFF
PLAN
PROFILE
6440
6430
6420
6410
6400
36.00
-1.00%
-0.90%
P.I. 6430.00
200' V.C.
21.90
21.53
22.20
+1.20%
F.L. 15.7
P.I. 6421.00
27.60
28.16
P.I. 6429.40
26.25
300' V.C.
-2.10%
200' V.C.
14.70
13.03
12.21
-0.385%
F.L. 07.5
P.I. 6412.60
Unc'l. Exc.
Emb. ±
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
Emb. Fac.
9890
7608
3314
2986
33,960
700
Lap to Sta 1195+00
1165
1170
1175
1180
1185
1190
1195



FED. ROAD DIST. NO. 3
STATE COLO.
FED. AID PROJ. NO. F.A.P.-113-E. F.L.H.P.-2-C
SHEET NO. 38
TOTAL SHEETS
Revised 1/3/36-JWS
Sta 1218+75 to 1220+80 Req'd 200 Cu. Yd Rock Embank for Ditch Change
Fill Slope 1½:1
N 85°28' E
ROCK CLIFF
P.I. 1200+66.7
P.C.C. 1197+10.6 B. 1197+16.6 A.
Δ: 30°45' R
D: 4°30'
T: 350.1
L: 683.3
R: 1273.3
P.T. 1203+99.9
Section Line
STA. 1204+11½ - End of F.L.H.P.-2-C. & Beginning of F.A.P.-113-E.
Hawthorne Gulch
PRESENT ROAD
S. 63°47' E.
1206+68.3 to 1207+31.6 Reqd Bridge as per details on Sheet No. 15 to 17 and 3000 cu. yds. Excav. for Channel Improvement. Material to be used to dyke channel.
N
P.C. 1210+14.1
Δ: 66°49'30" L.
D: 10°
T: 378.0
L: 668.3
R: 573.0
E: 113.4
P.T. 1216+82.4
N. 49°23'30" E.
ROCK
P.I. 1213+92.1
SE¼ Sec. 35 T. 48N. R. 11 E.
SW¼ Sec. 36 T. 48N. R. 11 E.
STRUCTURE NOTES FOR BRIDGE - STA. 1206+68.3 TO STA. 1207+31.6.
STRUCTURE NO. K-14-G
PRESENT STRUCTURE
SPAN
CLEAR ROADWAY
CLEAR WATERWAY
TYPE OF SUPERSTRUCTURE
TYPE OF SUBSTRUCTURE
STREAM DATA
DRAINAGE AREA IN SQ. MILES 6 sq. mi
VELOCITY DURING HIGH WATER
ELEVATION OF:
MAXIMUM HIGH WATER 6420
LOW WATER 6414
NORMAL STAGE
STREAM BED 6414
DRIFT HEAVY
SCOUR 4 FEET
PROPOSED STRUCTURE
POSITION REFERRED TO PRESENT STRUCT.
SPAN 1 @ 60'
CLEAR ROADWAY 30'-0"
CLEAR WATERWAY 350 sq. ft.
TYPE OF SUPERSTRUCTURE I BEAM-CONCRETE
TYPE OF SUBSTRUCTURE CLOSED CANT'L. CONC. ABUTS.
DETOUR STRUCTURE REQUIREMENTS
R.R. SIDING COTOPAXI
HAUL TO BRIDGE SITE 13 MI
NEARBY STRUCTURE ON SAME STREAM
LOCATION
WATERWAY
RECORD DURING FLOODS
6430
6420
6410
6400
6390
6380
200' V.C.
300' V.C.
500' V.C.
-2.10%
-0.385%
+1.90%
-2.50%
0.0%
P.I. 6412.60
P.I. 6410.70
P.I. 6424.00
P.I. 6399.00
EQUATION 1197+10.6 BACK 1197+16.6 AHEAD
Clear Channel to Elev. 6408.0
Use 37'-0" Bottom, 2:1 Back Slopes
Rock
Bridge
Unl. Exc.
Emb. ±
Borrow
Sta Yd. O.H.
Yd. Mi. O.H.
Bor. Source
Emb. Fac.
4210
7603
7039
2393
13,257
4861
1517
1070
40,650
420
1666 Cu. Yd Excess Excav. to be used to evenly widen roadway on left side within Free Haul
0.80 to Sta 1221+00
1.10 to Sta 1272+00
1195
1200
1205
1210
1215
1220
1225

FED. ROAD CLST NO.	STATE	FED. A'D PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO	FAP-113-E FLHP-2-C	39	

Sec 36 T. 46 N. R. 11 E.

1252+00 to 1254+50 - Reqd Ditch Change on left. Quantities included for payment in profile quantities.

N 77°15'30"E.

N 49°23'30"E.

N 89°04'E.

Sta. 1228+42

P.I. 1241+67.7

P.O.T. 1250+49.9

P.I. 1256+55.4

P.C. 1239+30.8

P.T. 1243+95.2 B.
P.T. 1243+77.3 A.

Δ 27°52' R.
D 6°
T 236.9
L 464.4
R 955.0

Δ 31°05' R.
D 5°
T 318.7
L 621.7
R 1146.0

1237+00 - Remove 12"x30" C.M.P. Culvert in dirt road. Reqd 24"x42" C.M.P. Culvert

1245+10 - Remove 18"x24" C.M.P. Culvert

1249+94 - Remove 18"x24" C.M.P. Culvert

1253+00 - Reqd 24"x56" C.M.P. Culvert

P.C. 1253+36.7

1256+50 - Remove Barn from Right-of-Way. (Force Account)

Garage · Pump · House · Barn · Dugout Garage · DITCH · IRRIGATION DITCH · 36

PLAN

PROFILE

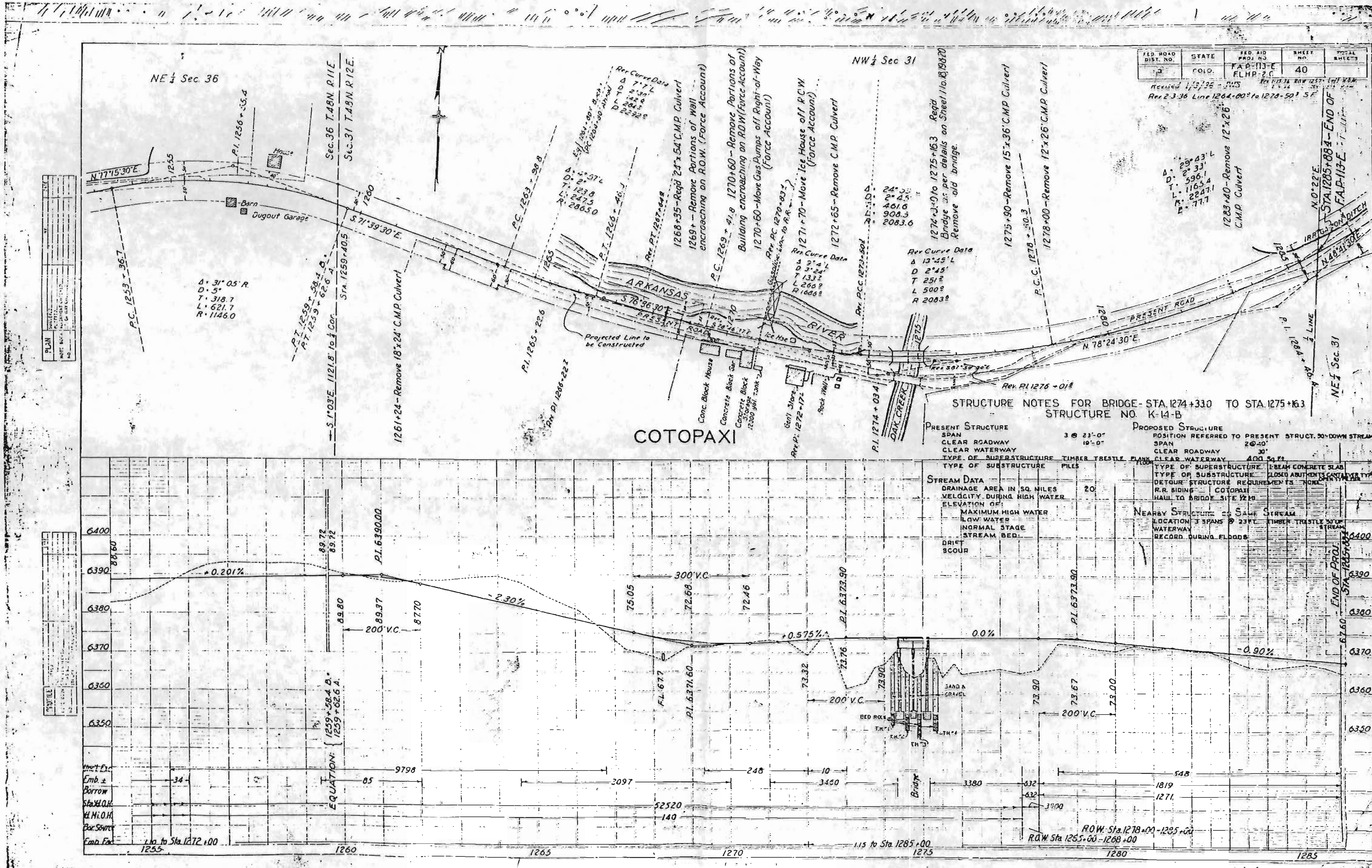
99.00 · 98.75 · 98.00 · 200' V.C. · 0.0% · -1.00% · P.I. 6399.00 · 92.00 · 91.35 · 91.39 · 200' V.C. · P.I. 6391.00 · F.I. 87.6 · +0.393% · 94.13 · 94.13 · P.I. 6395.00 · 89.40 · 88.40 · 88.20 · 200' V.C. · -1.40% · +0.201% · 88.40 · F.I. 88.0 · 94.61 · 94.56 · 93.60 · 200' V.C. · P.I. 6388.00 · 1243+95.2 B. = 1243+77.3 A. · EQUATION

6410 · 6400 · 6390 · 6380

Unt. Exc.	6031			3013			1072				2407				2	
Emb. ±		37	65		909			848		1123		207		3342		
Borrow											23,010					
Sta. to O.H.											220					
Ad. Mat'l. O.H.																
Bor. Source																
Emb. Fac.	1.0 to Sta 1272+00														1.0 to Sta 1272+00	

497 Cu. Yd. Excess Excav. to be used to widen Bridge Approaches

1225 · 1230 · 1235 · 1240 · 1243 B. · 1243 A. · 1245 · 1250 · 1255



FED. ROAD DIST. NO. 3
STATE COLO.
FED. AID PROJ. NO. F.A.P.-113-E F.L.H.P.-2-C
SHEET NO. 40
TOTAL SHEETS
Revised 1/3/36
Rev 2-3-36 Line 1264+80± to 1278+50± SF
NE ¼ Sec. 36
NW ¼ Sec 31
NE ¼ Sec. 31
Sec. 36 T.48N. R.11E.
Sec. 31 T.48N. R.12E.
N.77°15'30"E.
P.I. 1256+35.4
House
Barn
Dugout Garage
S.71°39'30"E.
P.C. 1253+36.7
Δ 31°05' R.
D 5°
T 318.7
L 621.7
R 1146.0
P.T. 1259+58.4 B.
P.T. 1259+62.6 A.
S.1°03'E. 1121.8' to ¼ Cor.
Sta. 1259+40.5
1261+24 – Remove 18"x24" C.M.P. Culvert
P.C. 1263+98.8
Δ 4°57' L
D 2°
T 123.8
L 247.5
R 2865.0
P.T. 1266+46.3
P.I. 1265+22.6
Rev. P.I. 1266+22.7
Rev. Curve Data
Δ 7°7' L
D 2°30'
T 142.6
L 284.3
R 2292.9
Rev. P.T. 1267+64.2
1268+35 – Reqd 24"x54" C.M.P. Culvert
1269+ – Remove Portions of Wall encroaching on R.O.W. (Force Account)
P.C. 1269+41.8
1270+60 – Remove Portions of Building encroaching on R.O.W. (Force Account)
1270+60 – Move Gas Pumps off Right-of-Way (Force Account)
Rev. P.C. 1270+83.1
Gasoline Line to R.R.
1271+70 – Move Ice House off R.O.W. (Force Account)
1272+65 – Remove C.M.P. Culvert
Rev. Curve Data
Δ 3°4' L
D 3°24'
T 133.2
L 266.9
R 1686.5
Rev. P.C.C. 1273+50.1
Δ 24°55'
D 2°45'
T 461.6
L 908.3
R 2083.6
1274+33.0 to 1275+16.3 Reqd Bridge as per details on Sheet 11 to 18, 19 & 20. Remove old bridge.
Rev. Curve Data
Δ 13°45' L
D 2°45'
T 251.2
L 500.0
R 2083.0
ARKANSAS RIVER
PRESENT ROAD
S.76°36'30"E.
Rev. S.78°46'17"E.
Projected Line to be Constructed
Ice Hse
Conc. Block House
Concrete Block Gar.
Concrete Block Storage 12300 gal. Tank
Gen'l Store
Rev. P.I. 1272+17.2
Rock Wall
P.I. 1274+03.4
OAK CREEK
Rev. S.87°50'30"E.
Rev. P.I. 1276+01.0
COTOPAXI
1275+90 – Remove 15"x36" C.M.P. Culvert
P.C.C. 1278+50.3
1278+00 – Remove 12"x26" C.M.P. Culvert
N.78°24'30"E.
Δ 29°43' L
D 2°33'
T 596.1
L 1165.4
R 2247.1
E 77.7
1283+40 – Remove 12"x26" C.M.P. Culvert
P.I. 1284+46.4
¼ LINE
N.0°22'E.
STA. 1285+88.4 – END OF F.A.P.-113-E
IRRIGATION DITCH
N.48°41'30"E.
STRUCTURE NOTES FOR BRIDGE – STA. 1274+33.0 TO STA. 1275+16.3
STRUCTURE NO. K-14-B
PRESENT STRUCTURE
SPAN 3 @ 23'-0"
CLEAR ROADWAY 19'-0"
CLEAR WATERWAY
TYPE OF SUPERSTRUCTURE TIMBER TRESTLE PLANK FLOOR
TYPE OF SUBSTRUCTURE PILES
STREAM DATA
DRAINAGE AREA IN SQ. MILES 20
VELOCITY DURING HIGH WATER
ELEVATION OF:
MAXIMUM HIGH WATER
LOW WATER
NORMAL STAGE
STREAM BED
DRIFT
SCOUR
PROPOSED STRUCTURE
POSITION REFERRED TO PRESENT STRUCT. 50' DOWN STREAM
SPAN 2 @ 40'
CLEAR ROADWAY 30'
CLEAR WATERWAY 400 Sq. Ft.
TYPE OF SUPERSTRUCTURE I-BEAM CONCRETE SLAB
TYPE OF SUBSTRUCTURE CLOSED ABUTMENTS CANTILEVER TYPE
DETOUR STRUCTURE REQUIREMENTS NONE
R.R. SIDING COTOPAXI
HAUL TO BRIDGE SITE ½ MI
NEARBY STRUCTURE ON SAME STREAM
LOCATION 3 SPANS @ 23 FT. TIMBER TRESTLE 50' UP STREAM
WATERWAY
RECORD DURING FLOODS
PLAN
PROFILE
6400
6390
6380
6370
6360
6350
88.60
+0.201%
89.72
89.72
P.I. 6390.00
89.80
89.37
87.70
200' V.C.
EQUATION: 1259+58.4 B. = 1259+62.6 A.
-2.30%
300' V.C.
75.05
72.68
72.46
F.L. 67.7
P.I. 6371.60
+0.575%
73.32
73.76
P.I. 6373.90
73.90
200' V.C.
SAND & GRAVEL
BED ROCK
T.H. 1
T.H. 2
T.H. 3
T.H. 4
0.0%
73.90
73.67
73.00
P.I. 6373.90
200' V.C.
-0.90%
67.60
END OF PROJ. STA. 1285+88.4
Unc'l Exc.
Emb. ±
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
Emb. Fac.
34
9798
85
2097
248
10
3460
Bridge
3380
632
632
548
1819
1271
3900
52520
140
1.10 to Sta. 1272+00
1.15 to Sta. 1285+00
R.O.W. Sta. 1265+00 – 1268+00
R.O.W. Sta. 1278+00 – 1285+00
1255
1260
1265
1270
1275
1280
1285