

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 BR	1	

COLORADO STATE HIGHWAY DEPARTMENT PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 278 BR STATE HIGHWAY NO. 8 LINCOLN COUNTY

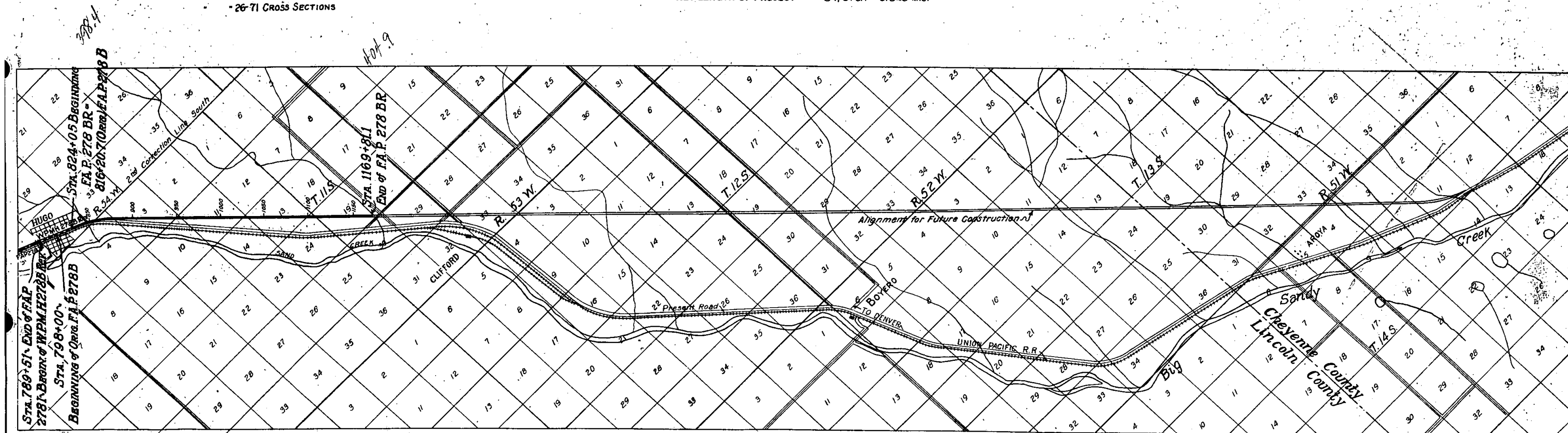
INDEX OF SHEETS

SHEET NO	TITLE PAGE
2	TYPICAL SECTION AND SUMMARY OF QUANTITIES
3	LIST OF STRUCTURES
4	TREATED TIMBER BRIDGE, STA. 842+
5	" " " " STA. 865+
6	" " " " STA. 978+
7	" " " " STA. 1160+
8	CONCRETE BOX CULVERTS, M-103-D
9	CONCRETE BOX CULVERT-TYPE 10X, M-104-D, Rev.
10	DOUBLE CONCRETE BOX CUL., M-110-B
11	STANDARD HEADWALLS FOR C.M.P. CUL., M-102-E
12	STANDARD WIRE CABLE GUARD FENCE, M-20-A
13	STAN. WIRE FENCES WITH STEEL PSTS. & MARKER POSTS, M-27-A
14	STANDARD STRUCTURE NUMBER LETTERING, M-10-A
15	STAN. METHODS FOR SUPERELEVAT'G & WIDEN'G OF CURVES, M-1-A
16	TYPICAL SIDE APPROACH ROADS & TRAFFIC SIGNS, M-2-B
17-25	PLAN AND PROFILE
26-71	CROSS SECTIONS

CONVENTIONAL SIGNS

CENTERLINE OF IMPROVEMENT	605
RIGHT OF WAY LINES	
TOWNSHIP LINES	
SECTION LINES	
QUARTER SECTIONS	
SECONDARY ROADS	
RAILROADS	
BARBED WIRE FENCE	
TELEPHONE LINES	
CITY LIMITS	

SCALES	
ON PLAN,	1 IN. = 100 FT.
ON PROFILE	1 IN. = 100 FT. HORIZONTAL
	1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD	
GROSS LENGTH OF PROJECT	34,576.1' = 6.548 MIS.
NET LENGTH OF PROJECT	34,576.1' = 6.548 MIS.



NOTE:

It is recommended that Bidders on this Project go over the plan details with one of the following field representatives of this department.

Ernest Montgomery, Div Engr, Colo. Spgs.
H. R. Evans, Resident Engr, Limon

RECOMMENDED FOR APPROVAL 6/13/36

Chas. H. Evans
ASSISTANT ENGINEER

APPROVED
Chas. H. Evans
STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL
DIST. ENGR. BUREAU PUBLIC ROADS

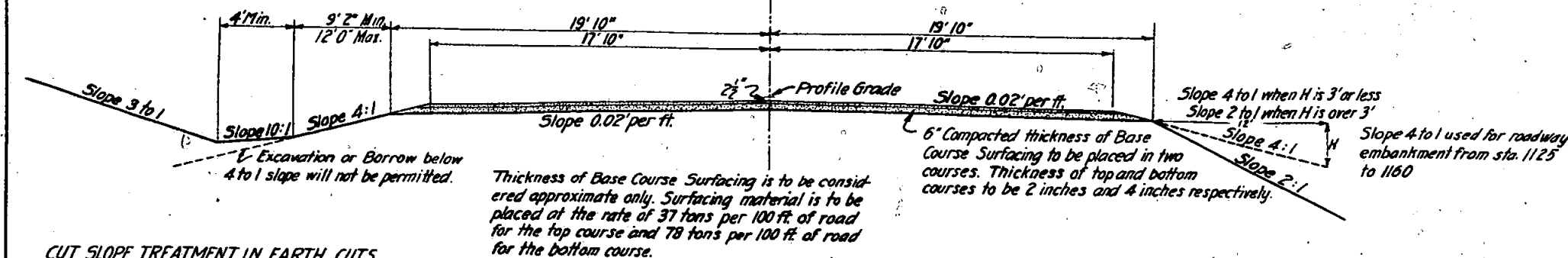
RECOMMENDED FOR APPROVAL
CHIEF ENGR. BUREAU PUBLIC ROADS

APPROVED
DIRECTOR BUREAU PUBLIC ROADS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 B.R.	2	

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

TYPICAL SECTION



CUT SLOPE TREATMENT IN EARTH CUTS

The intersection of cut slopes with the existing ground shall be rounded in earth cuts, beginning 5 ft. outside the slope stake and extending 5 ft. down the cut slope. Where the cut slope is less than 5 ft. each of the above widths is to be reduced to the actual slope distance. Quantities involved in slope treatment shall not be included in Unclassified Excavation.

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted August 1, 1935.

All quantities on the preliminary plans are to be considered approximate only.

All roadway excavation required to construct the project is to be obtained as indicated on the plans. Quantities involved beyond the limits of the side ditches, as shown on the typical section, either noted as "Borrow" on the plans or as "Embankment" in the list of structures, are to be classified and paid for as "Unclassified Excavation." These quantities are to be stated as part of the original excavation at locations indicated on the plans. Any slope stakes beyond the typical ditches are subject to change by the Engineer to fit embankment requirements actually encountered during construction.

All curves are to be super-elevated in accordance with the methods shown on the Standard Super-elevation Sheet.

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

The detour for the project lies along the present road as indicated on the title sheet. From Sta. 824+05 to Sta. 855+00 on the project, where the new work is on the present traveled roadway the contractor shall, at his own expense, so prosecute construction that traffic can readily pass over the road. Also, the contractor shall maintain in safe condition and at his own expense, all temporary approaches and crossings of intersecting highways.

All C.M.P. Culverts are to be constructed without headwalls unless otherwise called for on the plans. Where but one headwall is called for it is to be placed at the inlet end unless otherwise stated.

Except as otherwise noted on the plans all overhaul will be paid for as measured along the center line of the project.

All pole lines encroaching on construction are to be moved by the owners.

All road approaches to the project are to be surfaced with a 4 inch thickness of "Gravel or Crushed Rock Surfacing" extending approximately 30 ft from the edge of the highway. The estimated quantity of this surfacing material is shown in the List of Structures.

FENCING REQUIREMENTS

Station to Station	Side	Remove Fence (Lin. Ft.)	Build Fence (Lin. Ft.)	B. W. Gates Rt. Lt.	Driveway Gates Rt. Lt.
828+25 - 847+75	L	2,040			
847+75 - 854+55	R	680			
855+70	X	245			
824+05 - 856+75	L		3,270		
847+52					1
847+68					1
859+00	X	220			
860+00 - 869+50	L		950		
858+00 - 895+00	R		3,700		
865+70 - 867+90	L	235			
865+20 - 866+20	R	130			
868+75	X	145			
870+15				1	1
885+87	X	165			
869+50 - 951+60	L		8,235		
895+00 - 900+00	R		550		
900+00 - 1169+81	R		26,985		
950+50				1	1
950+90	X	145			
951+50 - 1135+00	L		18,350		
1029+00				1	1
1069+00				1	1
1110+20	X	145			
1110+50					1
1135+00 - 1139+20	L		480		
1139+00 - 1169+81	L		3,085		
TOTALS		4,150	65,605	9	2

R.O.W. MARKERS.

Station	Side	Number
	Rt.	Lt.
824+05	1	1
859+00	1	1
869+50		2
885+85	1	1
895+00	2	2
900+00	2	2
902+10	1	1
922+60	1	1
950+90		2
950+90	1	1
960+00	1	1
988+20	1	1
997+60	1	1
1025+45	1	1
1035+20	1	1
1063+40	1	1
1072+70	1	1
1101+40	1	1
1110+10	1	1
1135+00		2
1138+50	1	2
1148+20	1	1
1169+81	1	1
Total Required		46

WIRE CABLE GUARD FENCE

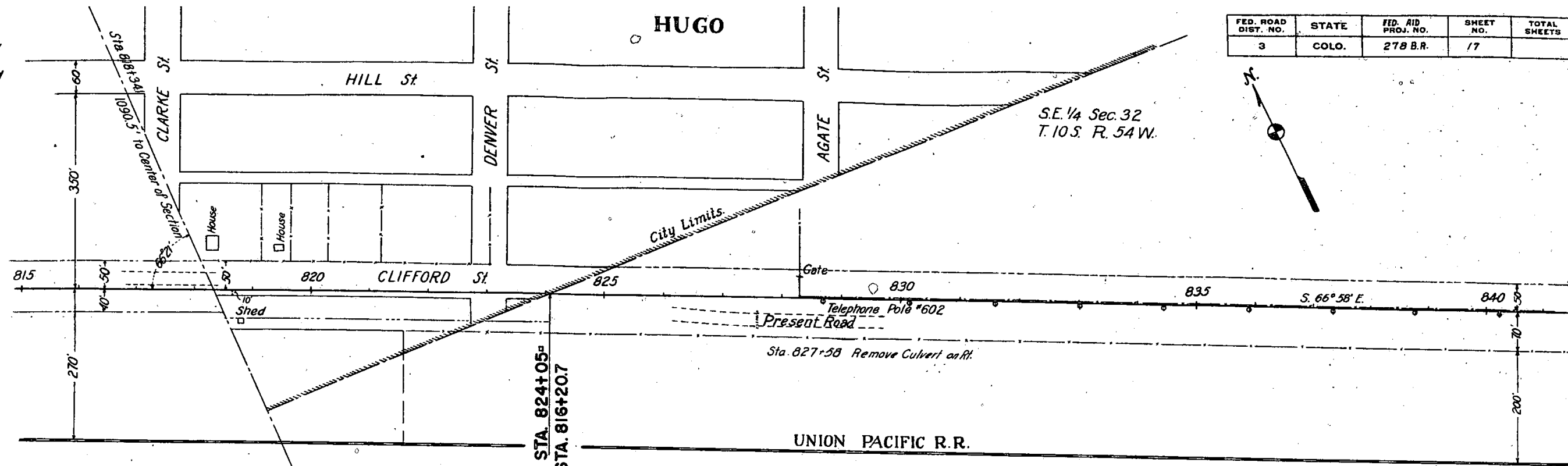
Station to Station	Right (Lin. Ft.)	Left (Lin. Ft.)
841+74.5 - 842+37.5	63	63
843+59 - 844+22	63	63
864+72.2 - 865+35.2	63	63
865+64.7 - 866+27.2	63	63
977+79.5 - 978+42.5	63	63
979+16.2 - 979+79.2	63	63
1159+54.8 - 1160+17.8	63	63
1161+82.5 - 1162+45.5	63	63
TOTAL		1008 lin. ft.

SUMMARY OF APPROXIMATE QUANTITIES

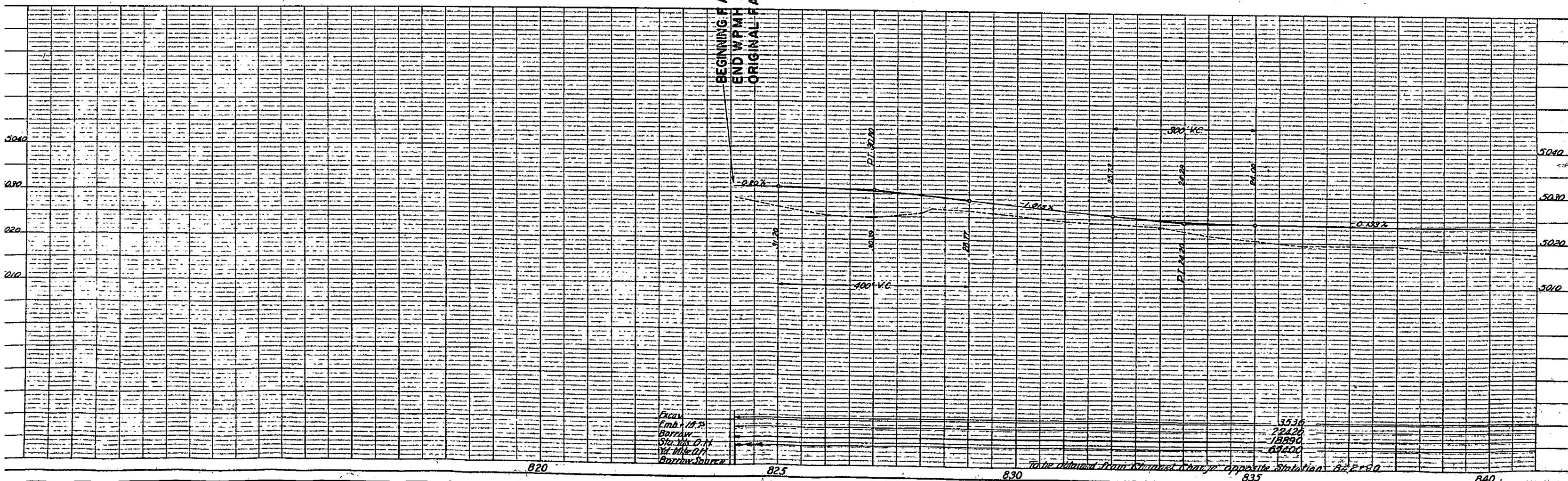
NO.	ITEM	UNIT	QUANTITIES					TOTALS
			ROADWAY	BRIDGE 843	BRIDGE 865	BRIDGE 978	BRIDGE 1161	
10 a.	Clearing and Grubbing the Entire Project	Lump Sum	•	•	•	•	•	•
11 a.	Removal of Bridge Sta. 843+	"	•	•	•	•	•	•
11 b.	Removal of 3 Structures	"	•	•	•	•	•	•
12 a.	Removing Fence	Lin. Ft.	4,200					4,200
13 c.	Unclassified Excavation	Cu. Yd.	153,000	11,200	400	2400	11,000	178,000
13 d.	Cut Slope Treatment	Mile	5					5
14 a.	Dry Rock Excavation (Str.)	Cu. Yd.	300				5	305
14 b.	Dry Common Excavation (Str.)	"	900	125	85	90	150	1,350
14 c.	Wet Rock Excavation (Str.)	"	100				5	105
14 d.	Wet Common Excavation (Str.)	Cu. Yd.	300	10		10	5	325
18 a.	Station Yard Overhaul	Sta. Yd.	54,500					54,500
18 b.	Yard Mile Overhaul	Yd. Mi.	3,500					3,500
26 a.	Gravel or Crushed Rock Surfacing	Ton.	39,500					39,500
42 a.	Untreated Bridge Timber	M. ft. B.M.		2.6	10.8	15	3.0	7.9
42 b.	Treated Bridge Timber	"		58.7	15.8	32.5	79.9	189.9
43	Asphalt Plant Wearing Surface	Sq. Ft.		3,335	667	2,025	4,725	10,752
46 a.	Class "R" Concrete	Cu. Yds.	460					460
46 b.	Class "B" Concrete	"	6					6
47	Reinforcing Steel	Lb.	39,000					39,000
53 b.	18" Corrugated Metal Culvert Pipe	Lin. Ft.	30					30
53 c.	24" "	"	754					754
60 a.	Treated Timber Piling	"		2,308	724	1,260	3,460	7,752
60 c.	Piling Cutoff Treated	"		10	10	10	10	40
60 e.	Metal Pile Shoes	Each		98	30	54	118	300
65	Dry Rubble Slope Paving (18" Th.)	Sq. Yd.		130			150	280
74	Wire Cable Guard Fence	Lin. Ft.	1,008					1,008
76 c.	Barbed Wire Fence with Metal Posts	"	65,700					65,700
76 g.	Barbed Wire Gates	Each	9					9
76 h.	Driveway Gates	"	2					2
81 a.	Project Markers	"	1					1
81 b.	Right of Way Markers	"	46					46
89 b.	Drain Pipe (Timber Floor)	"		10	2	6	14	32
	Work to be done by Force Account							
	Remove Wind Mill Sta. 866+42	Lump Sum	•					•
	Obliterating Old Road	Lump Sum	•					•

NOTE
 All pole lines encroaching on construction are to be moved
 by owners
 Fencing, right of way markers, gates and guard
 fence are tabulated on sheet No.2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 B.R.	17	



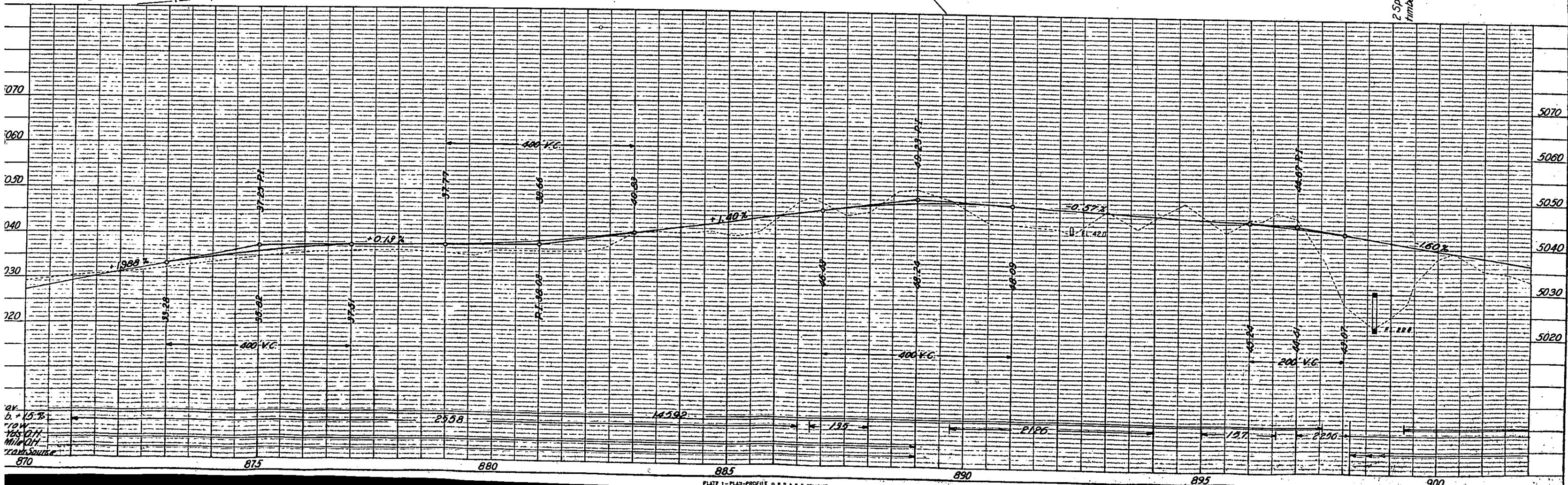
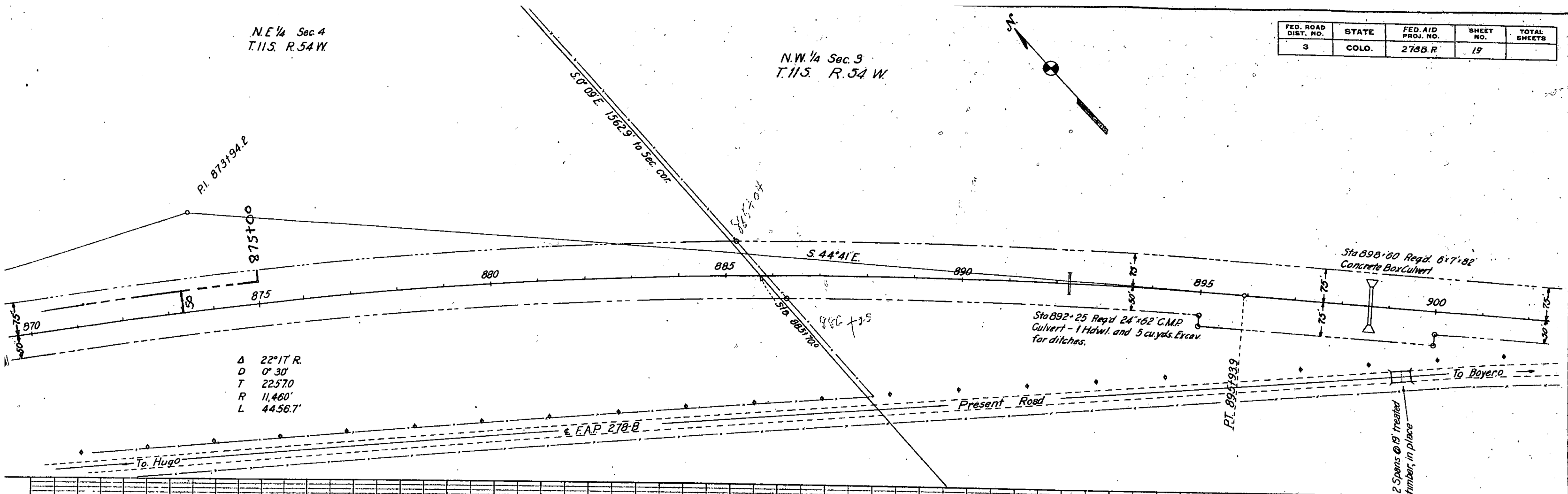
BEGINNING P.A.P. 278 B.R. STA. 824+05
 END W.P.M.H. 278-B. REV. STA. 816+20.7
 ORIGINAL P.A.P. 278-B.



N.E. 1/4 Sec. 4
T.11S. R.54 W.

N.W. 1/4 Sec. 3
T.11S. R.54 W.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	276B.R.	19	

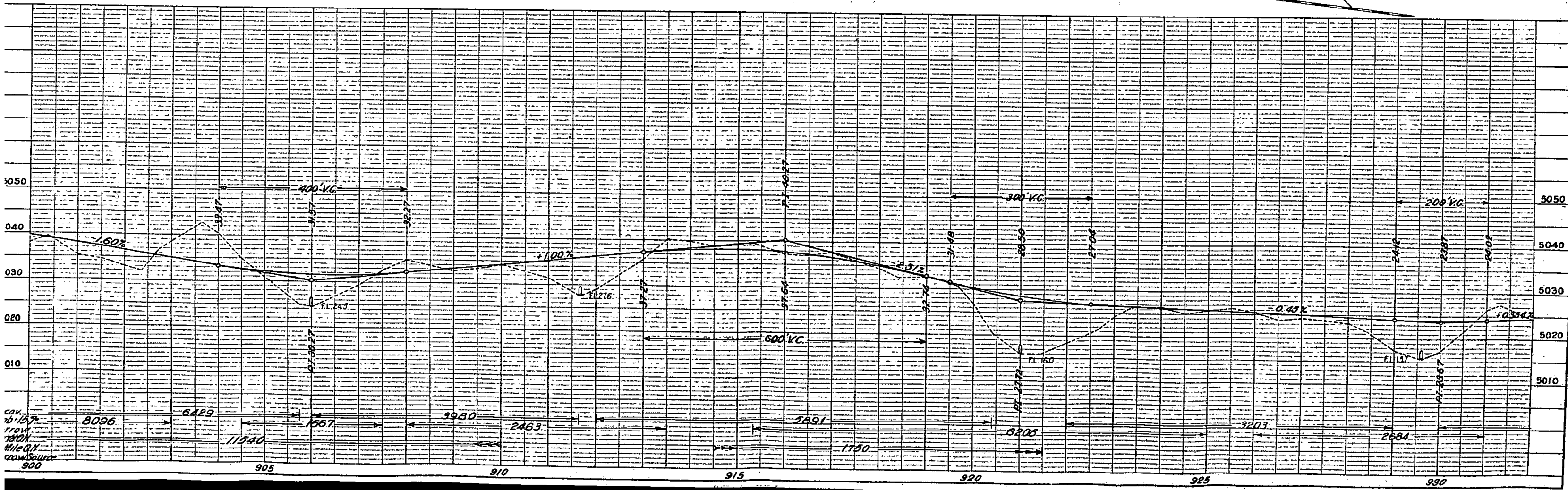
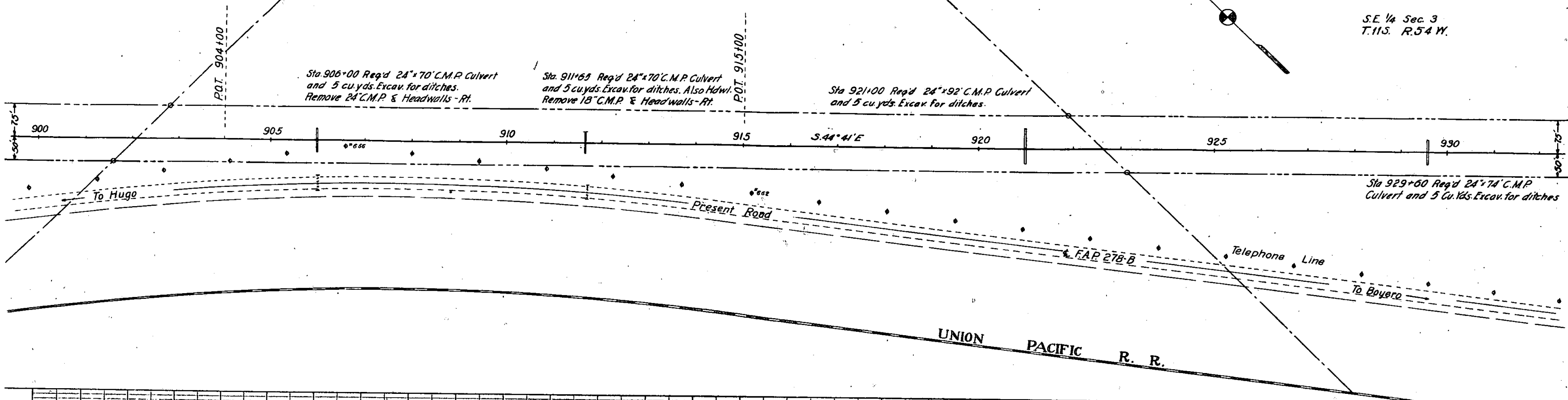


N.W. 1/4 Sec. 3
T. 11 S. R. 54 W.

S.W. 1/4 Sec. 3
T. 11 S. R. 54 W.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 B.R.	20	

S.E. 1/4 Sec. 3
T. 11 S. R. 54 W.



S.E. 1/4 Sec. 3
T. 11 S. R. 54 W.

N.E. 1/4 Sec. 10
T. 11 S. R. 54 W.

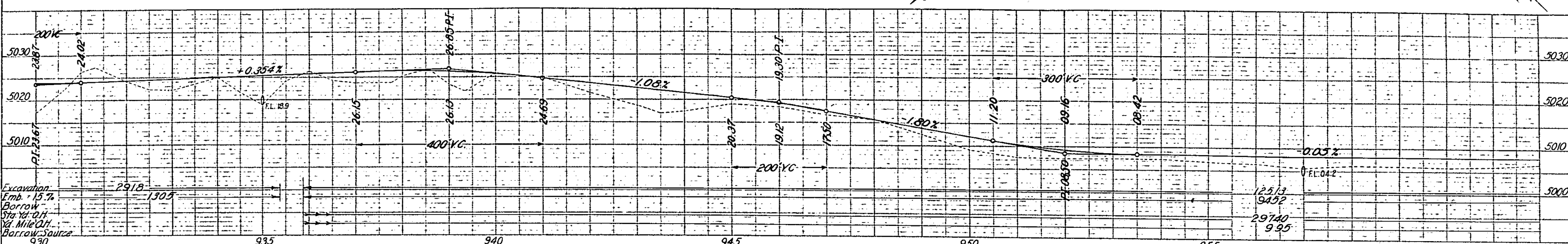
FED. ROAD DIST. NO.	STATE	FED. AID. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 B.R.	21	

Rev. 7-20-36, by L.C.; Channel Change

Sta. 935+00 Req'd. 24'x60' C.M.P. Culvert
with 1 Hdwl and 5 Cu. Yds. Excav. for ditches.

Sta. 950+50 Req'd. 100 Cu. Yds. Excav.
for Approaches Rt. & Lt.

Sta. 957+00 Req'd. 24'x68' C.M.P.
Culvert and 5 Cu. Yds. Excav. for ditches



Excavation
Emb. +15%
Borrow
Sta. 940+00
1/4 Mile O.H.
Borrow Source
930

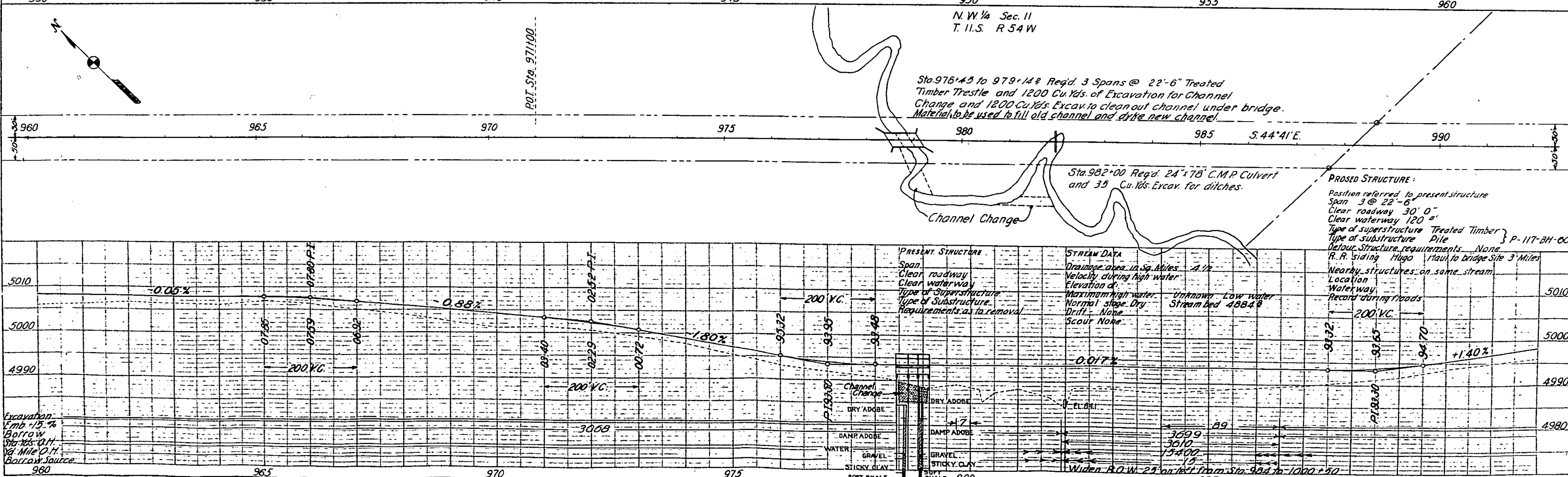
125.13
9432
29740
9.95

N.W. 1/4 Sec. 11
T. 11 S. R. 54 W.

Sta. 976+45 to 979+14 Req'd. 3 Spans @ 22'-6" Treated
Timber Trestle and 1200 Cu. Yds. of Excavation for Channel
Change and 1200 Cu. Yds. Excav. to clean out channel under bridge.
Material to be used to fill old channel and dyke new channel.

Sta. 982+00 Req'd. 24'x78' C.M.P. Culvert
and 35 Cu. Yds. Excav. for ditches.

PROPOSED STRUCTURE:
Position referred to present structure
Span 3 @ 22'-6"
Clear roadway 30' 0"
Clear waterway 120' 0"
Type of superstructure Treated Timber } P-117-BH-00
Type of substructure Pile
Defour structure requirements None
R.R. siding Hugo Haul to bridge Site 3 Miles
Nearby structures on same stream
Location
Waterway
Record during floods



Excavation
Emb. +15%
Borrow
Sta. 980+00
1/4 Mile O.H.
Borrow Source
960

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

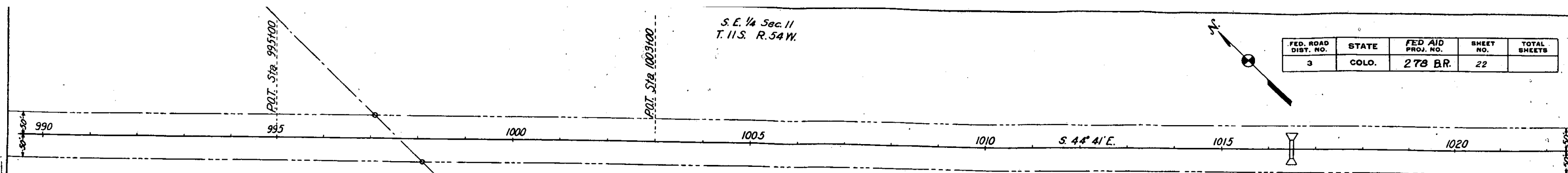
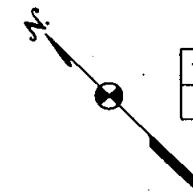
STREAM DATA
Drainage area in Sq. Miles 4 1/2
Velocity during high water
Elevation of
Maximum high water
Normal stage Dry
Drift: None
Scour None

Unknown Low water
Stream bed 4884.8

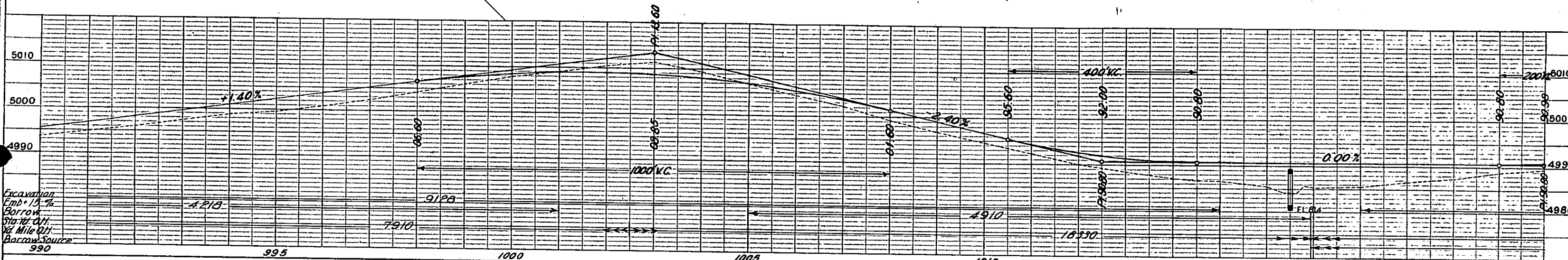
Widen R.O.W. 25' on left from Sta. 984 to 1000+50

S.E. 1/4 Sec. 11
T. 11 S. R. 54 W.

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 BR.	22	

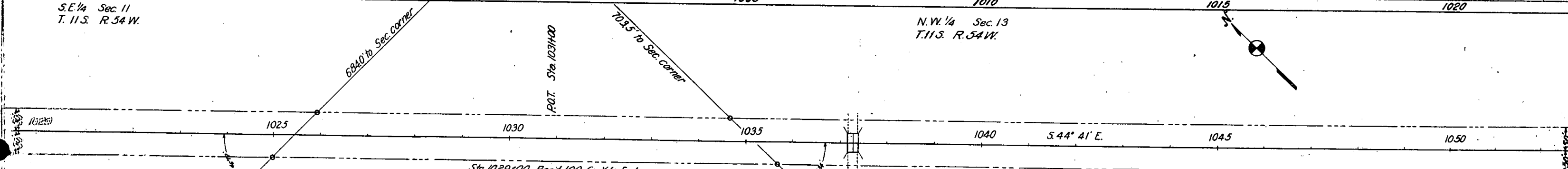


S.W. 1/4 Sec. 11

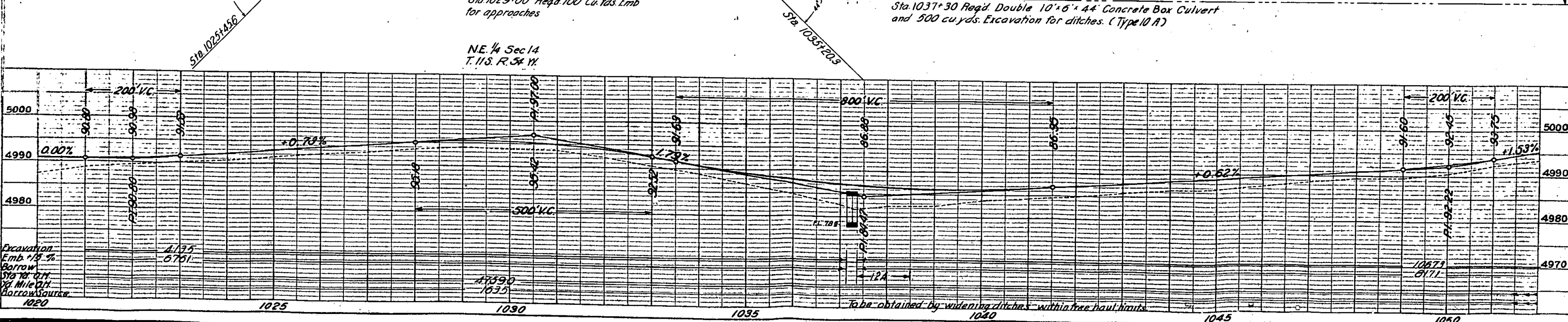


S.E. 1/4 Sec. 11
T. 11 S. R. 54 W.

N.W. 1/4 Sec. 13
T. 11 S. R. 54 W.



N.E. 1/4 Sec. 14
T. 11 S. R. 54 W.

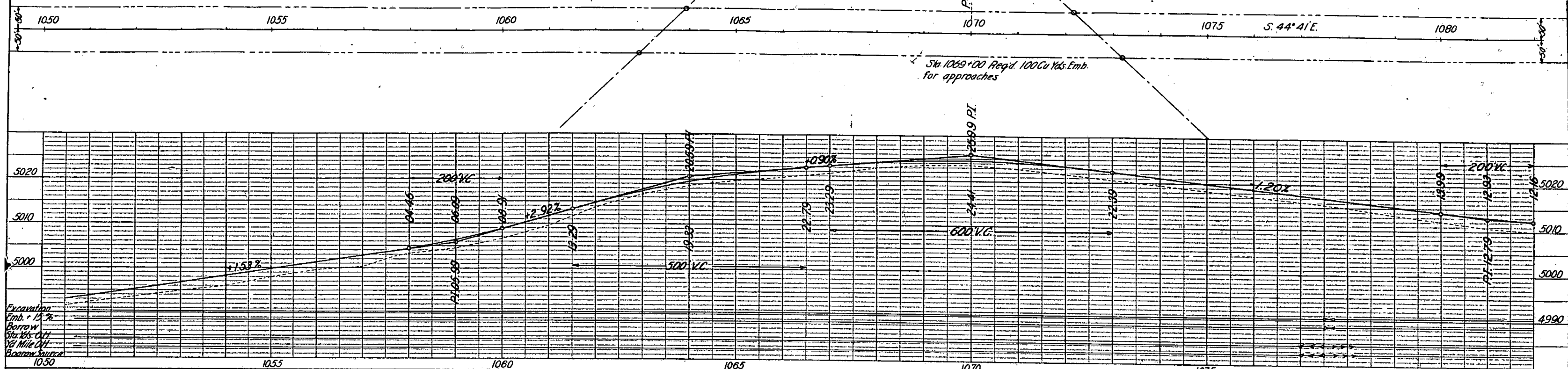


N.W. 1/4 Sec. 13
T. 11 S. R. 54 W.

S.W. 1/4 Sec. 13
T. 11 S. R. 54 W.

S.E. 1/4 Sec. 13
T. 11 S. R. 54 W.

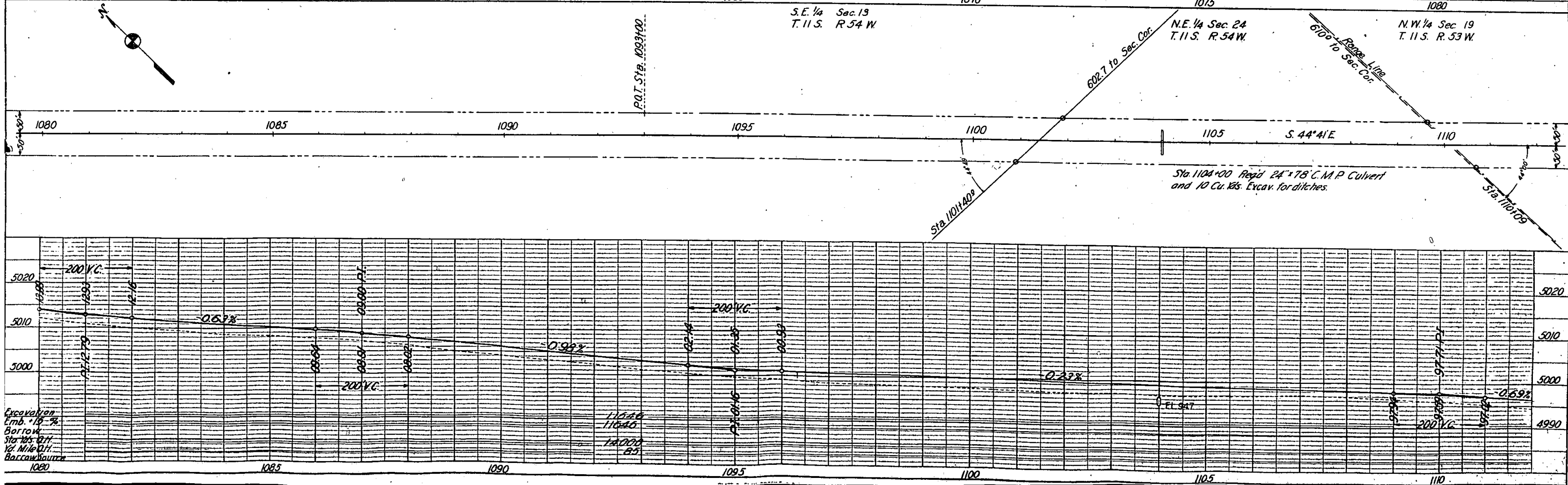
FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	276 B.R.	23	



S.E. 1/4 Sec. 13
T. 11 S. R. 54 W.

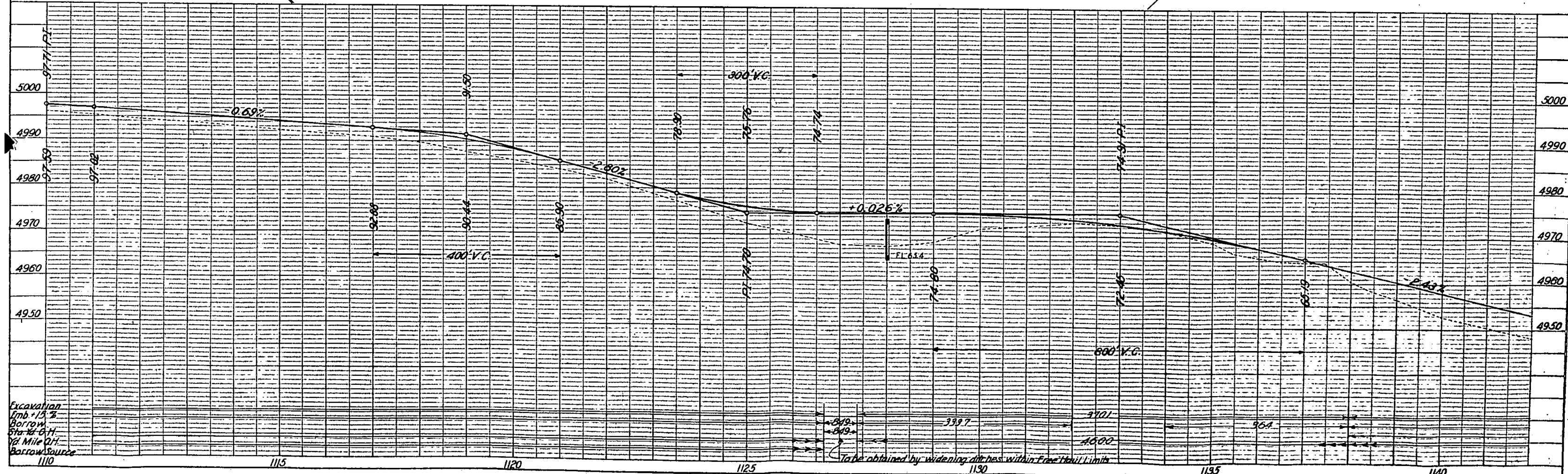
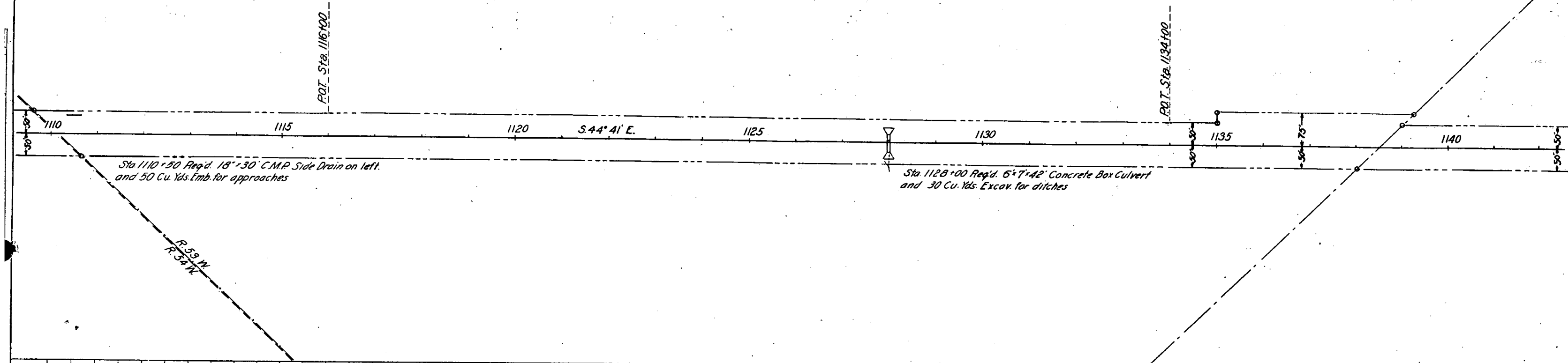
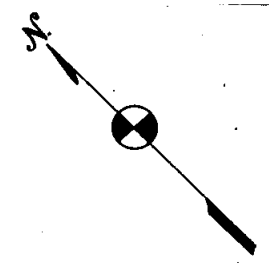
N.E. 1/4 Sec. 24
T. 11 S. R. 54 W.

N.W. 1/4 Sec. 19
T. 11 S. R. 53 W.



N.W. 1/4 Section 19
T. 11. S. R. 53 W.

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278 B.R.	24	



Excavation
Emb. 1/2 ft
Borrow
Sta 1110 to 1115
1/2 Mile 211
Borrow Source
1110

Rev. 7-20-36 by lgc; Channel Change

S.W. 4 SEC. 19
T. 11 S., R. 53W.

Sta. 1160+20+ to 1161+80 Req'd: 7 spans @ 22'-6" Treated Timber Trestle and 44,000 cu.yds. Excavation for Channel Change, 33,000 cu.yds. to be used in roadway Embankment and 11,000 cu.yds. for filling old Channel and building dike and banks of new Channel.

PRESENT STRUCTURE	2
Span	2
Clear roadway	
Clear waterway	
Type or Superstructure	
Type of Substructure	
Requirements as to removal	

STREAM DATA
 Drainage area in Sq. Miles. 30 Taken jointly by
 Velocity during high water Structures H-23-M and H-23-N
 Elevation of:
 Maximum high water Low water
 Normal stage Stream bed Channel to be
 Drift cleaned to FLOOM OF L
 Scour

PROPOSED STRUCTURE
Position referred to present structure
Span 7 @ 22'-6"
Clear roadway 30'-0"
Clear waterway 1200'
Type of Superstructure Timber (nestle)
Type of Substructure Pile } P. 117 BH-4
Design Structure requirements Revised
RR siding Clifford Haul to bridge site 3 MI
Nearby Structures on same stream
Location 1/4 mi. downstream R.R. Trestle 20 Spans
Waterway
Record during floods

UNCL. EXC.
EMBK. T.
BORROW
STAYD. Q.H.
YD. MI. O.H.
BOR. SOURCE

Borrow to be obtained from Channel Change opposite Station 1161+00 to Station 1170+00.