

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	1	

COLORADO

STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED P.W.A. DOCKET COLORADO 804-D PROJECT NO.158-E, CONST. DIV.2 STATE HIGHWAY NO. 4 PARK COUNTY

INDEX OF SHEETS

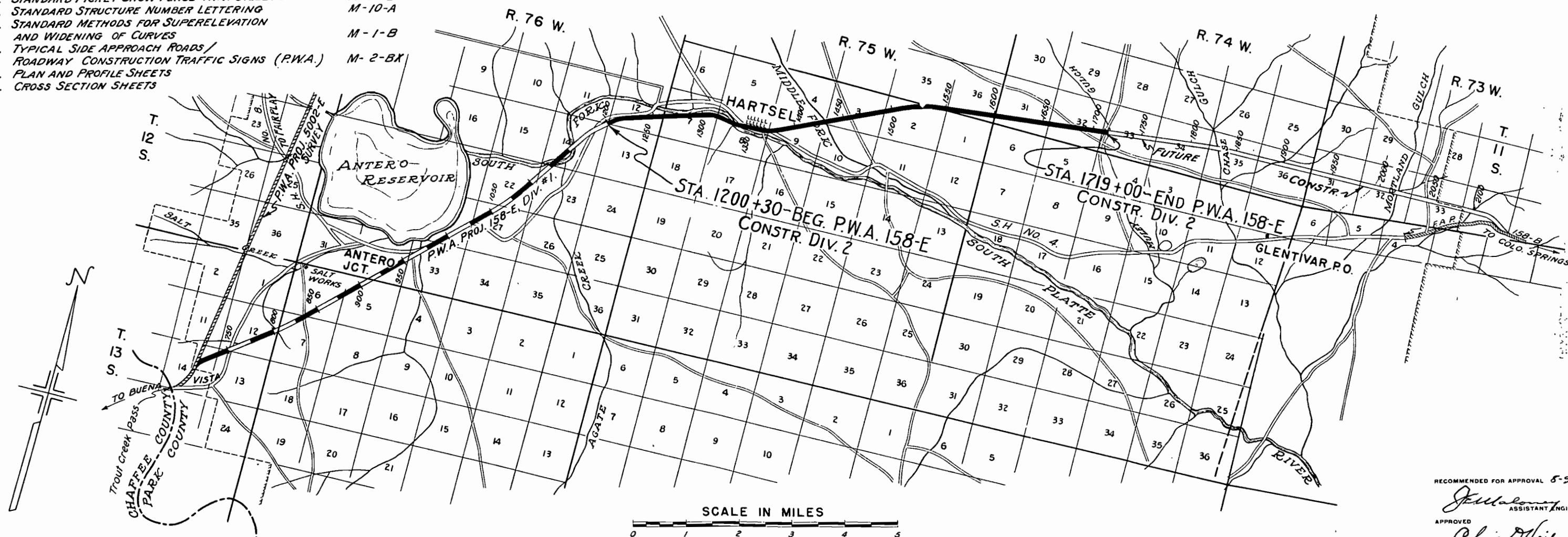
1. TITLE SHEET
2. TYPICAL SECTION AND SUMMARY OF APPROXIMATE QUANTITIES
3. LIST OF STRUCTURES
4. FENCING REQUIREMENTS, GUARD FENCE, GUARD POSTS, AND RIGHT OF WAY MARKERS.
5. DETAILS OF BRIDGE STA. 1287+
6. " " " STA. 1347+
7. " " " STA. 1435+
8. " " " STA. 1451+
9. CONCRETE BOX CULVERTS M-103-D
10. (SHEET OMITTED)
11. STANDARD HEADWALLS FOR C.M.P. CULVERTS M-102-E
12. STANDARD SIPHON CORR. GALV. IRON PIPE WITH CONCRETE INLET AND OUTLET BOXES. M-123-A
13. STANDARD CATTLE GUARD- 16 FT. ROADWAY M- 16-A
14. STANDARD TIMBER GUARD POSTS M- 19-A
15. STANDARD WIRE CABLE GUARD FENCE M-20-B
16. STANDARD WIRE FENCE WITH STEEL POSTS AND MARKERS M-27-A
17. STANDARD WIRE FENCE WITH STEEL POSTS AND MARKERS (REV.)M-27-AX
18. STANDARD PICKET SNOW FENCE WITH STEEL POSTS M-25-B
19. STANDARD STRUCTURE NUMBER LETTERING M-10-A
20. STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES M-1-B
21. TYPICAL SIDE APPROACH ROADS/ ROADWAY CONSTRUCTION TRAFFIC SIGNS (P.W.A.) M-2-BX
- 22 TO 39. PLAN AND PROFILE SHEETS
- 40 TO 206. CROSS SECTION SHEETS

CONVENTIONAL SIGNS

- CENTERLINE OF PROJECT
RIGHT OF WAY LINES
TOWNSHIP AND RANGE LINES
SECTION LINES
ONE QUARTER SECTION LINES
TELEPHONE LINES
BARBED WIRE FENCE
SNOW FENCE
PRESENT ROAD

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
GROSS LENGTH OF PROJECT }
NET LENGTH OF PROJECT } 51,870.0 FT. = 9.823 MI.



RECOMMENDED FOR APPROVAL 8-9-37

James Montgomery
ASSISTANT ENGINEER

APPROVED
Chas. D. Vail
STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL

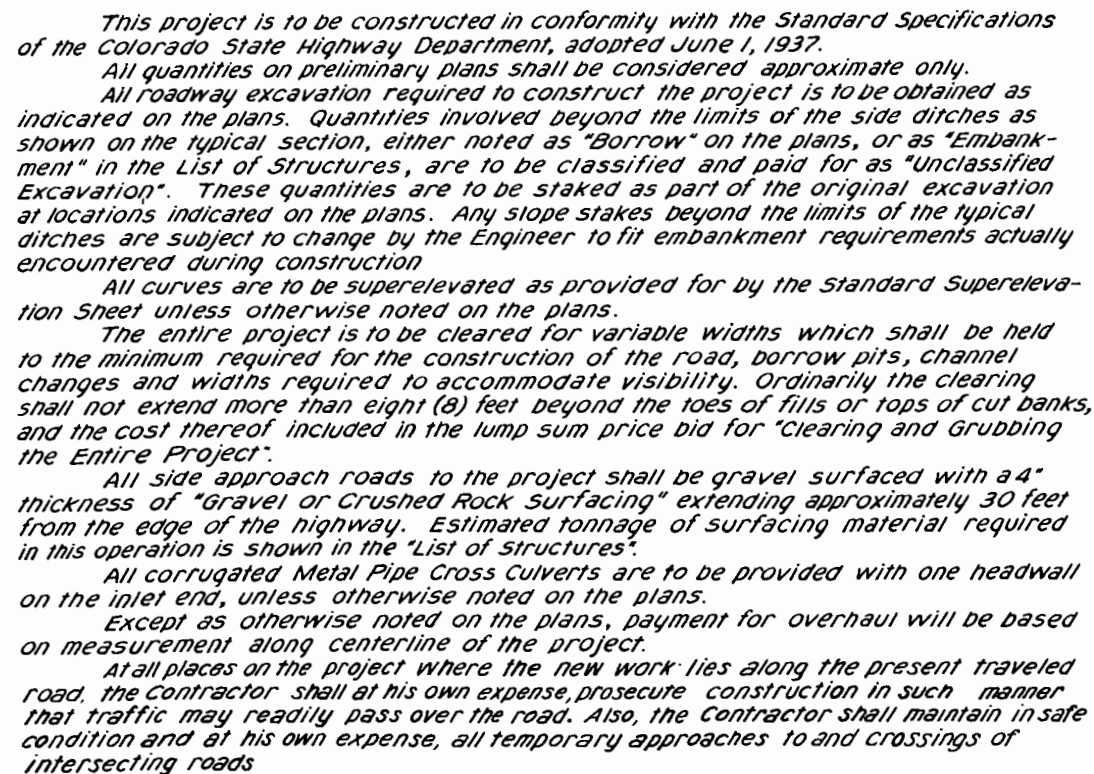
DIST. ENGR. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL

CHIEF ENGR. BUREAU PUBLIC ROADS
APPROVED

DIRECTOR BUREAU PUBLIC ROADS

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. Springs
V.H. Littlefield Res. Engr. Colo. Springs



NO.	ITEM	UNIT	ROADWAY	B R I D G E S					PROJECT	
				STATION 1287+	STATION 1347+	STATION 1435+	STATION 1451+	TOTALS	TOTALS	
10a	Clearing & Grubbing Entire Project	Lp.Sm.	•							•
11a	Remove Bridge, Sta. 1368+	" "	•							•
11b	" R.R. Ties, Sta. 1285 to 1350	" "	•							•
11c	" Piling, Sta. 1305+	" "	•							•
11d	" " , Sta. 1347+	" "			•			•		
12a	Removing Fence	Lin. Ft.	12,100							12,100
13c	Unclassified Excavation	Cu. Yd.	179,500			1,500		1,500		181,000
13d	Cut Slope Treatment	Mile	90							90
14a	Dry Rock Excavation (Struct.)	Cu. Yd.	70		5	10		15		85
14b	" Common Excavation (Struct.)	" "	595	30	40	60	60	190		785
14c	Wet Rock Excavation (Struct.)	Cu. Yd.	70		5	10		15		85
14d	" Common Excavation (Struct.)	" "	595	10	80	80	10	180		775
18a	Station Yard Overhaul	Sta. Yd.	525,000							525,000
18b	Yard Mile Overhaul	Yd. Mi.	7,600							7,600
26a	Gravel or Crushed Rock Surfacing	Ton	47,700							47,700
42a	Untreated Bridge Timber	Mft. bm.		08	15	22	08	53		53
42b	Treated Bridge Timber	" " " "		139	326	520	139	1124		1124
43	Asphalt Plank Wearing Surface	Sq. Ft.		667	2001	3335	667	6670		6670
46a	Class "A" Concrete	Cu. Yd.	297							297
46b	" "B" "	" "	67							67
47	Reinforcing Steel	Lb.	20,300							20,300
53b	18" Corr. Metal Culvert Pipe	Lin. Ft.	778							778
53c	24" " " " "	" "	1,064							1,064
53d	30" " " " "	" "	254							254
53e	36" " " " "	" "	320							320
55c	24" " " Siphon Pipe	" "	108							108
60a	Treated Timber Piling	" "		728	808	1,144	672	3352		3352
60e	Metal Pile Shoes	Each		26	38	54	26	144		144
63b	Heavy Riprap (30" Thick)	Cu. Yd.	540							540
74	Wire Cable Guard Fence	Lin. Ft.	4228							4228
74x	Timber Guard Posts	Each	87							87
76c	Barb. Wire Fence with 6'-6" Metal Posts	Lin. Ft.	39,900							39,900
76cx	" " " " 9'-0" " "	" "	10,000							10,000
76f	Comb. " " " 6'-6" " "	" "	47,100							47,100
76fx	" " " " 9'-0" " "	" "	2,500							2,500
76g	Barbed Wire Gates	Each	6							6
76h	Driveway Gates	" "	9							9
77	Picket Snow Fence	Lin. Ft.	612							612
81a	Project Markers	Each	1							1
81b	Right of Way Markers	" "	108							108
82	cattle guards (16 Ft. Roadway)	" "	8							8
85c	Trash Guards for 24" Siphon	" "	2							2
89b	Drain Pipe (Timber Floor)	" "		2	6	10	2	20		20
	FORCE ACCOUNT ITEMS Obliterating Old Road	Lp. Sm.	•							•

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE LIN. FT.	BUILD FENCE				GATES	
			BARB WIRE		COMB. WIRE		B.W. DWY.	
			6'6" POSTS LIN. FT.	9'0" POSTS LIN. FT.	6'6" POSTS LIN. FT.	9'0" POSTS LIN. FT.	NO.	NO.
1202+40	X	102						
1206+55	X	102						
1232+40	X	390						
1252+35	X	165						
1285+80	X	105						
1285+80~1308+65	Rt.	2295						
1288+80	X	70						
1308+65~1351+30	Lt.	4360						
1347+70~1349+75	Rt.	210						
1351+30~1353+50	Rt.	220						
1375+70	X	205						
1442+75	X	190						
1463+60	X	300						
1504+80	X	140						
1545+00	X	810						
1545+75~1549+00	Lt.	325						
1549+00~1553+70	Rt.	510						
1553+70~1553+80	Lt.	70						
1507+70	X	130						
1660+75	X	100						
1661+40	X	100						
1696+80~1696+90	Rt.	50						
1696+90~1700+65	Lt.	435						
1700+65~1704+70	Rt.	400						
1715+90	X	140						
1716+50	X	140						
1200+30~1270+00	L&R		14,060					
1270+00~1285+80	L&R			3160				
1285+80~1298+00	L&R					2440		
1298+00~1348+80	Lt.				5080			
1298+00~1353+40	Rt.				5600			
1374+80~1425+00	Lt.		5020					
1376+55~1425+00	Rt.		4845					
1425+00~1459+00	L&R			6800				
1459+00~1505+00	L&R		9370					
1505+00~1575+00	L&R				14,100			
1575+00~1607+50	L&R		6520					
1607+75~1715+90	L&R				21,680			
1716+55~1719+00	L&R				590			
1248+40	L&R						2	
1288+81	L&R							2
1389+	L&R						2	
1411+20	L&R							2
1420+25	L&R							2
1469+70	L&R							2
1498+20	Lt.							1
1607+34	L&R						2	
TOTALS		12,064	39,815	9960	47,050	2440	6	9

GUARD FENCE

STATION	SIDE	LIN. FT.
1306+00~1310+08	Lt.	408
1315+00~1319+08	Lt.	408
1345+70~1346+97	Lt.	127
1345+70~1346+97	Rt.	127
1347+73~1348+52	Lt.	79
1347+73~1348+52	Rt.	79
TOTAL		1228

R.O.W. MARKERS

STATION	SIDE	NO.
1200+30	Lt. & Rt.	2
1205+10	Lt. & Rt.	2
1207+18	Lt. & Rt.	2
1237+82	Lt. & Rt.	2
1247+00	Lt. & Rt.	4
1254+00	Lt. & Rt.	4
1266+07	Lt. & Rt.	2
1275+55	Lt. & Rt.	2
1294+95	Lt. & Rt.	2
1312+00	Rt.	2
1323+15	Lt. & Rt.	2
1336+00	Rt.	2
1349+00	Lt.	2
1351+75	Lt. & Rt.	2
1356+00	Lt.	2
1356+90	Rt.	2
1368+45	Lt.	2
1378+75	Lt. & Rt.	2
1408+05	Lt. & Rt.	2
1427+05	Lt. & Rt.	2
1437+20	Lt. & Rt.	2
1459+00	Lt. & Rt.	4
1465+40	Rt.	1
1465+65	Rt.	1
1466+40	Lt.	1
1466+90	Lt.	1
1471+50	Lt. & Rt.	2
1475+00	Rt.	2
1498+20	Lt. & Rt.	2
1516+00	Rt.	2
1527+15	Lt. & Rt.	2
1540+30	Lt.	1
1548+00	Lt.	2
1550+90	Rt.	1
1553+77	Lt. & Rt.	4
1562+00	Lt.	2
1579+00	Rt.	2
1580+60	Lt. & Rt.	2
1589+00	Rt.	2
1607+38	Lt. & Rt.	2
1619+00	Lt. & Rt.	4
1634+25	Lt. & Rt.	2
1649+00	Lt. & Rt.	4
1653+00	Lt. & Rt.	4
1661+12	Lt. & Rt.	2
1678+00	Lt.	2
1688+70	Lt. & Rt.	2
1697+00	Rt.	2
1716+05	Lt.	1
1716+40	Rt.	1
1719+00	Lt. & Rt.	2
TOTALS		108

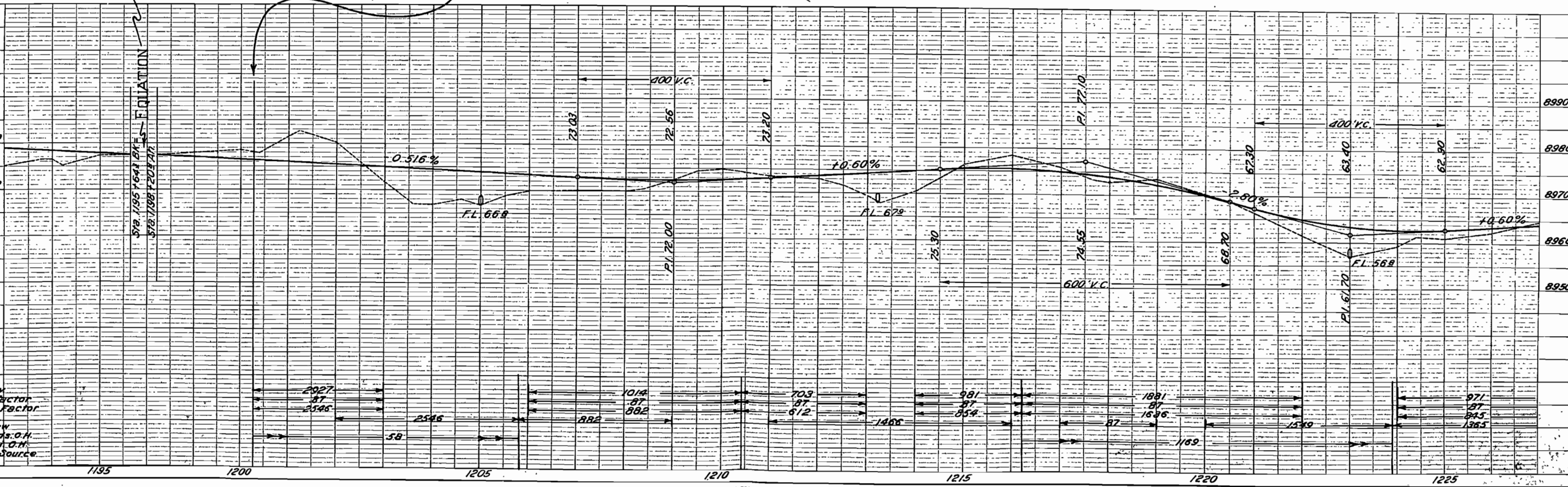
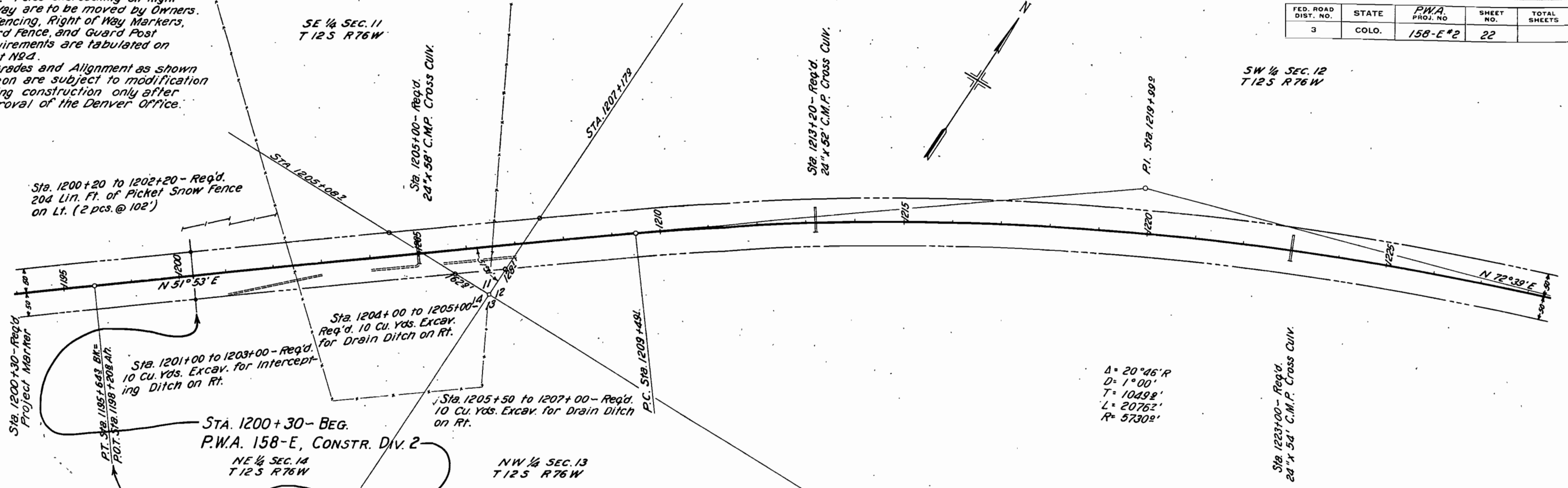
TIMBER GUARD POSTS

STATION	SIDE	SPACING LIN. FT.	NO. POST
1243+81	Lt. & Rt.	C.B.C.	8
1286+88~1287+49	Lt. & Rt.	Bridge	10
1287+79~1288+40	Lt. & Rt.	Bridge	10
1304+50~1305+50	Lt.	50	3
1465+25	Lt. & Rt.	C.B.C.	8
1623+80	Lt. & Rt.	C.B.C.	8
1434+56~1435+27	Lt. & Rt.	Bridge	10
1436+49~1437+10	Lt. & Rt.	Bridge	10
1450+36~1450+97	Lt. & Rt.	Bridge	10
1451+27~1451+88	Lt. & Rt.	Bridge	10
TOTALS			87

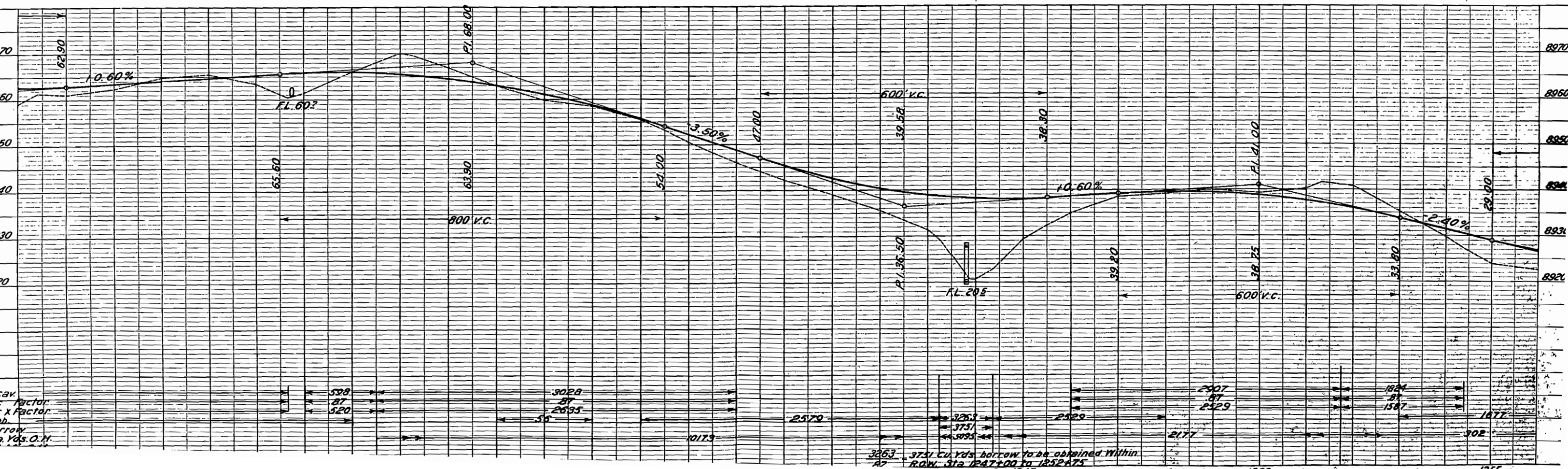
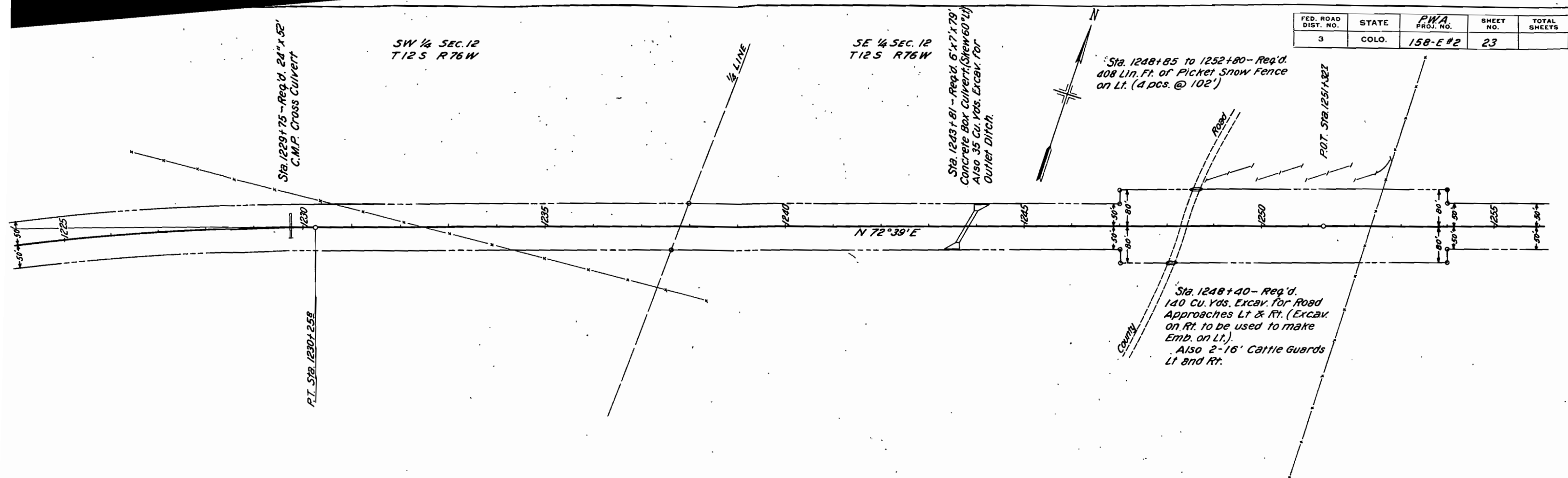
the force enclosing on right
Way are to be moved by Owners.
Fencing, Right of Way Markers,
Guard Fence, and Guard Post
Requirements are tabulated on
Sheet N24.

Grades and Alignment as shown
hereon are subject to modification
during construction only after
approval of the Denver Office.

FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E*2	22	



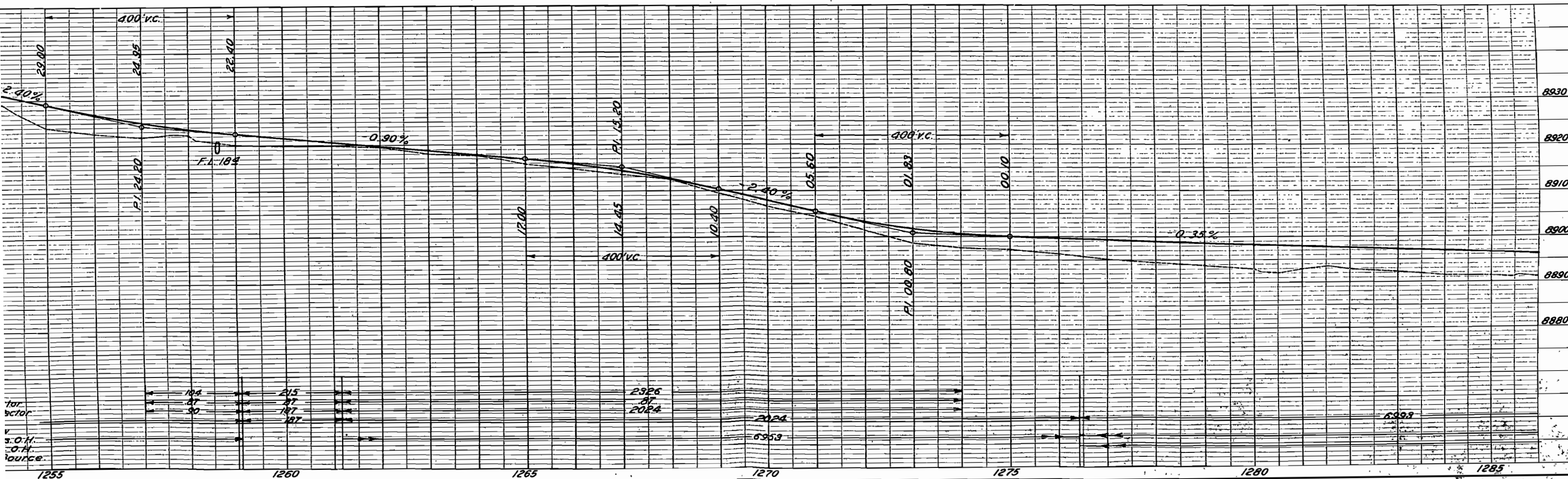
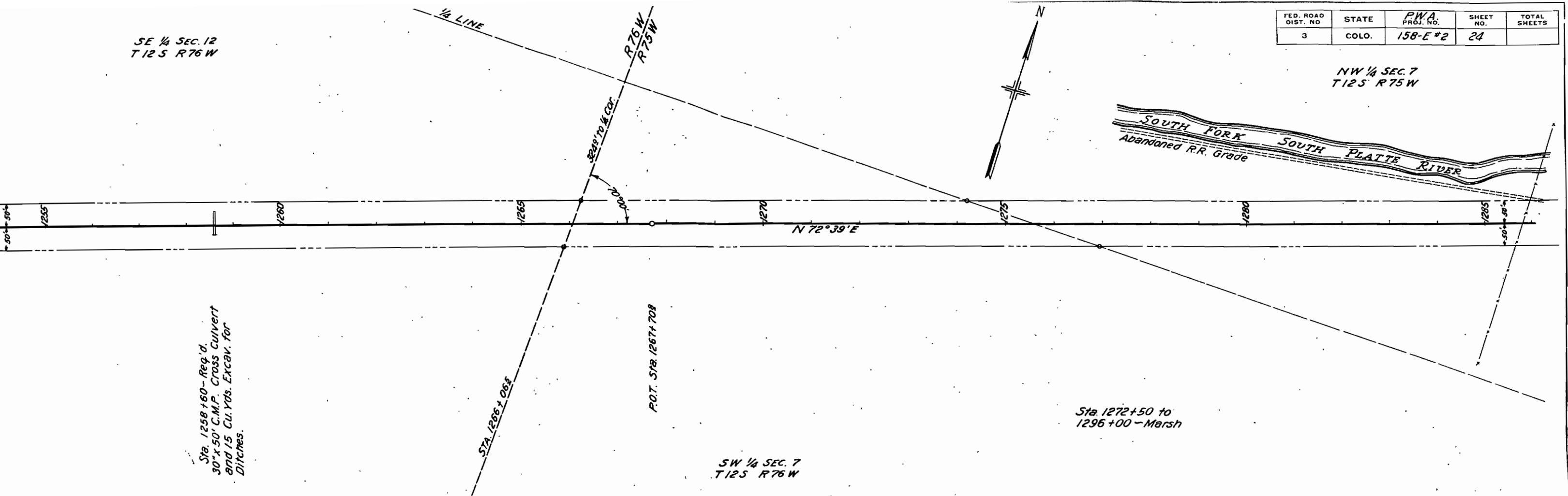
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3	COLO.	158-E #2	23	



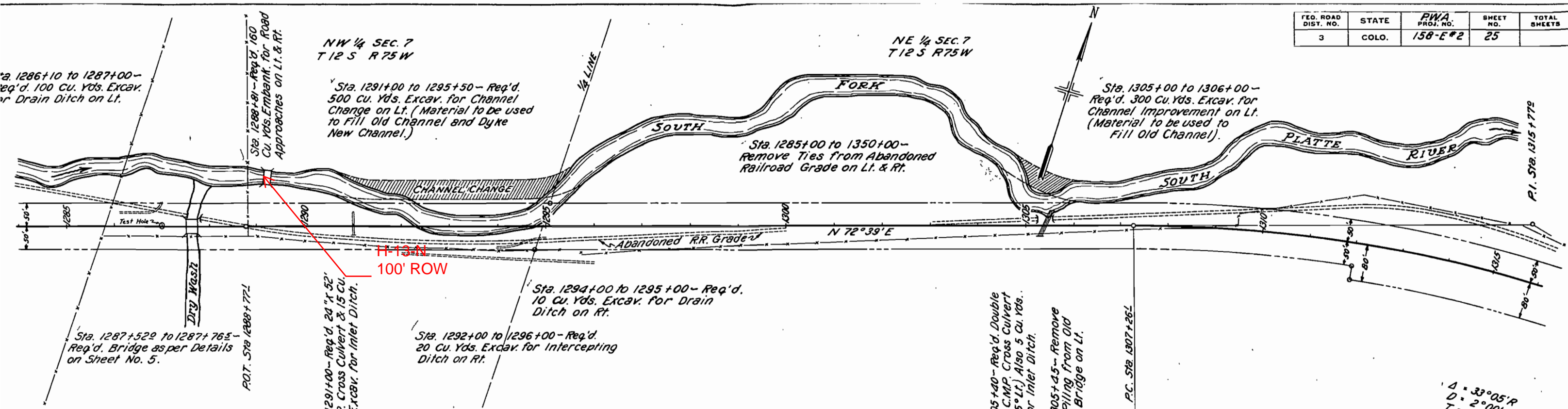
SE 1/4 SEC. 12
T 12 S R 76 W

FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	24	

NW 1/4 SEC. 7
T 12 S R 75 W



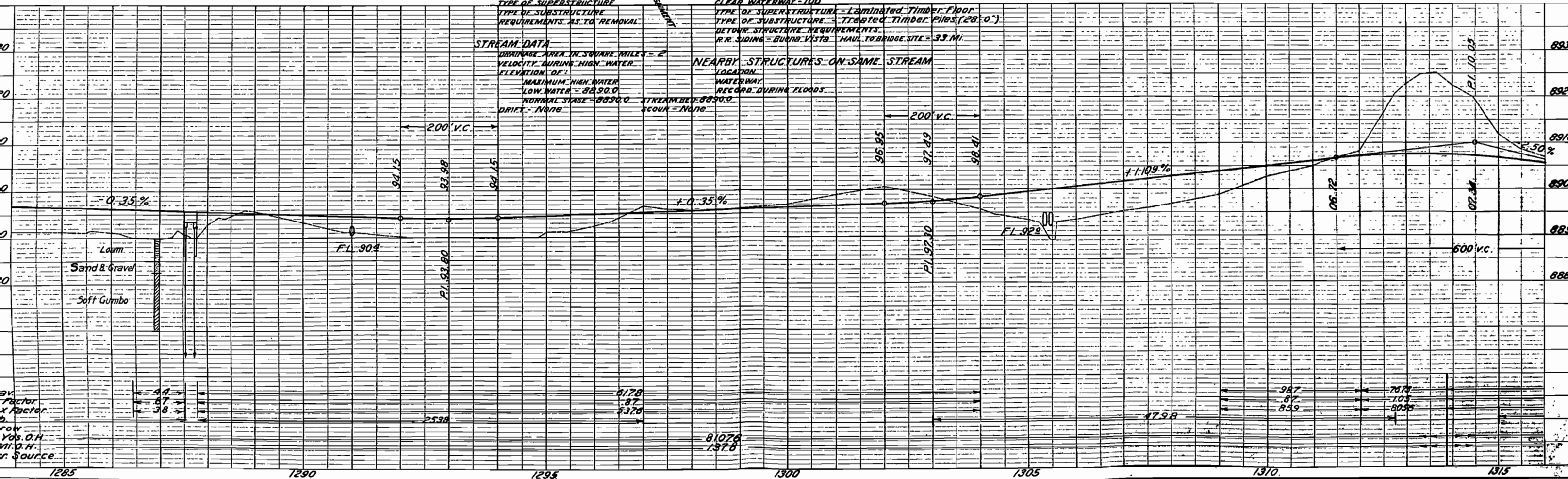
FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	25	



STRUCTURE NOTES FOR BRIDGE ~ STA. 1287+52 TO STA. 1287+76.5 ~ STRUCTURE NO. H-13-N

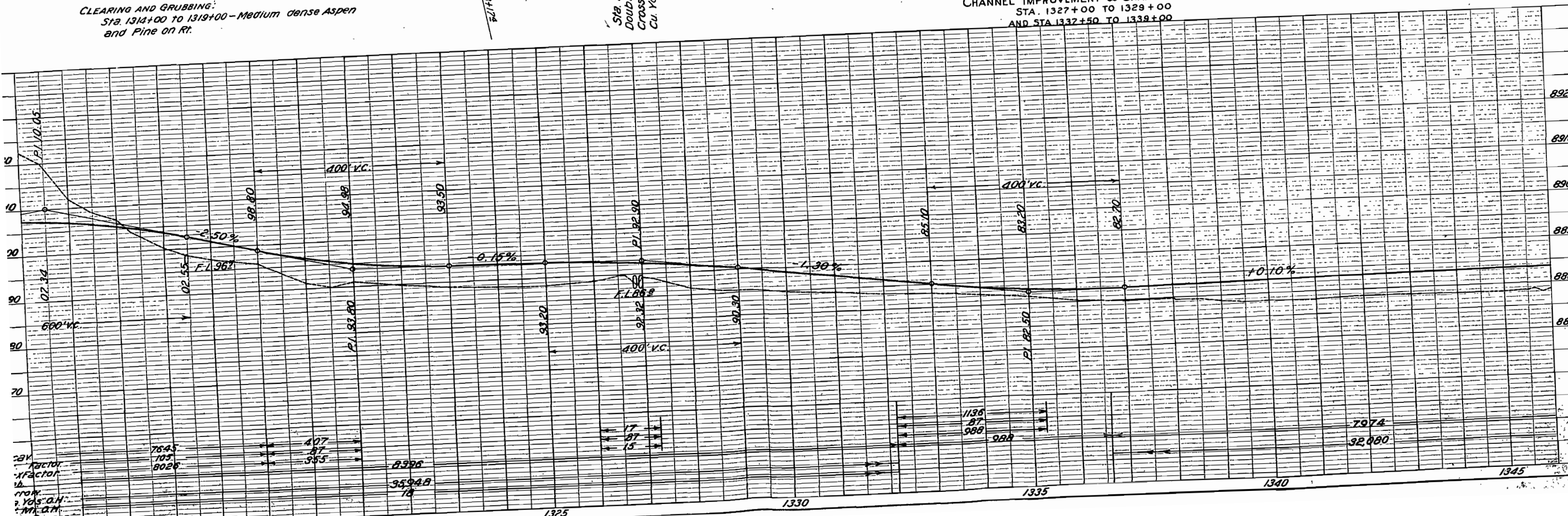
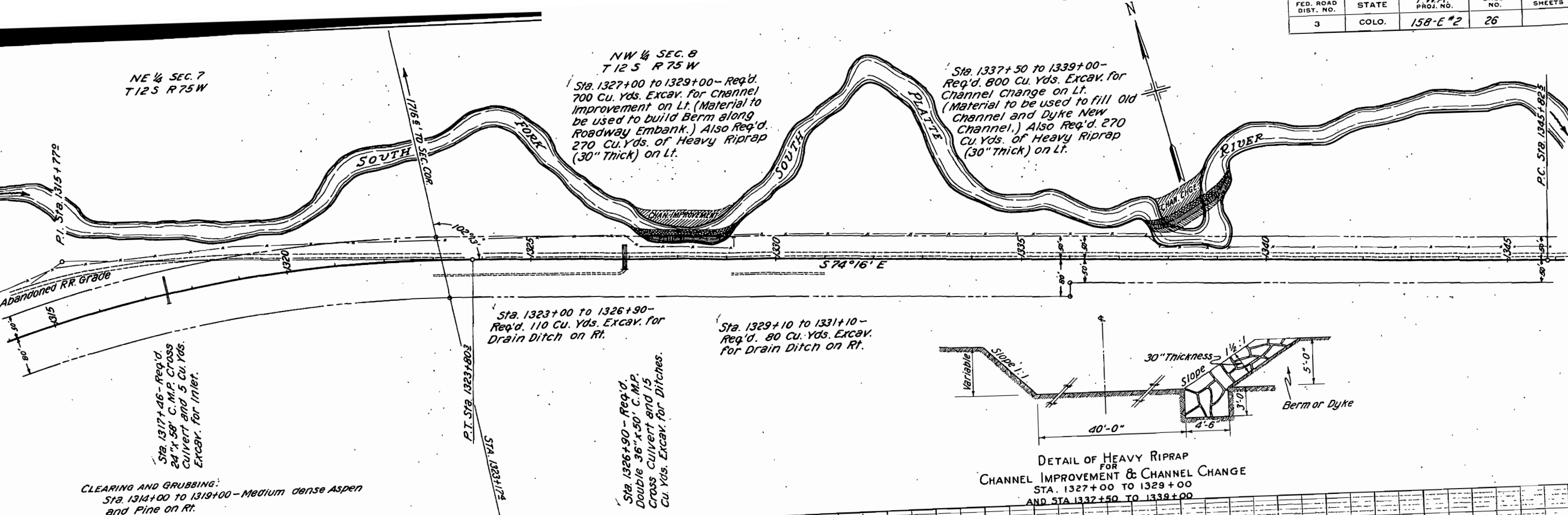
PRESENT STRUCTURE	PROPOSED STRUCTURE
SPAN	POSITION REFERRED TO PRESENT STRUCTURE
CLEAR ROADWAY	SPAN - 1 @ 23'-0"
CLEAR WATERWAY	CLEAR ROADWAY - 29'-0"
TYPE OF SUPERSTRUCTURE	CLEAR WATERWAY - 100'
TYPE OF SUBSTRUCTURE	TYPE OF SUPERSTRUCTURE - Laminated Timber Floor
REQUIREMENTS AS TO REMOVAL	TYPE OF SUBSTRUCTURE - Treated Timber Piles (28'-0")
	DETOUR STRUCTURE REQUIREMENTS
	R.R. SIDING - BURNING VISTS HAUL TO BRIDGE SITE - 3.3 MI.

STREAM DATA	NEARBY STRUCTURES ON SAME STREAM
DRAINAGE AREA IN SQUARE MILES - 2	LOCATION
VELOCITY DURING HIGH WATER	WATERWAY
ELEVATION OF:	RECORD DURING FLOODS
MAXIMUM HIGH WATER	
LOW WATER - 8890.0	
NORMAL STAGE - 8890.0	
DRIFT - NONE	

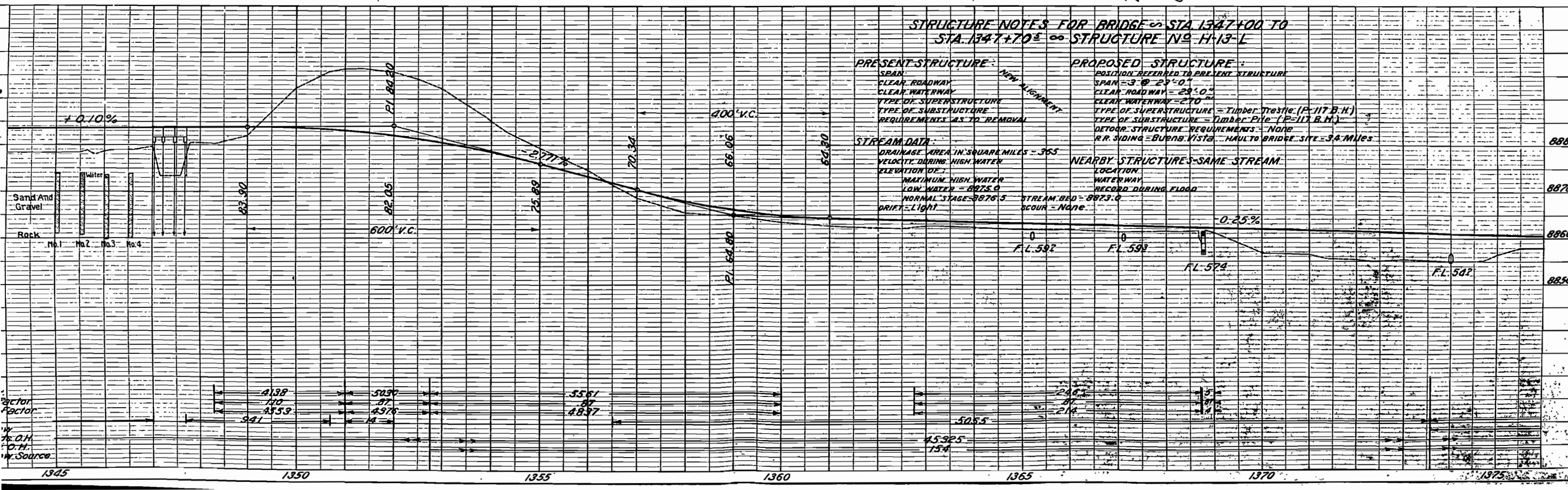
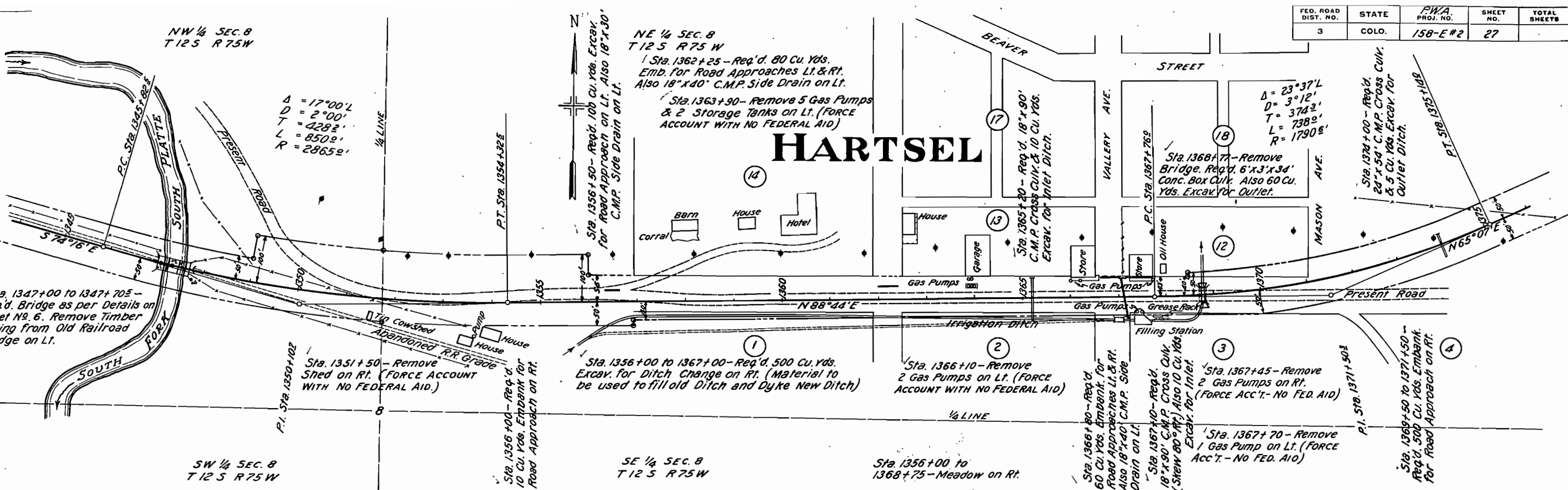


$\Delta = 33^\circ 05' R$
 $D = 2^\circ 00'$
 $T = 650.2'$
 $L = 1654.3'$
 $R = 28652'$

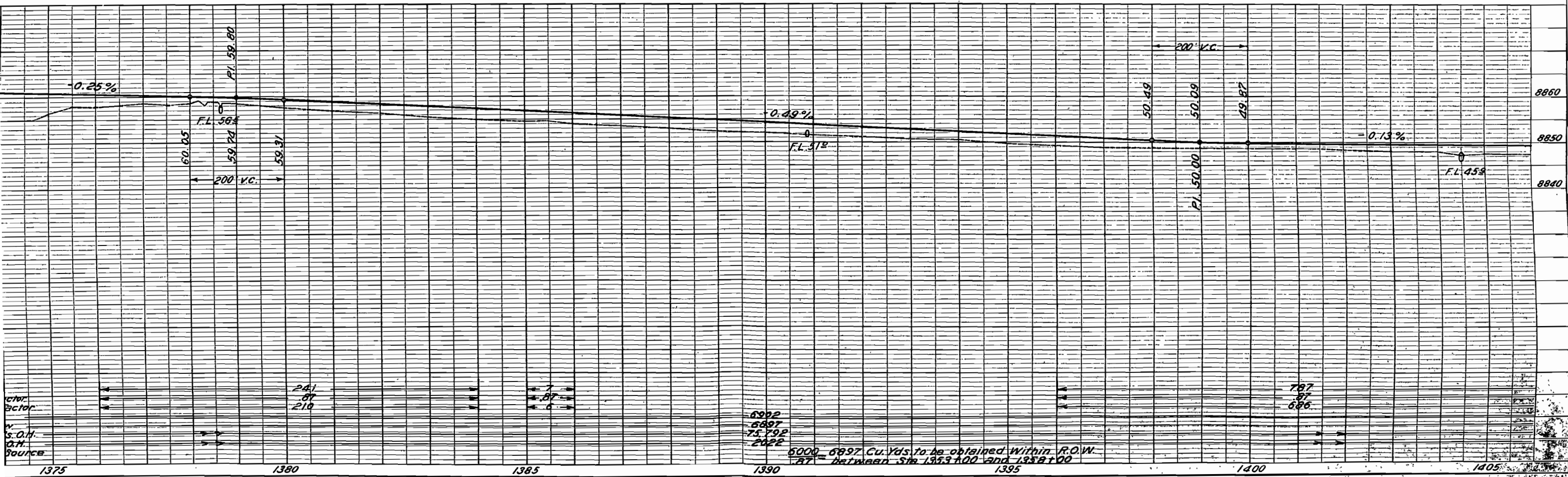
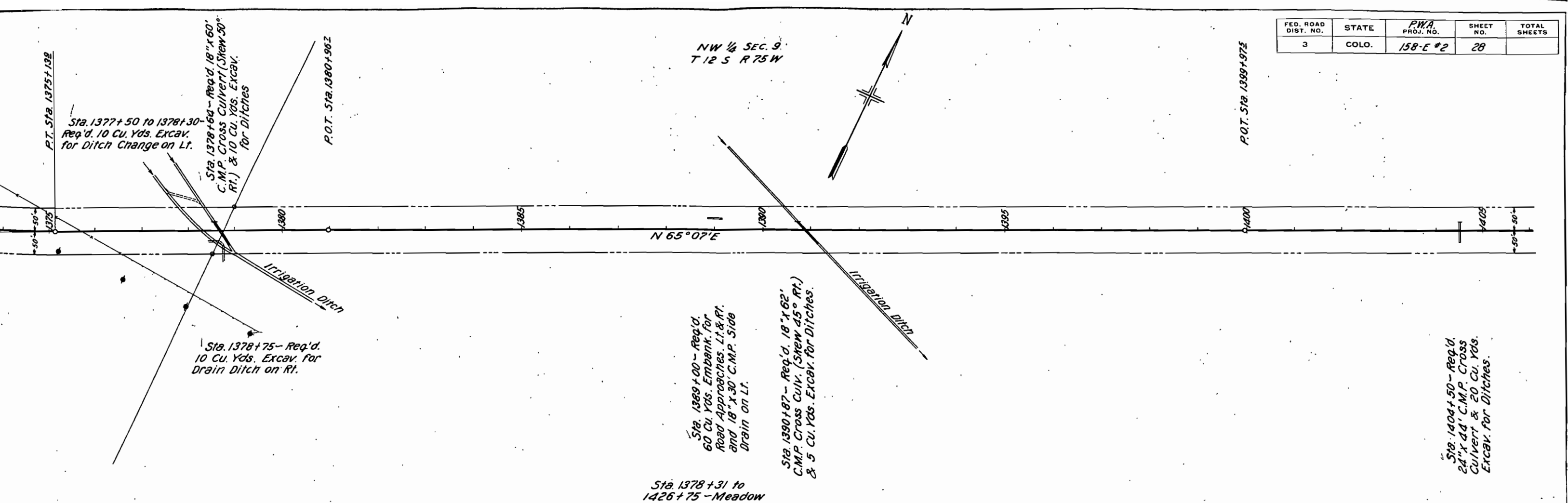
FED. ROAD DIST. NO.	STATE	PROJ. NO.	NO.	SHEETS
3	COLO.	158-E#2	26	



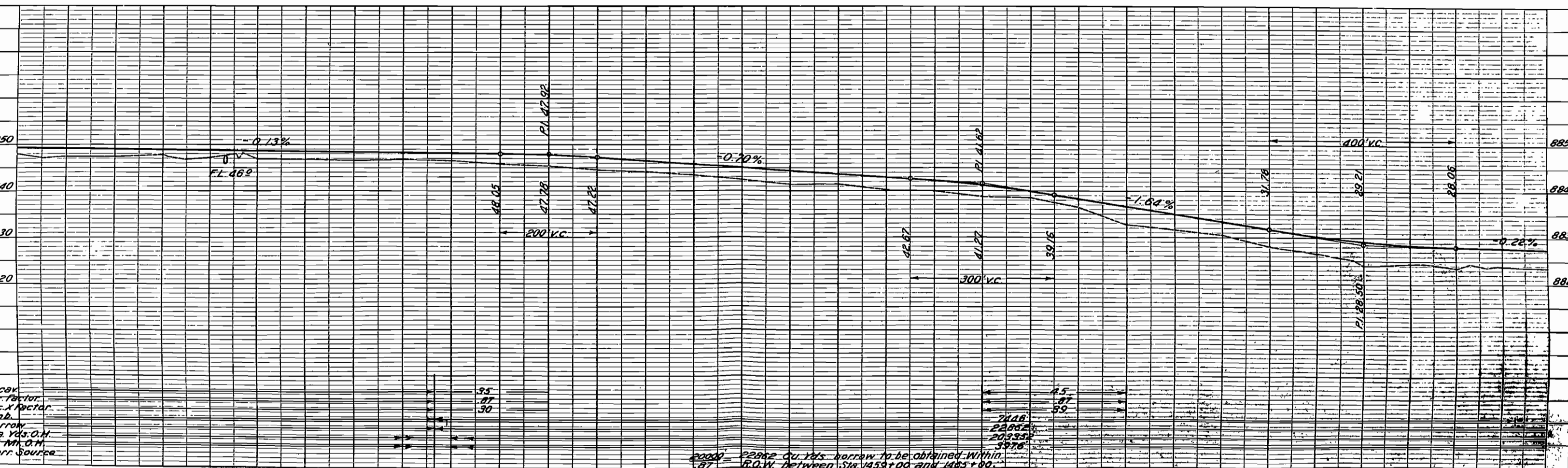
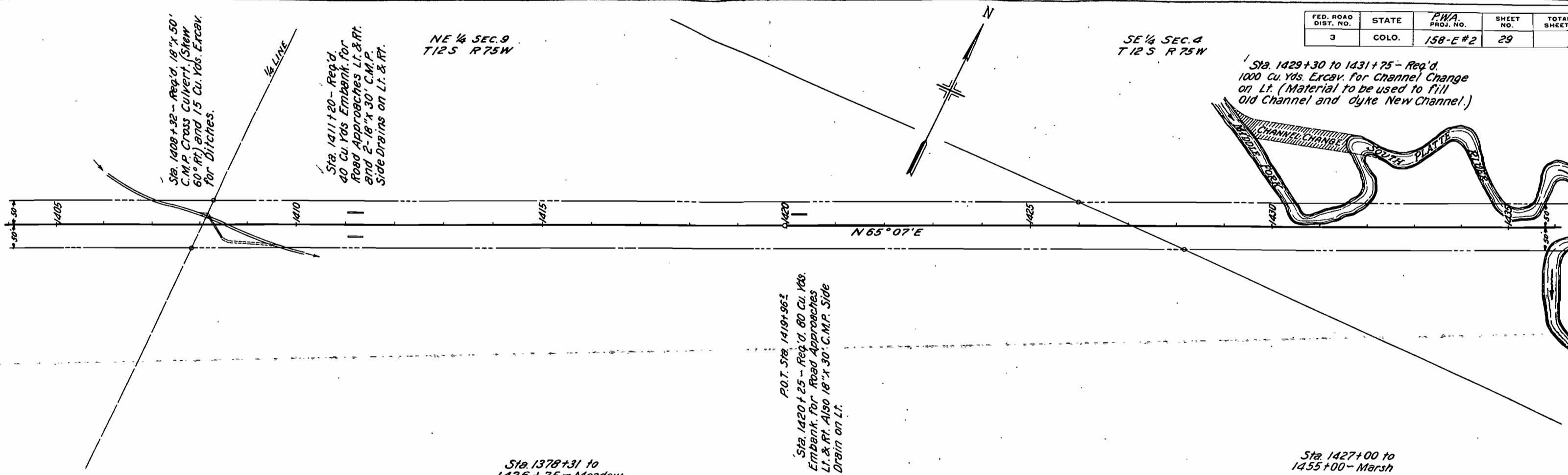
FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	27	



FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E #2	28	



FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	29	



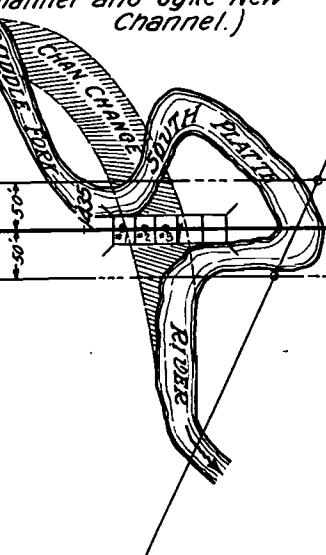
SE 1/4 SEC. 4
T12 S R75 W
1435+30 to 1436+46.5 - Req'd.
e and Channel Change 85 per
s on Sheet No. 7 (Channel
e Material to be used to fill
channel and dyke New
Channel.)

SW 1/4 SEC. 3
T12 S R75 W

Sta. 1451+00 to 1451+24.5 -
Req'd. Bridge as per Details
on Sheet No. 8

Sta. 1444+80 to 1450+90 -
Req'd. 250 Cu. Yds. Excav. for
Drain Ditch on Lt.

Sta. 1459+86 - Req'd. 24" x 102"
C.M. Siphon (H=3.5' Lt. & 4.0' Rt.)
(Slew 80° Rt.)



Abandoned

P.O.T. Sta. 1440+106

Sta. 1427+00 to
1455+00 Marsh

Rail Fence

Sta. 1455+00 to
1459+75 Meadow

Sta. 1460+90±
Irrigation Ditch

1/2 LINE

STRUCTURE NOTES FOR BRIDGE ~ STA. 1451+00 TO
1451+24.5 ~ STRUCTURE NO. H-13-M

PRESENT STRUCTURE:

SPAN
CLEAR ROADWAY
CLEAR WATERWAY
TYPE OF SUPERSTRUCTURE
TYPE OF SUBSTRUCTURE
REQUIREMENTS AS TO REMOVAL

PROPOSED STRUCTURE:

POSITION REFERRED TO PRESENT STRUCTURE
SPAN - 1 @ 23'-0"
CLEAR ROADWAY - 29'-0"
CLEAR WATERWAY - 115'
TYPE OF SUPERSTRUCTURE - Timber Trestle (P-117 B.H.)
TYPE OF SUBSTRUCTURE - Timber Piles (P-117 B.H.)
DETOUR STRUCTURE REQUIREMENTS - None
R.R. SIDING - Buena Vista HAUL TO BRIDGE SITE - 36 Miles

NEW ALIGNMENT

STRUCTURE NOTES FOR BRIDGE ~ STA. 1435+30 TO
1436+46.50 ~ STRUCTURE NO. H-13-M.

PRESENT STRUCTURE:

SPAN
CLEAR ROADWAY
CLEAR WATERWAY
TYPE OF SUPERSTRUCTURE
TYPE OF SUBSTRUCTURE
REQUIREMENTS AS TO REMOVAL

PROPOSED STRUCTURE

POSITION REFERRED TO PRESENT STRUCTURE
SPAN - 5 @ 23'-0"
CLEAR ROADWAY - 29'-0"
CLEAR WATERWAY - 147'
TYPE OF SUPERSTRUCTURE - Timber Trestle (P-117 B.H.)
TYPE OF SUBSTRUCTURE - Timber Piles (P-117 B.H.)
DETOUR STRUCTURE REQUIREMENTS - None
R.R. SIDING - Buena Vista HAUL TO BRIDGE SITE - 36 Miles

STREAM DATA:

DRAINAGE AREA IN SQUARE MILES - 2.30
VELOCITY DURING HIGH WATER
ELEVATION OF
MAXIMUM HIGH WATER
LOW WATER - 8817.0
NORMAL STAGE - 8817.0
DRIFT - None

NEARBY STRUCTURES ON SAME STREAM:

LOCATION
WATERWAY
RECORD DURING FLOODS

STREAM DATA:

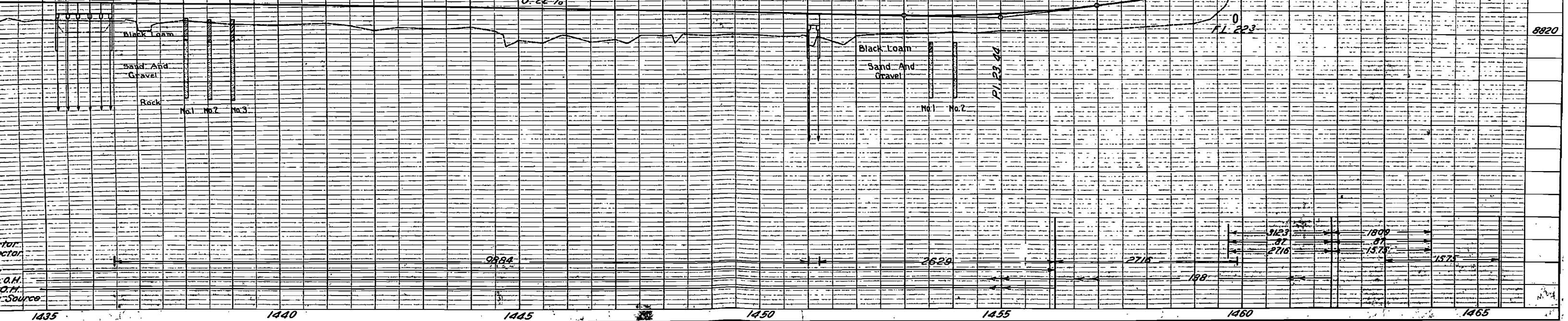
DRAINAGE AREA IN SQ. MILES - 2.30
VELOCITY DURING HIGH WATER
ELEVATION OF
MAXIMUM HIGH WATER
LOW WATER - 8821.5
NORMAL STAGE - 8822.0
DRIFT - Light

NEARBY STRUCTURES ON SAME STREAM:

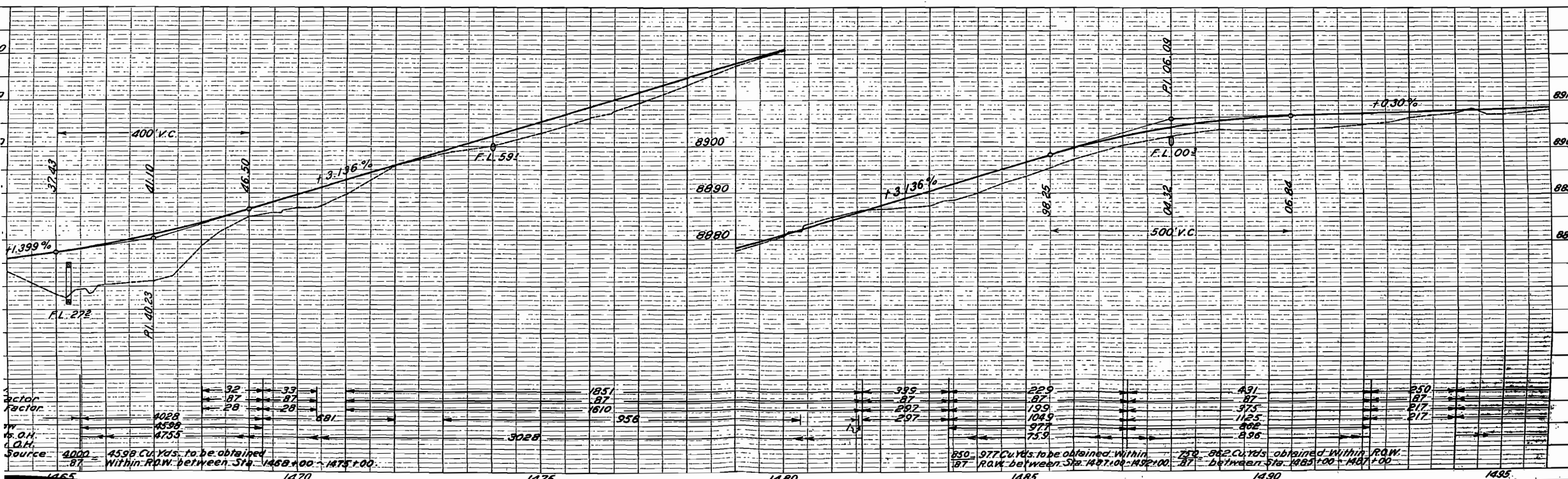
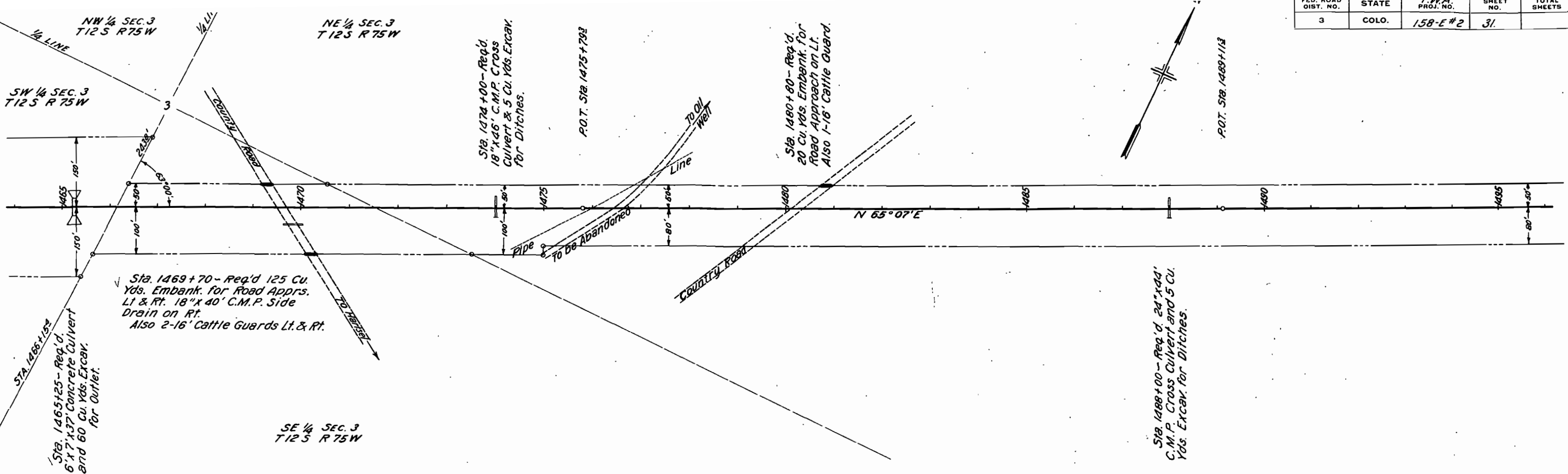
LOCATION
WATERWAY
RECORD DURING FLOODS

STREAM BED - 8821.0
SCOUR - None

0.22%



FEEDBACK DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E #2	31	



NE 1/4 SEC. 3
T 12 S R 75 W

NW 1/4 SEC. 2
T 12 S R 75 W

FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	32	

Sta. 1498+20 - Req'd. 65 Cu. Yds.
Embank. for Road Approach on
Lt. Also 1-16' Cattle Guard
on Lt.

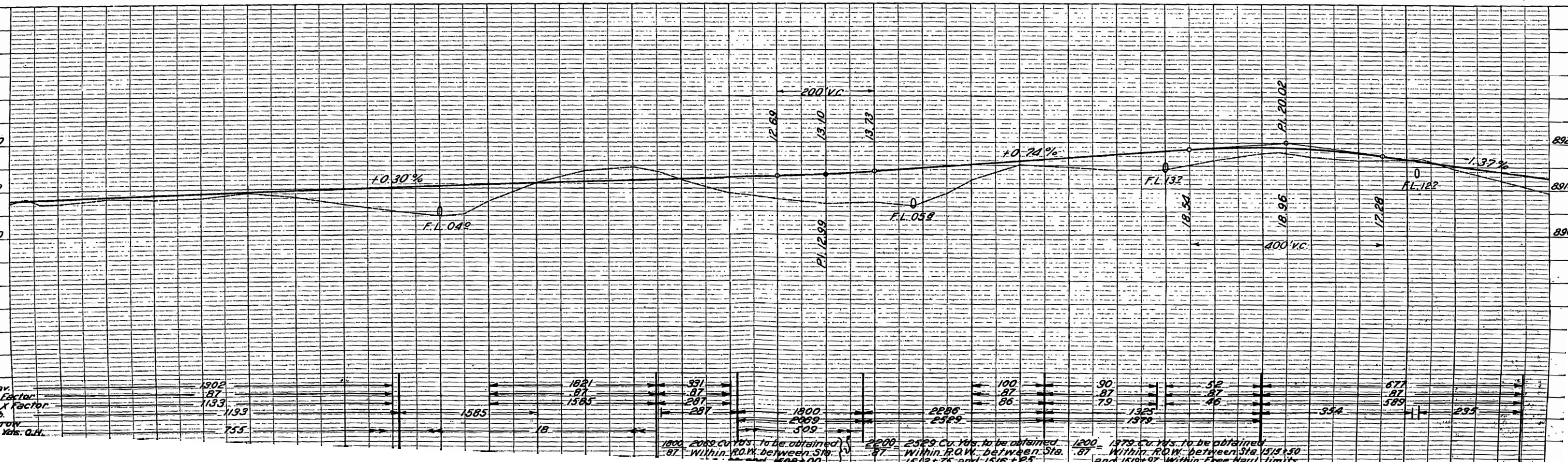
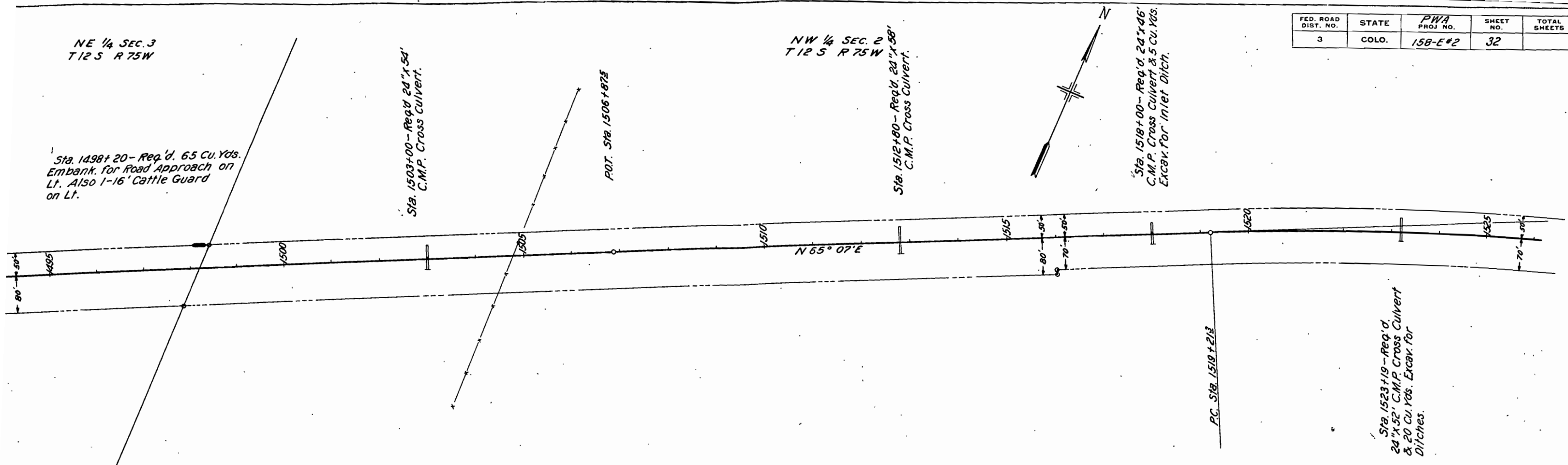
Sta. 1503+00 - Req'd. 24'x54"
C.M.P. Cross Culvert.

P.O.T. Sta. 1506+87.3

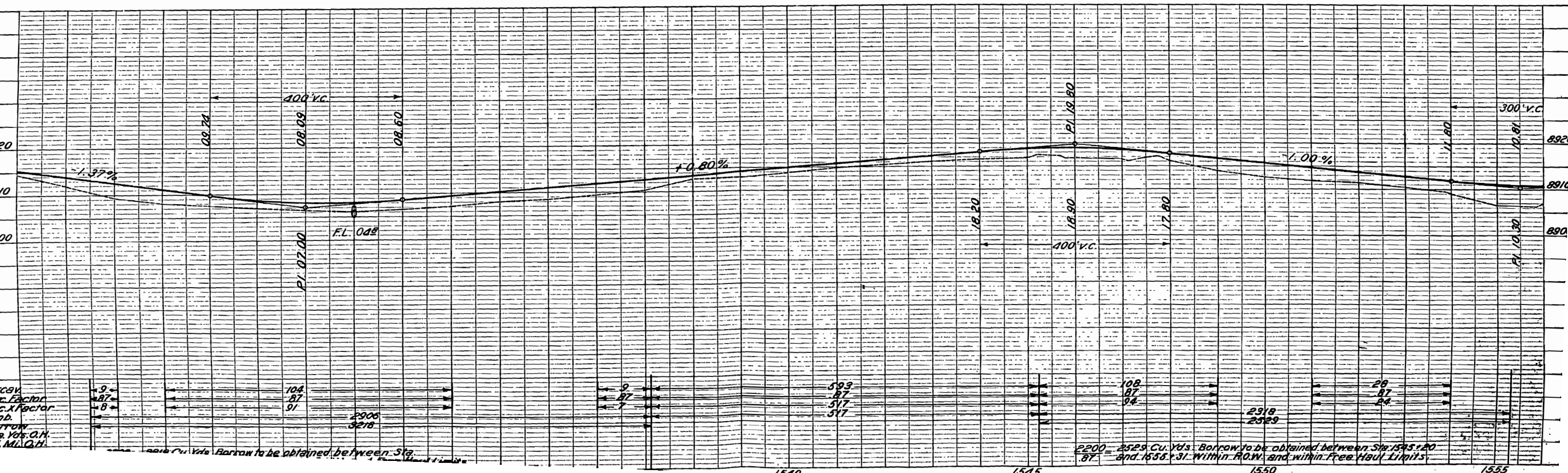
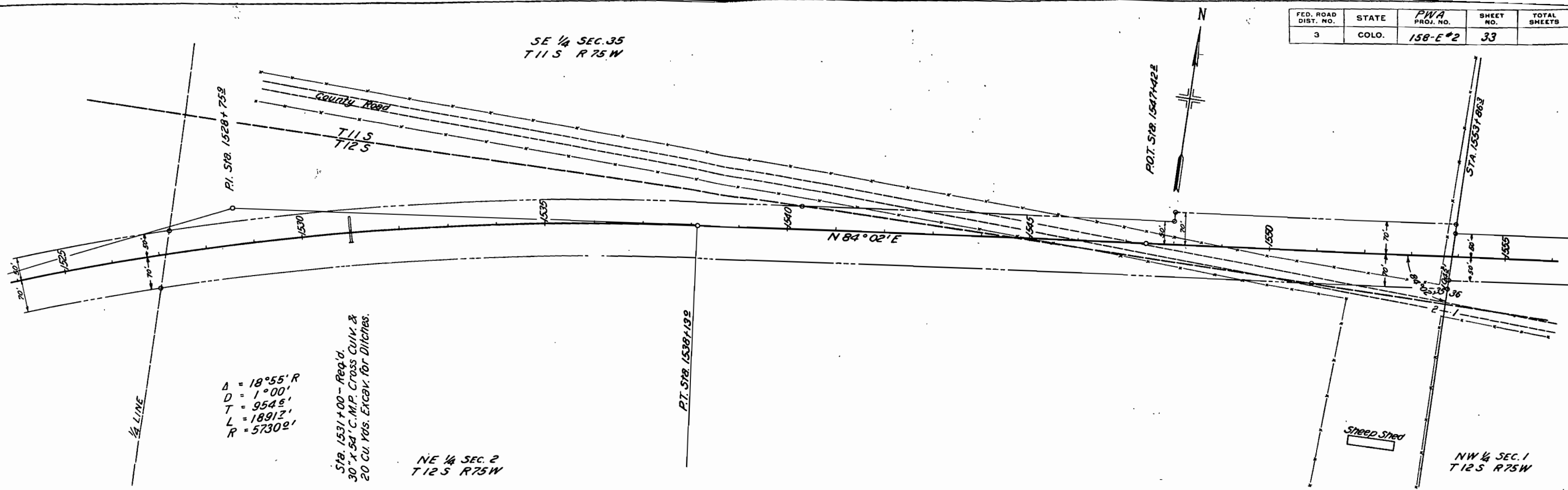
Sta. 1512+80 - Req'd. 24'x58"
C.M.P. Cross Culvert.

Sta. 1518+00 - Req'd. 24'x46"
C.M.P. Cross Culvert & 5 Cu. Yds.
Excav. for Inlet Ditch.

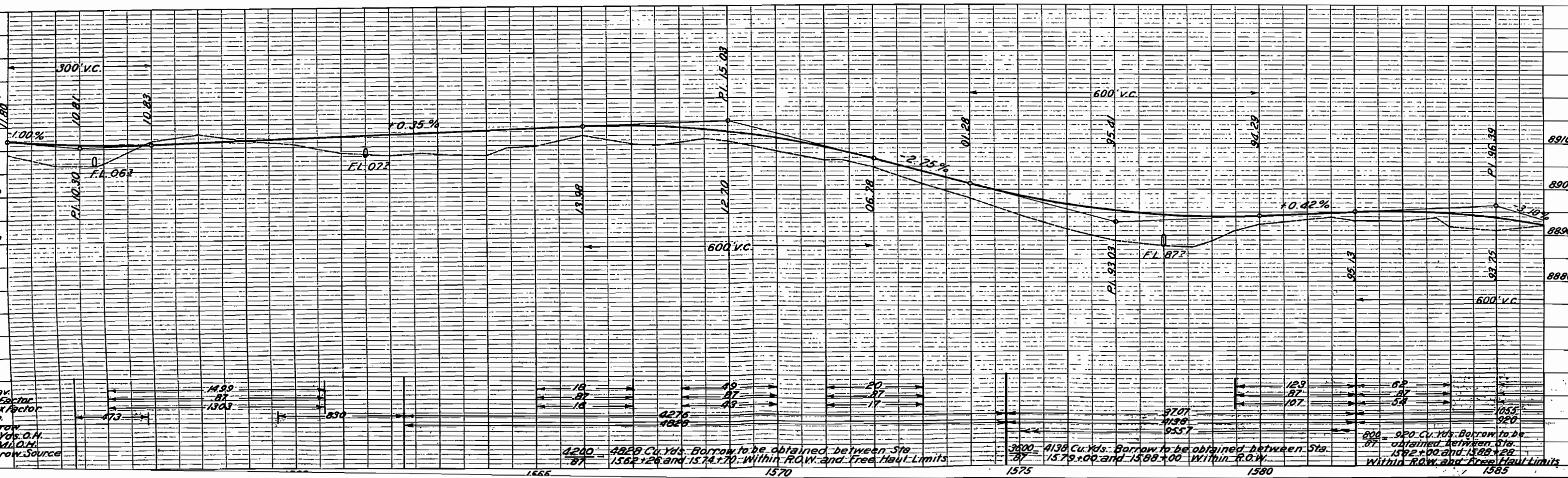
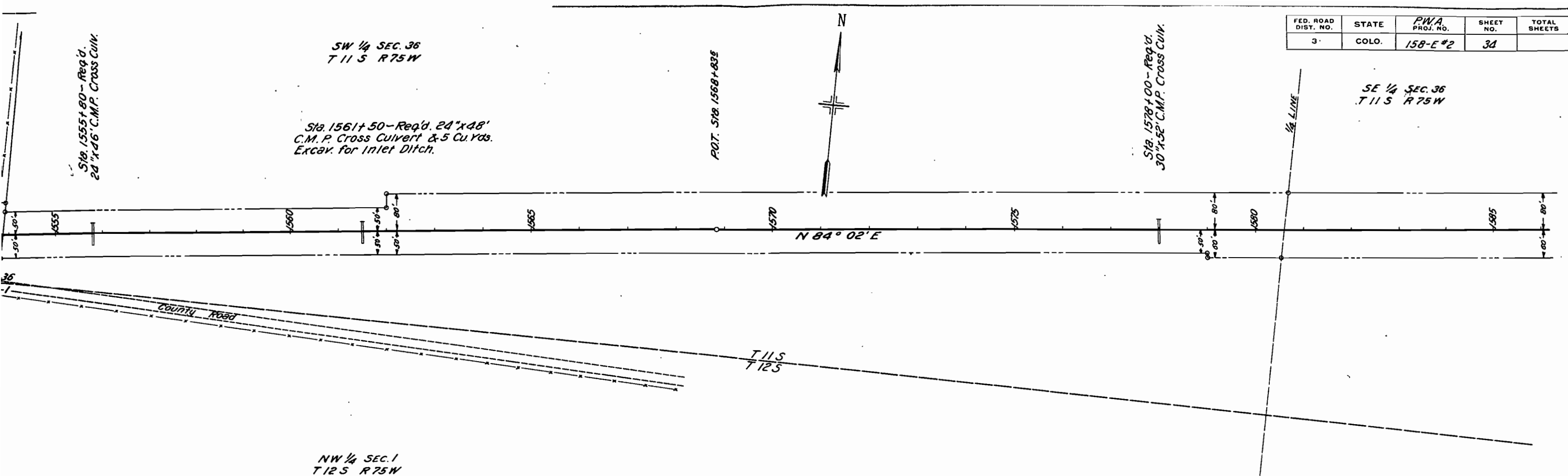
Sta. 1523+19 - Req'd.
24'x52' C.M.P. Cross Culvert
& 20 Cu. Yds. Excav. for
Ditches.



FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	33	



FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	34	



FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	15B-E#2	35	

P.O.T. Sta. 1586+05.9

SE 1/4 SEC. 36
T 11 S R 75 W

Sta. 1592+50 -
Req'd. 36"x46"
C.M.P. Cross Culv.

Sta. 1597+65 - Req'd.
24"x52' C.M.P. Cross.
Culvert & 5 Cu Yds.
Excav. for Inlet.



N 84° 02' E

P.O.T. Sta. 1606+95.2

Sta. 1607+35.1

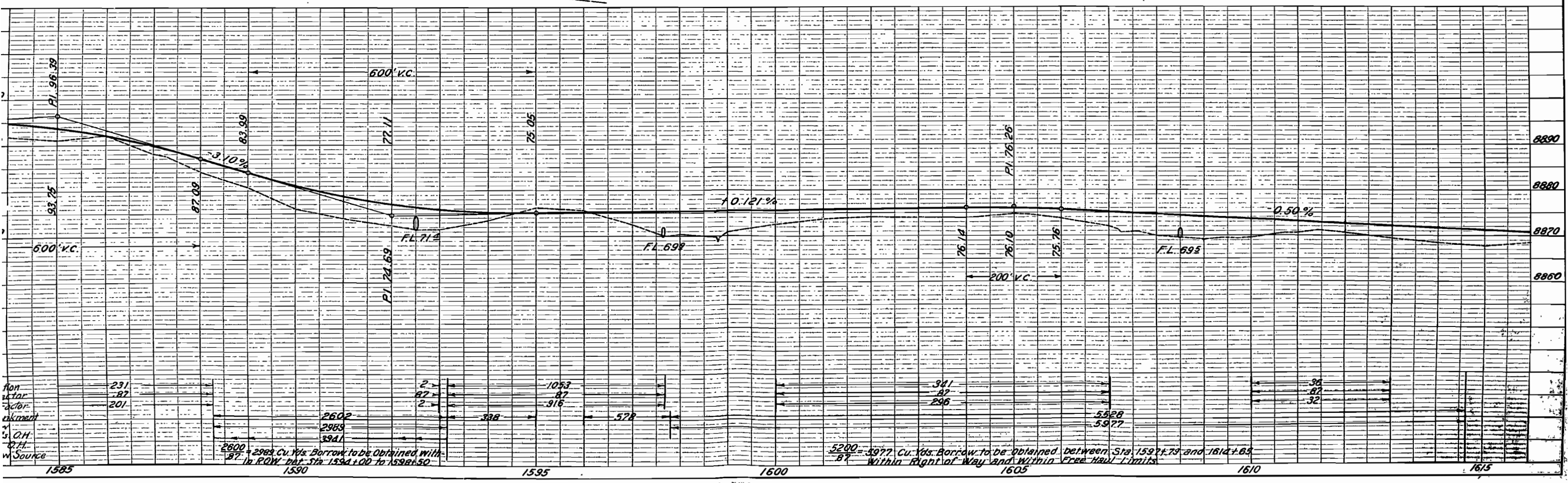
Sta. 1608+50 - Req'd.
24"x48' C.M.P. Cross Culv.

SW 1/4 SEC. 31
T 11 S R 74 W

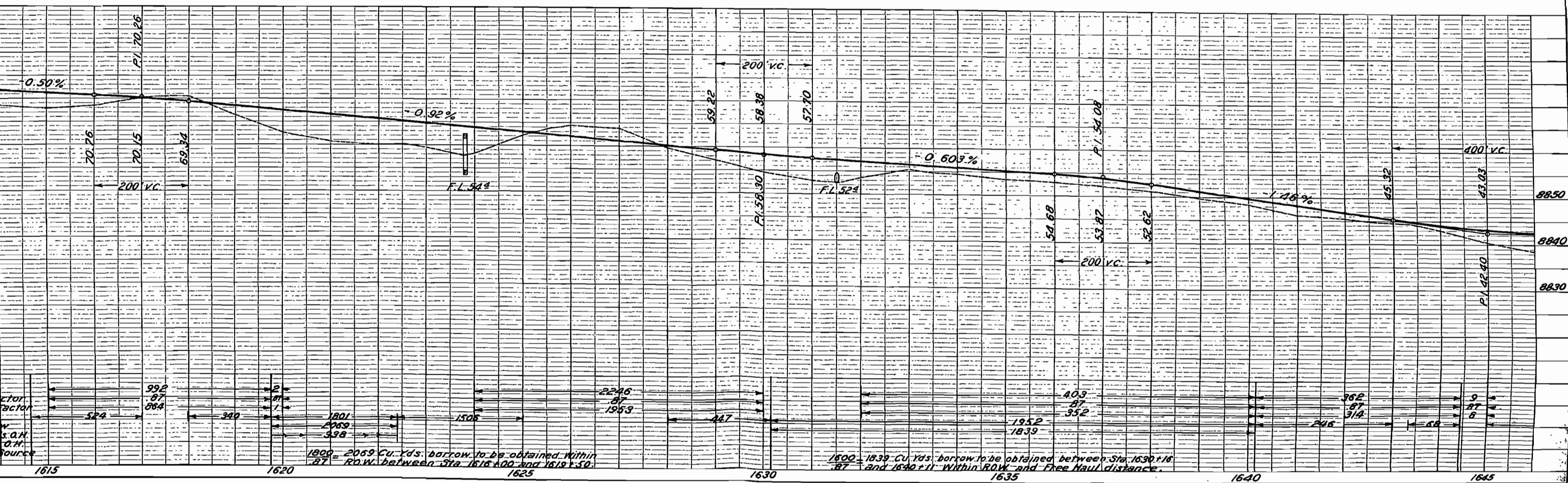
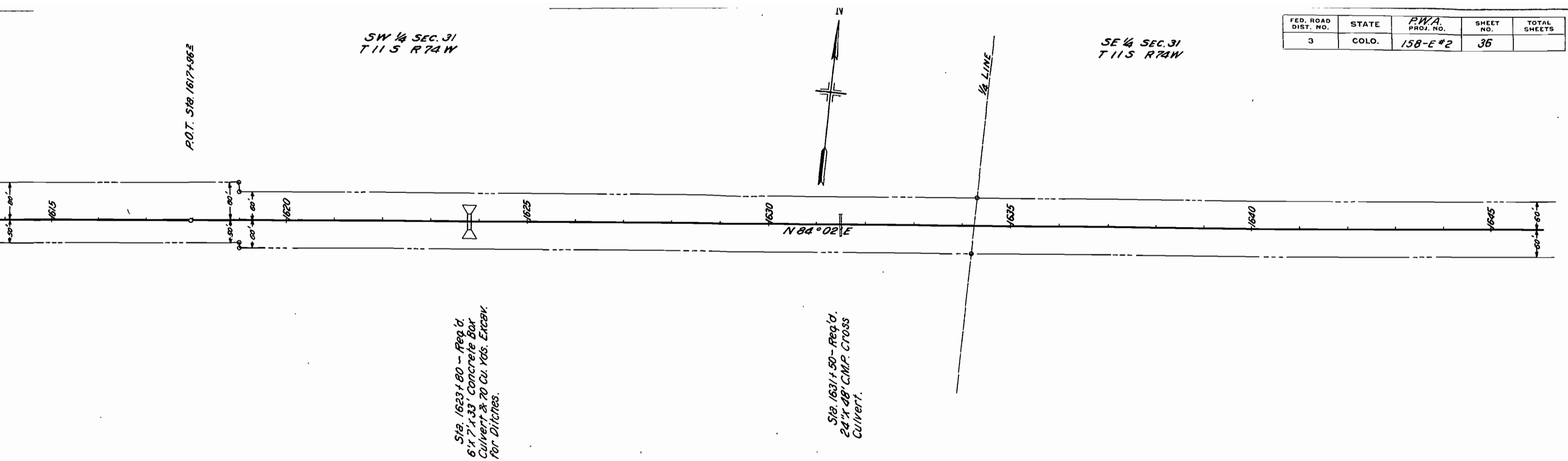
Sta. 1607+34 - Req'd.
250 Cu. Yds. Embank for
Road Approaches Lt. & Rt.
Also 18"x40' C.M.P. Side
Drain on Lt. & 2-16' Cattle
Guards Lt. & Rt.

R 25.5
R 74.5
7082' TO SEC. COR.

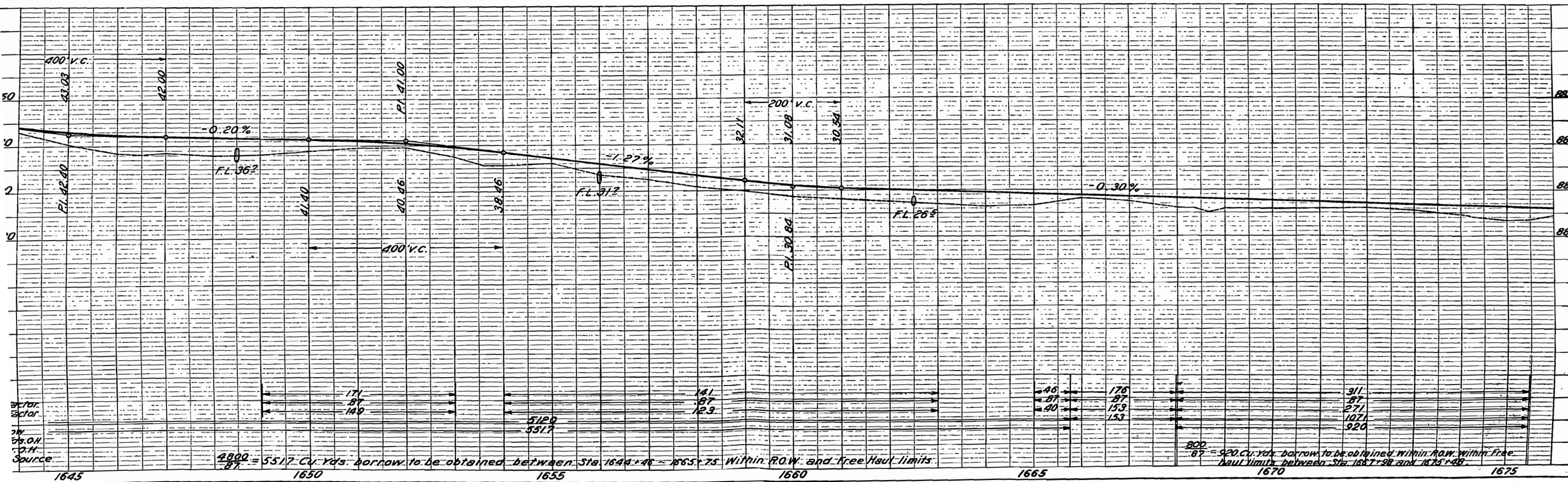
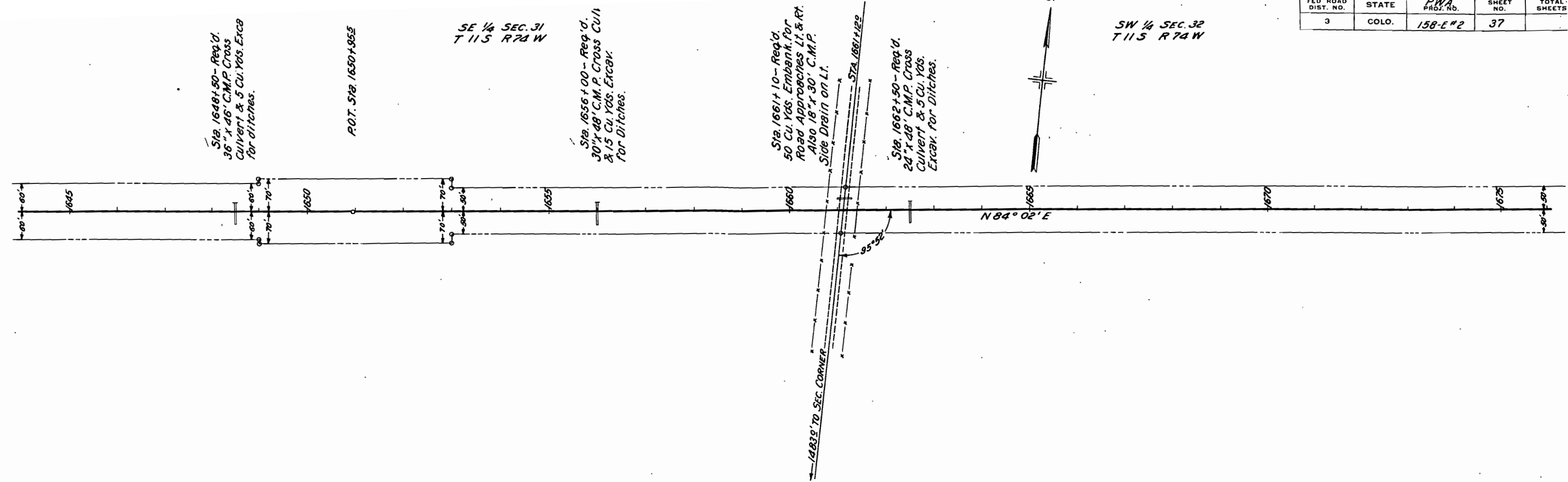
T 11 S
T 12 S



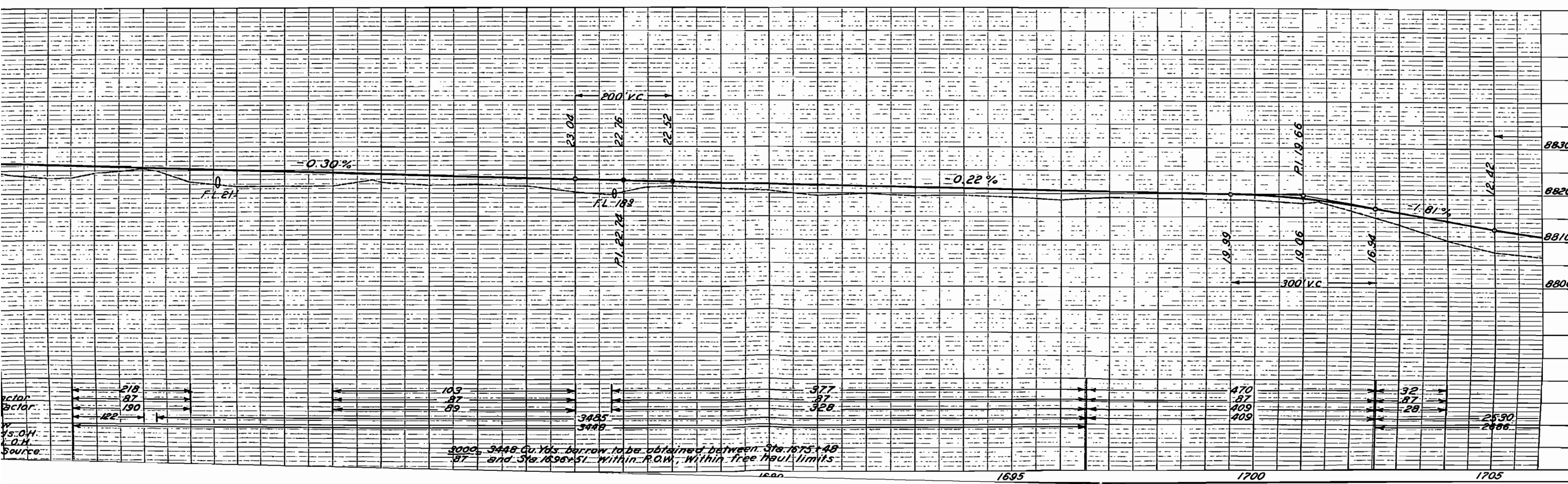
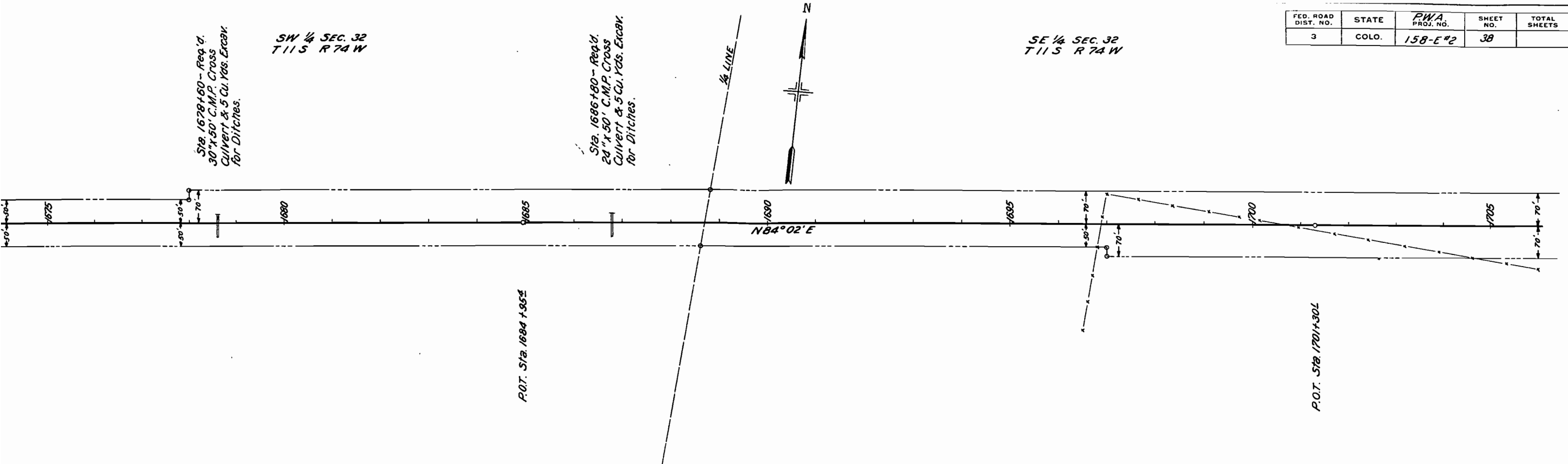
FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	36	



FED. ROAD DIST. NO.	STATE	F.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	37	



FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	38	



FED. ROAD DIST. NO.	STATE	PWA PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	158-E#2	39	

