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COLORADO
DEPARTMENT OF HIGHWAYS
PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. F 013-1(8)
STATE HIGHWAY NO. 102
WASHINGTON COUNTY

SCALES OF ORIGINAL DRAWINGS

ON PLAN: 1" = 100 FT.
ON PROFILE: 1" = 100 FT. HORIZONTAL
1" = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
NET LENGTH OF PROJECT 44,300 FT.-8,390 MI.

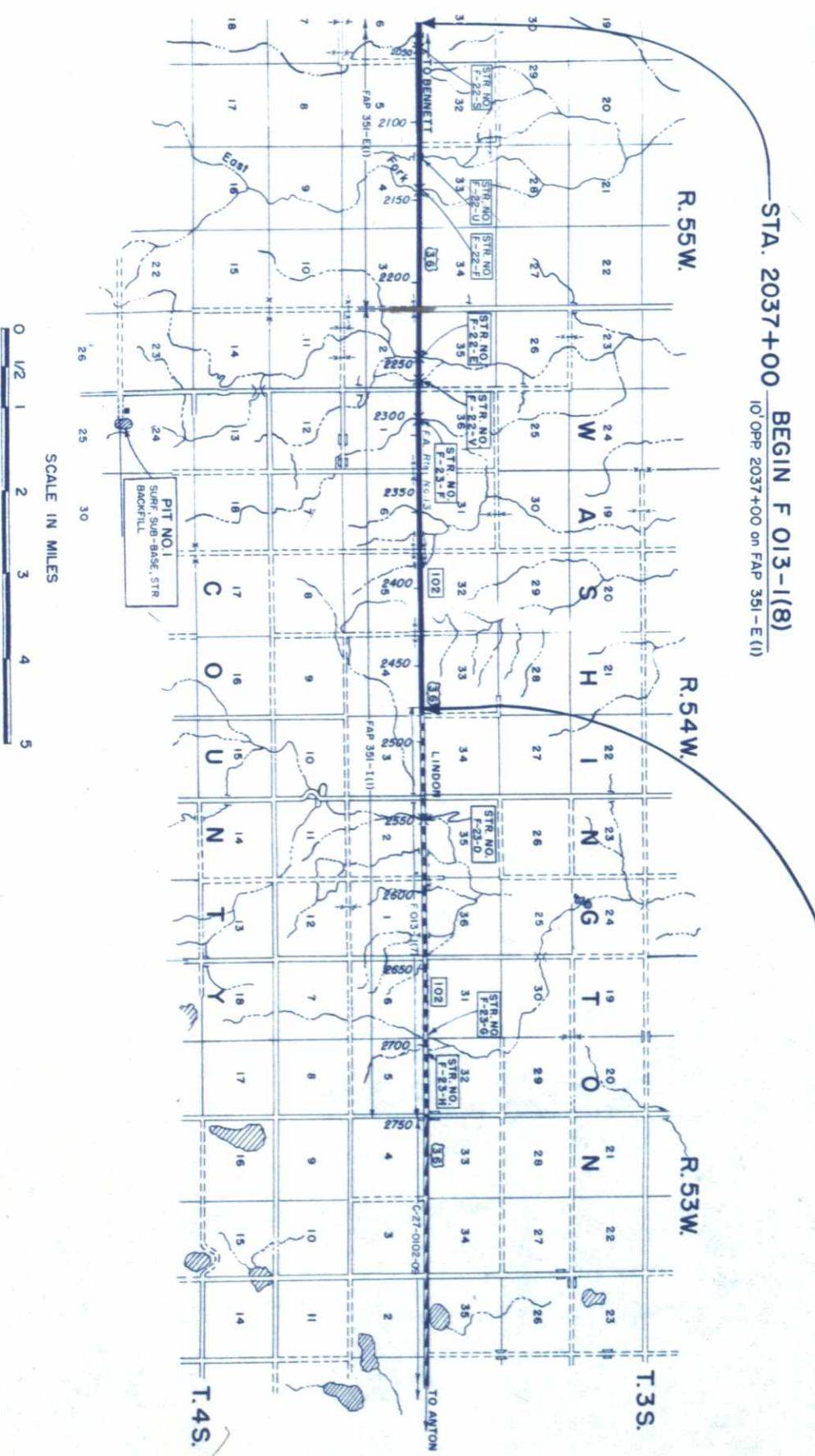
CONVENTIONAL SIGNS
CENTER LINE _____
RIGHT OF WAY LINE _____
TOWNSHIP OR RANGE LINE _____
LAND LINES _____
BARBED WIRE FENCE _____
COMBINATION WIRE FENCE _____
SNOW FENCE _____
TELEPHONE & TELEGRAPH LINES _____
POWER LINE _____
PRESENT ROAD (Plan Sheets) _____



AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DIVISION

TABULATION OF LENGTH & DESIGN DATA

STATION	ROADWAY	MAJOR STRUCTURES
2037+00 BEGIN F 013-1(8) 10' OPR. 2037+00 on FAP 351-E(1)	1,125.0	23.0
2048+25.0 2048+48.0 } DOUBLE 10' x 12' C.B.C. STR. NO. F-22-S 2220+00 END FAP 351-E(1) = Beg. FAP 351(1)	17,152.0	
2480+00 END F 013-1(8) = BEGIN F 013-1(7)	26,000.0	
TOTALS	44,277.0	23.0
SUMMARY	LIN. FT. MILES	
ROADWAY	44,277.0	8.396
MAJOR STRUCTURES	23.0	0.004
TOTAL - NET & GROSS LENGTH	44,300.0	8.390
DESIGN DATA	TANGENT	
MAXIMUM DEGREE OF CURVE	4.80%	
MAXIMUM GRADE	>1300 FT.	
MINIMUM N.P.S.D.-HORIZONTAL	610 FT.	
MINIMUM N.P.S.D.-VERTICAL	70 M.P.H.	
MAXIMUM DESIGN SPEED		



SEE SPECIAL PROVISIONS FOR
NOTICE TO BIDDERS

APPROVED: _____
CHIEF ENGINEER
DATE 6-16-60
COLORADO
DEPARTMENT OF HIGHWAYS
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED: _____
DIVISION ENGINEER
DATE _____





S1/2, SEC. 32, T3S, R55W.

REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-(18)	27	

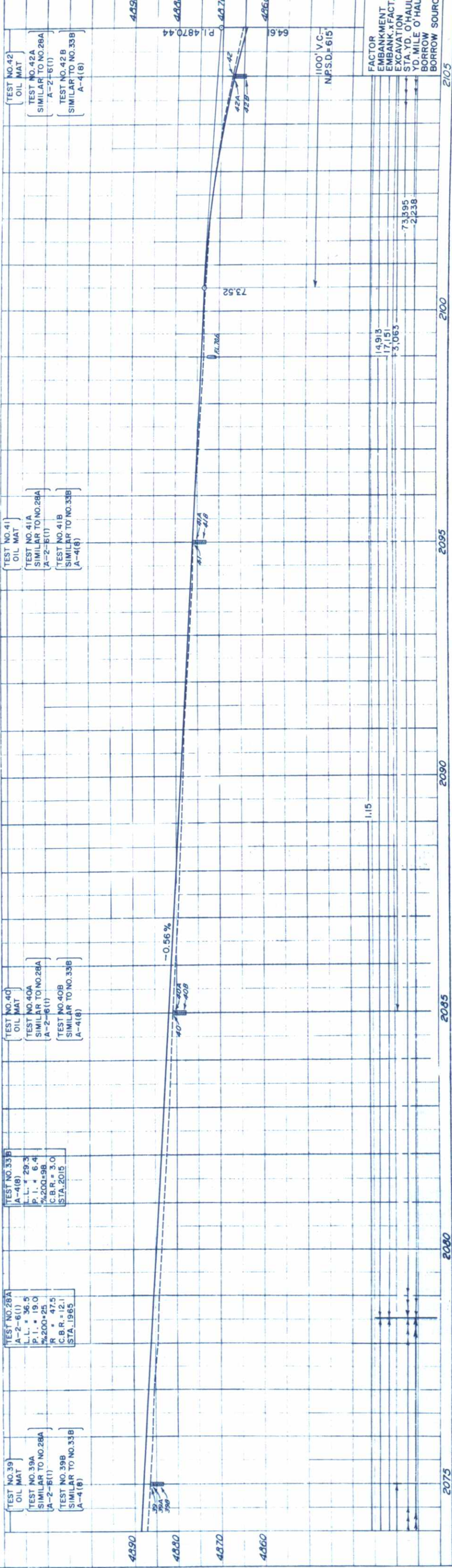
2105+00 - Reg'd, 18"x26"
Side Drain & Road Approach
LT

DBL 24"x48" C.M.P.'s

2099+00 - Reg'd, 43"x27"x50" C.M.P.
Arch Cross Culvert with Metal
Aprons, Ditches. (W=3') Remove
2-24" C.M.P.'s with Headwalls

B.M. 100' R1 Sta 2100+30
Spike in PP Elev. 4468.12

SEC. 5, T4S, R55W.



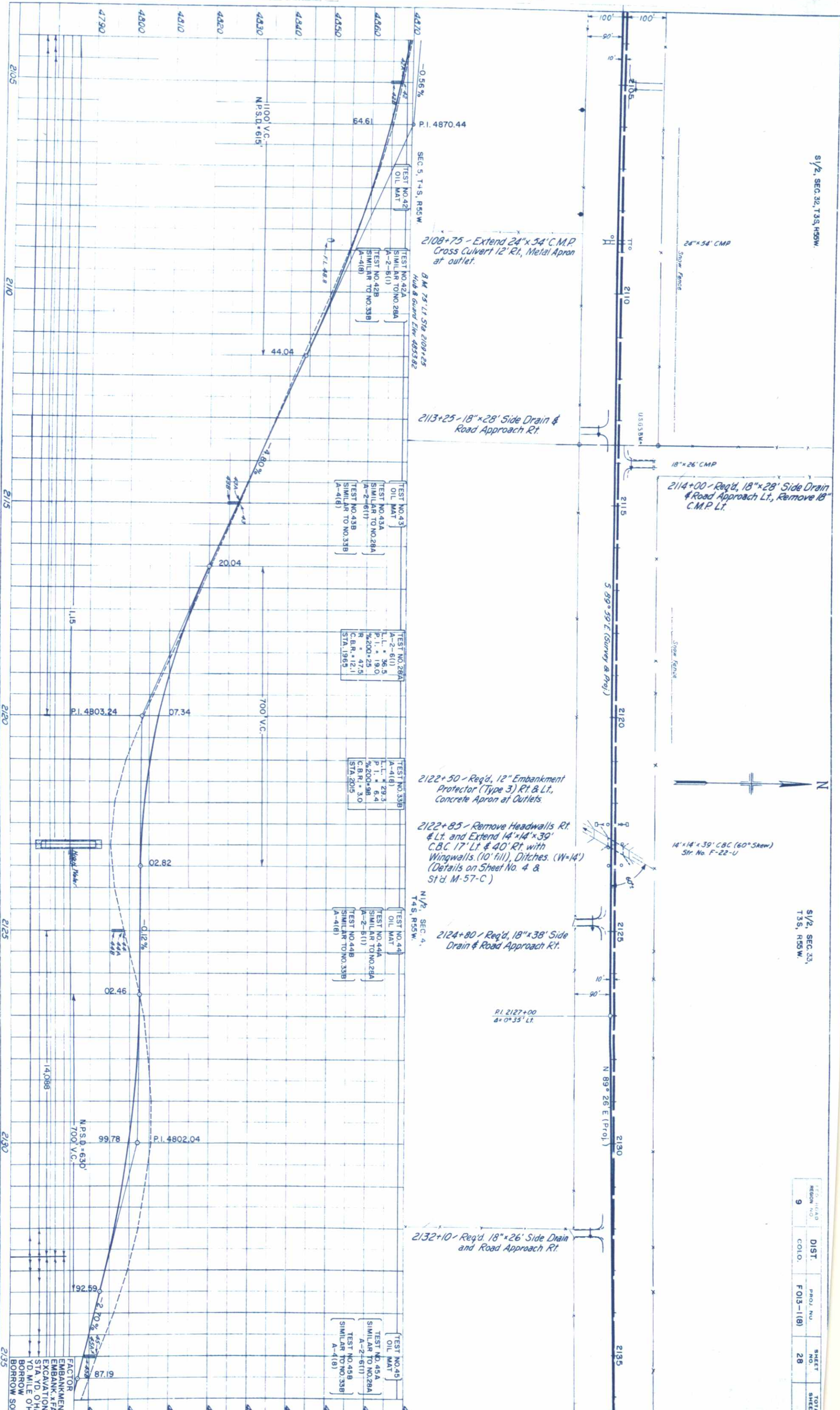
S1/2, SEC. 32, T3S, R55W.

S1/2, SEC. 33, T3S, R55W.

REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	FOI3-1(8)	28	

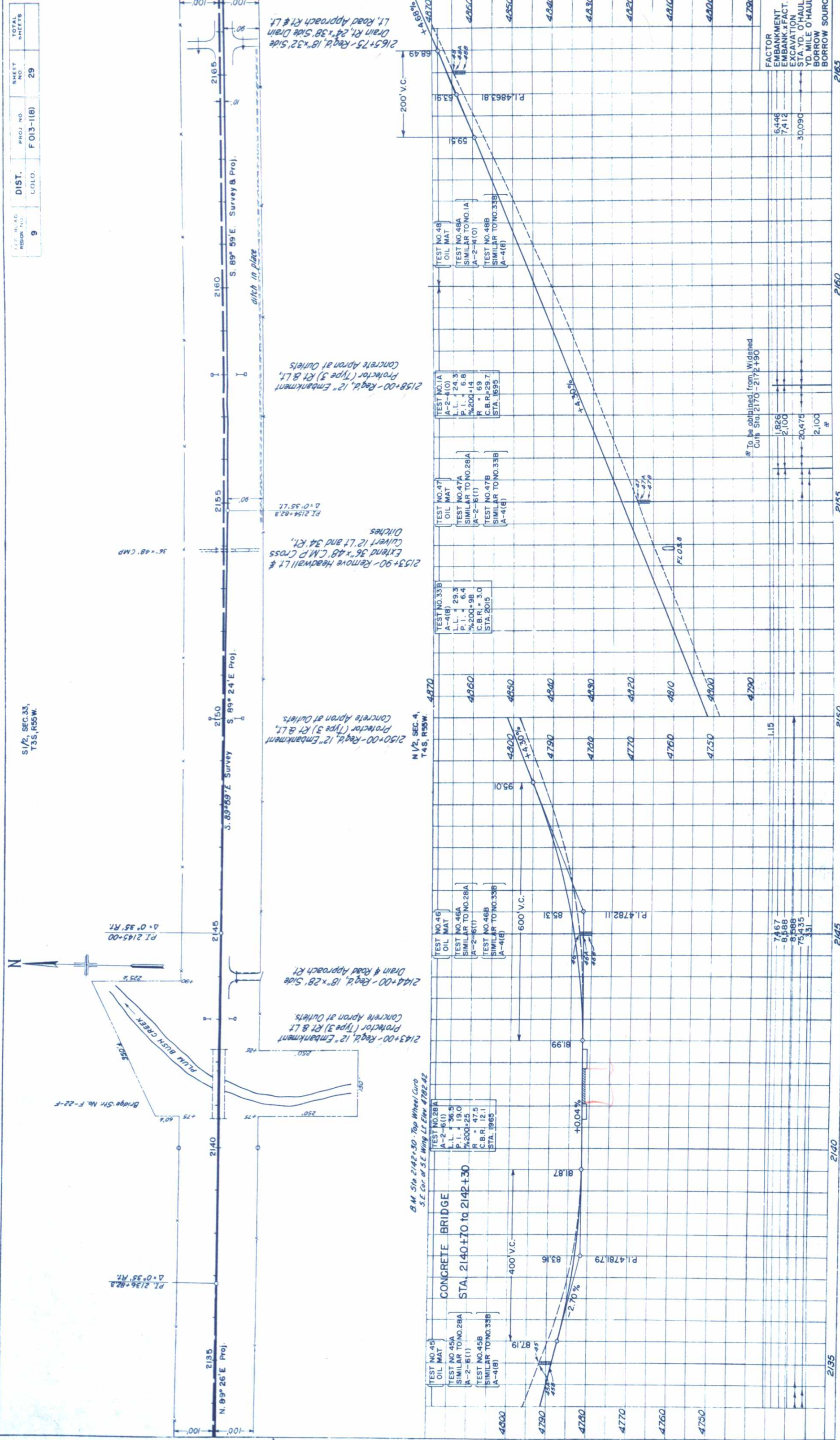
PLAN
7616

PROFILE
18016
18017



S 1/2, SEC. 35,
T3S, R55W.

STATE	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-118	29	

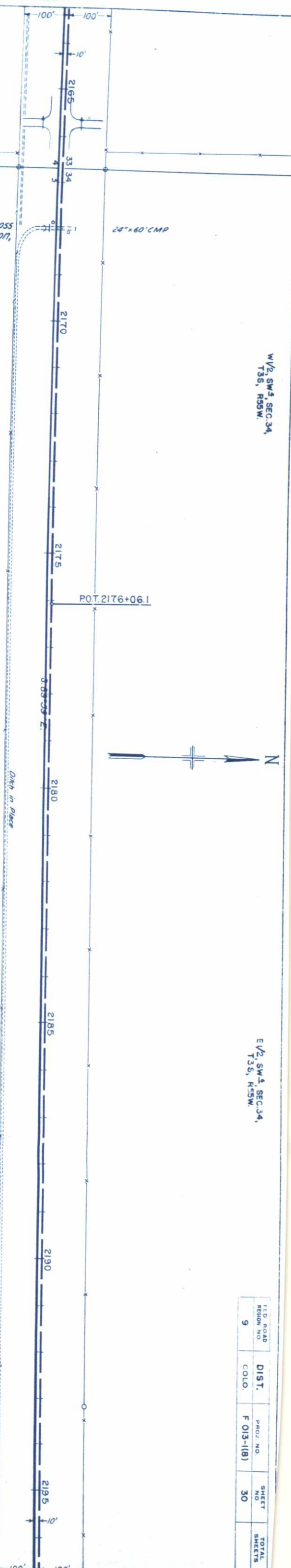


FACTOR	EMBANKMENT	EXCAVATION	STA. YD.	O'HAUL	YD. MILE	O'HAUL	BORROW	SOURCE
6.446	7.412	30.090						

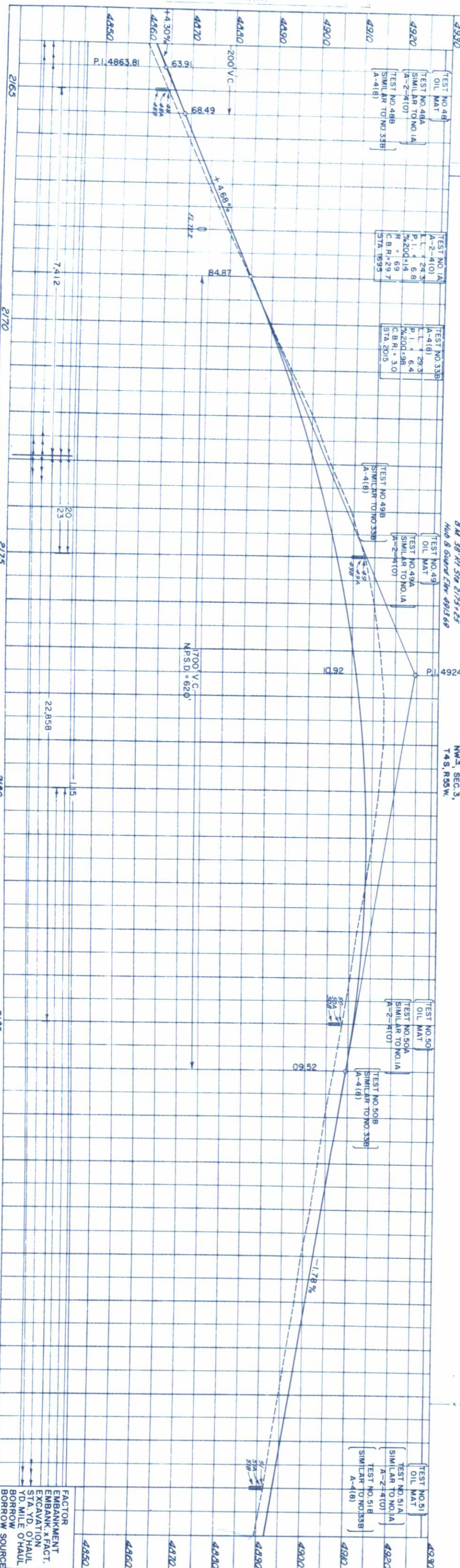
W/2, SW 1/4, SEC. 34,
T3S, R55W.

E/2, SW 1/4, SEC. 34,
T3S, R55W.

FIELD ROAD	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-(18)	30	



2168+00 - Remove Headwall Rt
and Extend 24' x 60' C.M.P. Cross
Culvert 8' Rt,
Metal Apron,
at Inlet, Inlet Ditch



PLANET PROFILE

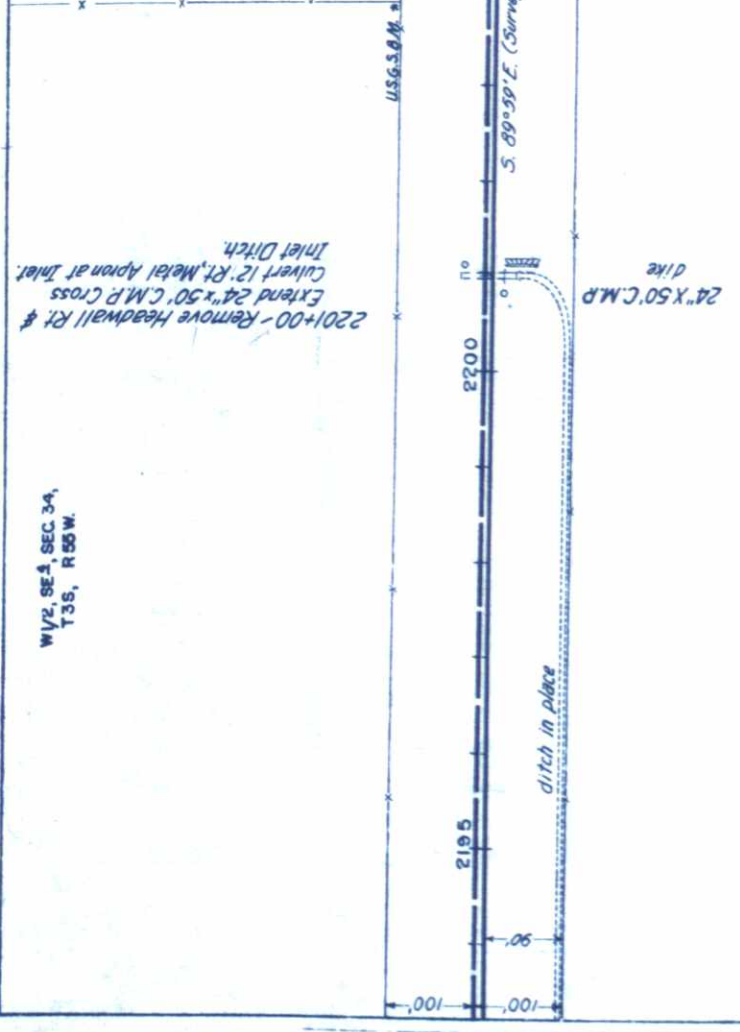


FED. ROAD DIST. PROJ. NO. SHEET TOTAL	REGION NO.	NO.	NO.	SHEETS
9	F 013-118	31		

W1/2, SE 1/4, SEC. 34,
T3S, R55W.

E1/2, SE 1/4, SEC. 34,
T3S, R55W.

W1/2, SW 1/4, SEC. 35,
T3S, R55W.



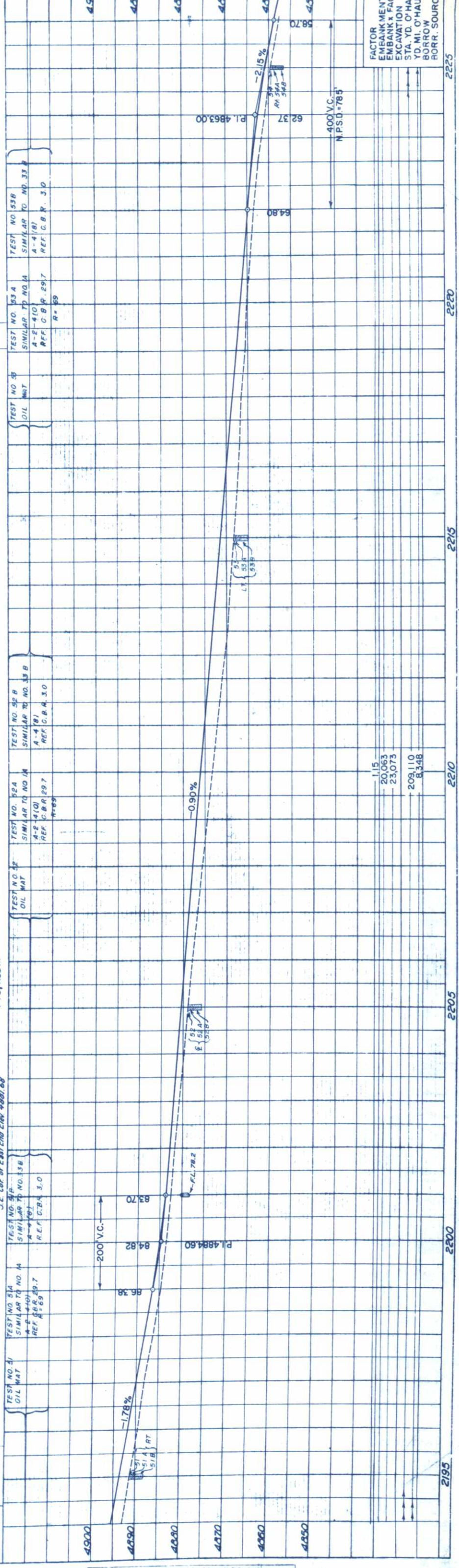
TEST NO. 1A	TEST NO. 3B
PI 6.8	PI 6.4
LL 24.3	LL 29.3
-200 = 14%	-200 = 98%
A-2-4 (10)	A-4 (8)
GBR 297	GBR 30
R = 69	

All Power Poles on this Survey Owned by:
Y B W ELECTRIC ASSOCIATION
Aron, Colo.

NE 1/4, SEC. 3
T4S, R55W.

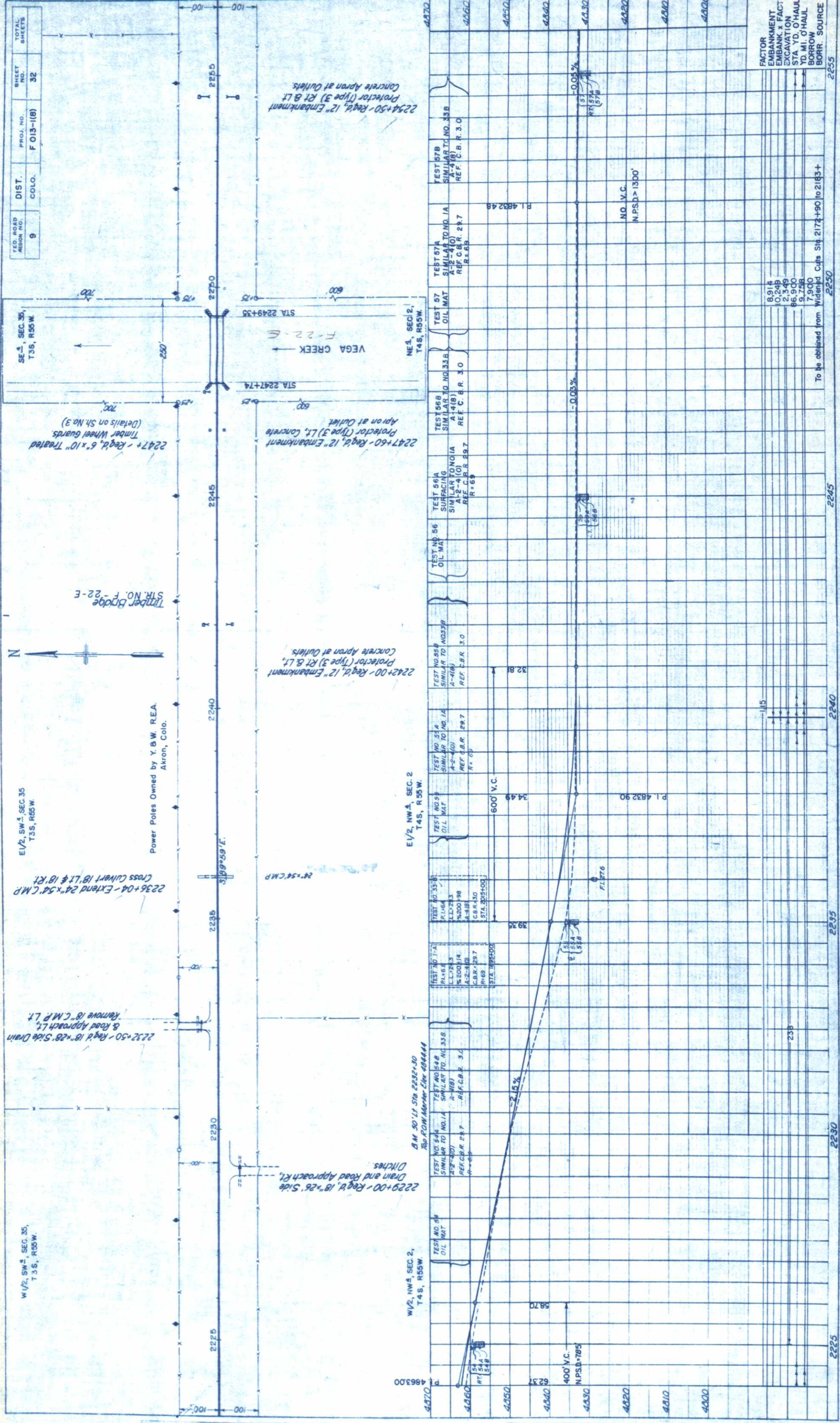
BM 51a 2201+00 - Top Hwyl. Rt.
S.E. Cor of East End Elm 4881.68

W1/2 NW 1/4, SEC. 2,
T4S, R55W.



FACTOR	EMBANKMENT	EXCAVATION	STA. YD. O'HAUL	YD. MI. O'HAUL	BORROW	SOURCE
	115	20,063	23,073	209,110	8,348	

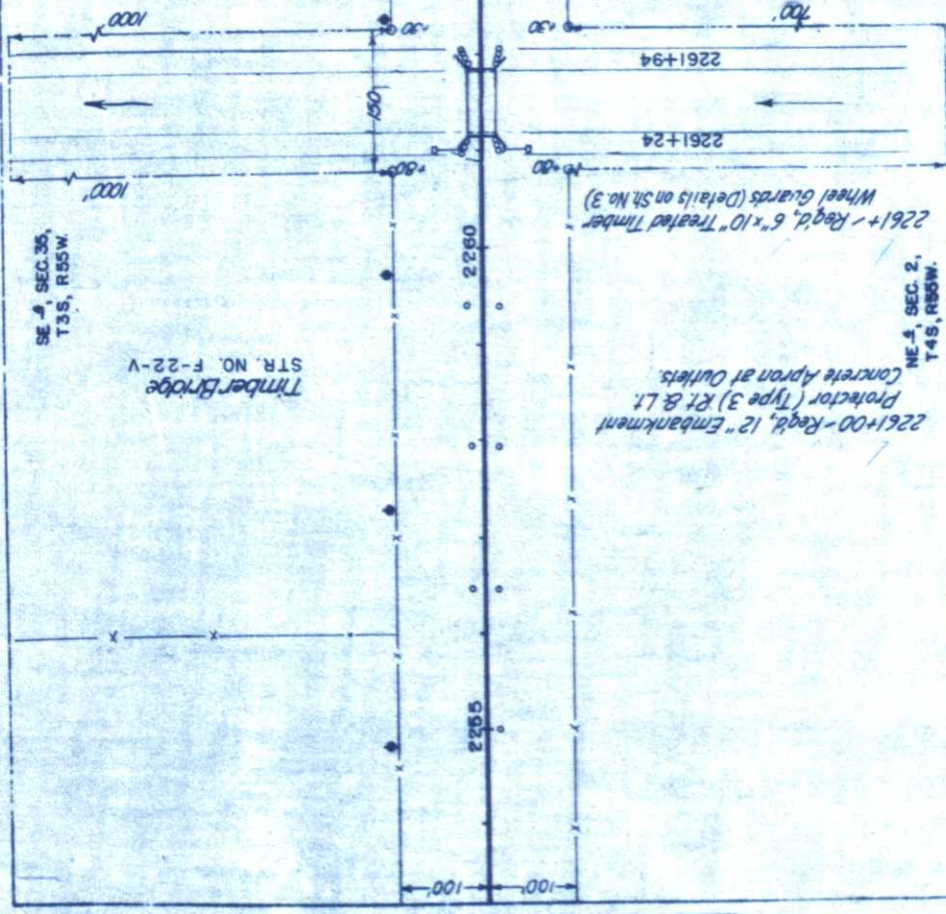
FED. ROAD REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-1(8)	32	



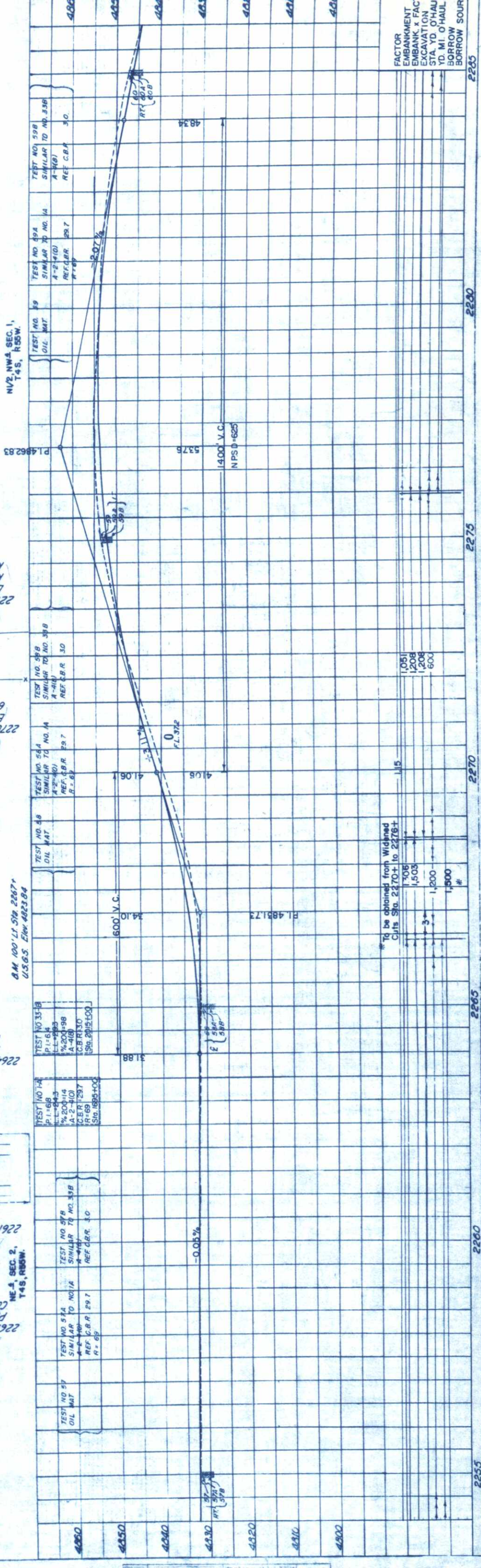
FACTOR	
EMBANKMENT	
EMBANK. x FACT	
EXCAVATION	
STA YD. O'HAUL	
YD. MI. O'HAUL	
BORROW	
BORR. SOURCE	
	255

SW 1/4 SEC. 36,
T3S, R55W.

SE 1/4 SEC. 35,
T3S, R55W.



PLAN	DATE	BY	CHKD
NOTED & CHECKED			
DATE			



PROFILE	DATE	BY	CHKD
NOTED & CHECKED			
DATE			

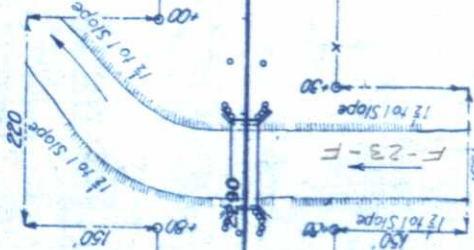
* To be obtained from Widened
Cuts Sta. 2270+ to 2276+
1,051
1,208
1,208
600

FACTOR
EMBANKMENT
EXCAVATION
STA. YD. O'HAUL
YD. MI. O'HAUL
BORROW
SOURCE

SW 1/4 SEC. 36,
T35S, R55W

SE 1/4 SEC. 36,
T35S, R55W

FED. ROAD REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F013-1(8)	34	



Timber Bridge
STR. NO. F-23-F
2289+ - Road, 6'x10' Treated
Timber Wheel Guards
(Details on Sh. No. 3)

PI 2295+00.0
A=0+35 Rt.

2300+00 - Extend 36"x60' C.M.P.
Cross Culvert 10' Lt. & 18' Rt.
Inlet Ditch

PI 2304+82.3 (Proj.)
A=0+35 Lt.

2310+00 - Extend 24"x50' C.M.P.
Cross Culvert 22' Rt. Inlet Ditch

Dike in place

N 1/2, NW 1/4 SEC. 1,
T4S, R55W

NE 1/4 SEC. 1,
T4S, R55W

BRIDGE STA 2289+97 - 2290+92

TEST NO. 1-A	TEST NO. 33-B
PI=64	PI=64
LL=24.3	LL=24.3
%200+98	%200+98
A-2-4(1)	A-4(8)
CBR=297	CBR=30
R=69	R=69
Sta. 2015+00	Sta. 1695+00

TEST NO. 80A	TEST NO. 80B
SIMILAR TO NO. 1A	SIMILAR TO NO. 33B
A-2-4(1)	A-4(8)
REF. C.B.R. 297	REF. C.B.R. 30
R=69	R=69

TEST NO. 61A	TEST NO. 61B
SIMILAR TO NO. 1A	SIMILAR TO NO. 33B
A-2-4(1)	A-4(8)
REF. C.B.R. 297	REF. C.B.R. 30
R=69	R=69

TEST NO. 62A	TEST NO. 62B
SIMILAR TO NO. 1A	SIMILAR TO NO. 33B
A-2-4(1)	A-4(8)
REF. C.B.R. 297	REF. C.B.R. 30
R=69	R=69

TEST NO. 63A	TEST NO. 63B
SIMILAR TO NO. 1A	SIMILAR TO NO. 33B
A-2-4(1)	A-4(8)
REF. C.B.R. 297	REF. C.B.R. 30
R=69	R=69

300' V.C.

600' V.C.

600' V.C.

500' V.C.

N.P.S.D. = 720'

43.17

38.35

40.50

48.07

73.80

407

39.78

4050

4807

81.39

4317

39.78

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4807

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407

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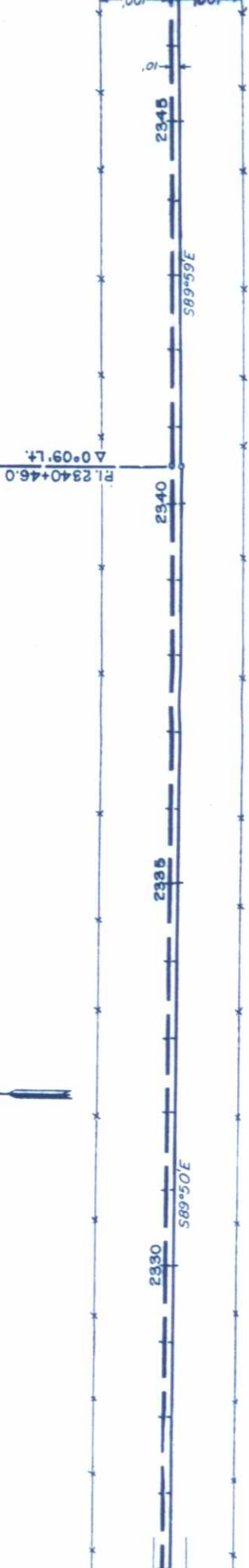
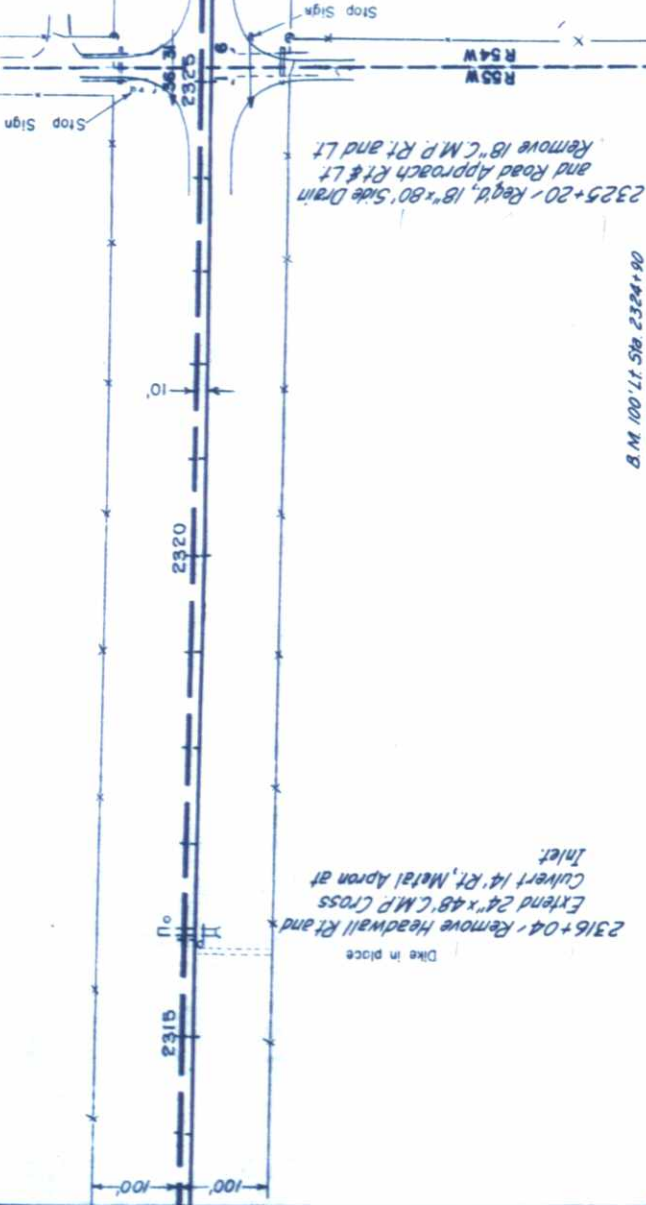
SEC 3, SEC 36,
T36, R55W

SW 1/4, SEC 31
T36, R54W

FED. ROAD REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-(18)	35	

PLAN	DATE
REVISIONS	
NOTED	
NOTE BOOK	
BY OR WAY CHECKED	
NO. 26/16	

PROFILE	DATE
REVISIONS	
NOTED	
NOTE BOOK	
BY OR WAY CHECKED	
NO. 26/17	

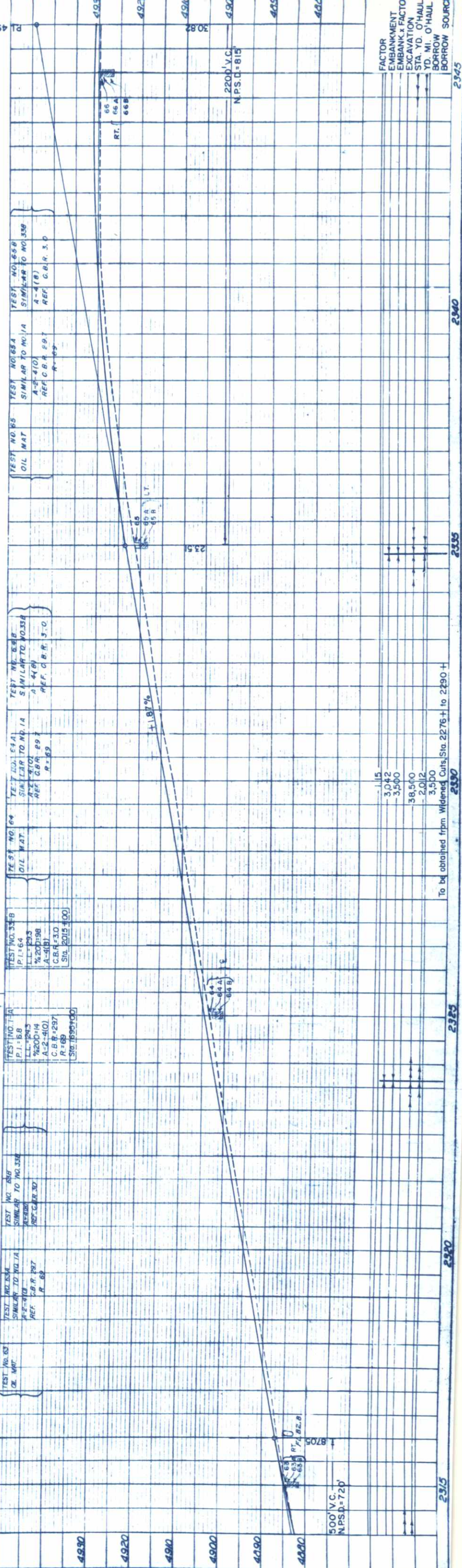


B.M. 100' Lt Sta 2324+90
U.S.B.M. Elev 4901.68

2316+04 - Remove Headwall Rt and
Extend 24' x 48' C.M.P. Cross
Culvert 14' x 48' C.M.P. Cross
Inlet

2325+20 - Reg'd, 18' x 80' Side Drain
and Road Approach Rt & Lt
Remove 18' C.M.P. Rt and Lt

SEC. 6, T4S, R54W.



Factor	Value
Embankment	1.15
Excavation	3.042
Borrow Source	3.500

To be obtained from Widened Cuts Sta. 2276+ to 2290+

2325

2330

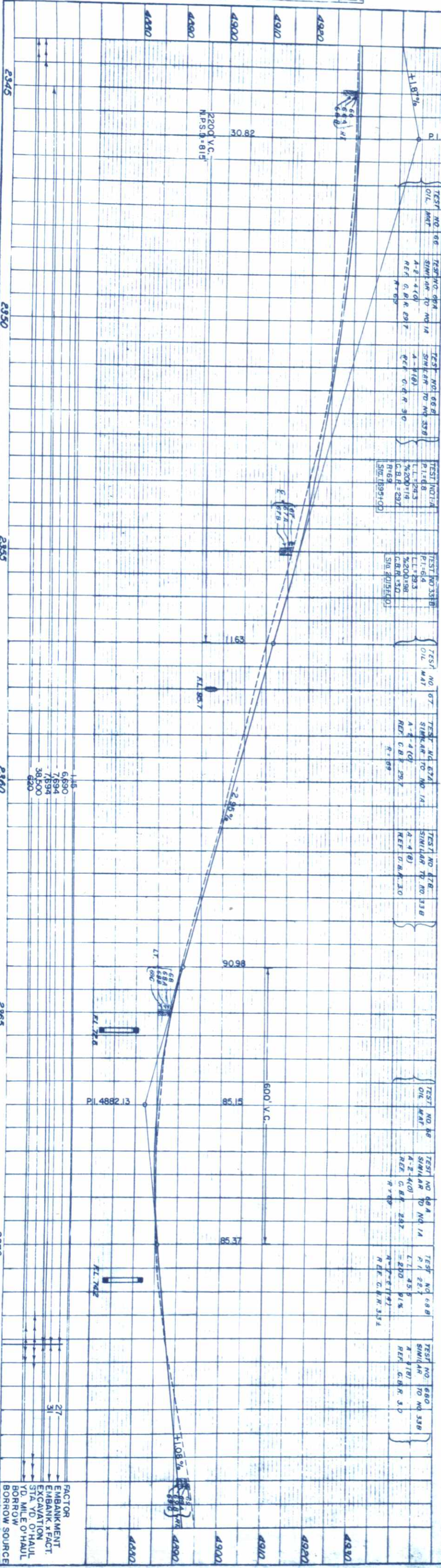
2335

2340

2345

PROFILE
NOTE BOOK GRADED CHECKED
NO. 18017
DATE

FL
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NOTE BOOK NO. 7616
DATE



2357+82 - Extend 36"x68" C.M.P. Cross Culvert 20' Rt.

2365+40 - Remove Headwall Rt. and Extend 6"x7"x59" C.B.C. 14' Rt. with Wingwalls (Type 6A) (Details on Sheet No. 4)

2368+40 - Req'd, 12" Embankment Protector (Type 3) Rt & Lt. Concrete Apron at Outlets.

2370+75 - Remove Headwall Rt. and Extend 6"x7"x44" C.B.C. 17' Rt. with Wingwalls (Type 6A) (Details on Sheet No. 4)



SW 1/4, SEC. 3, T3S, R54W.

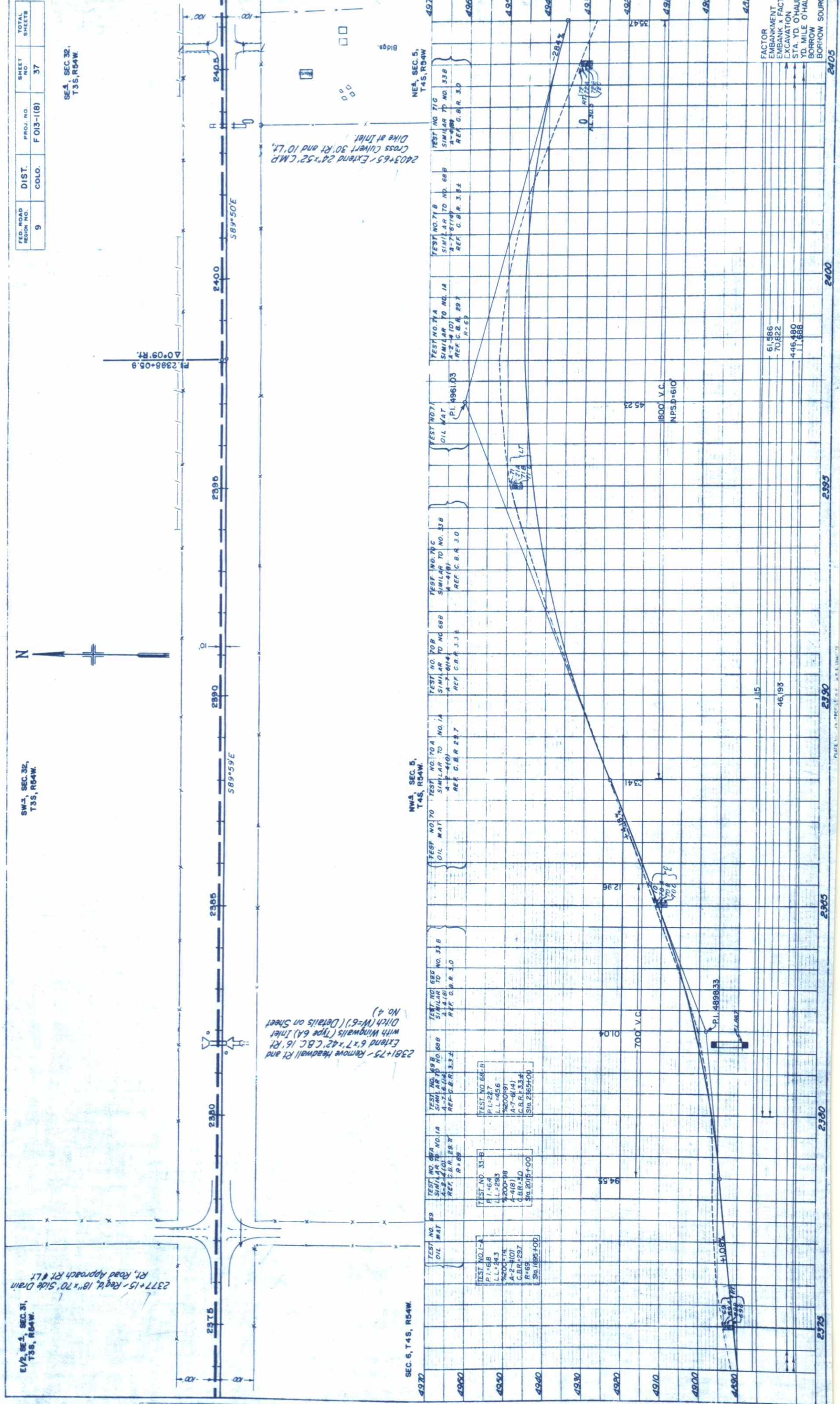
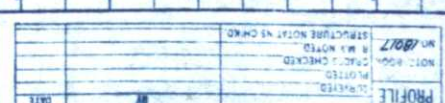
W 1/2, SEC. 3, T3S, R54W.

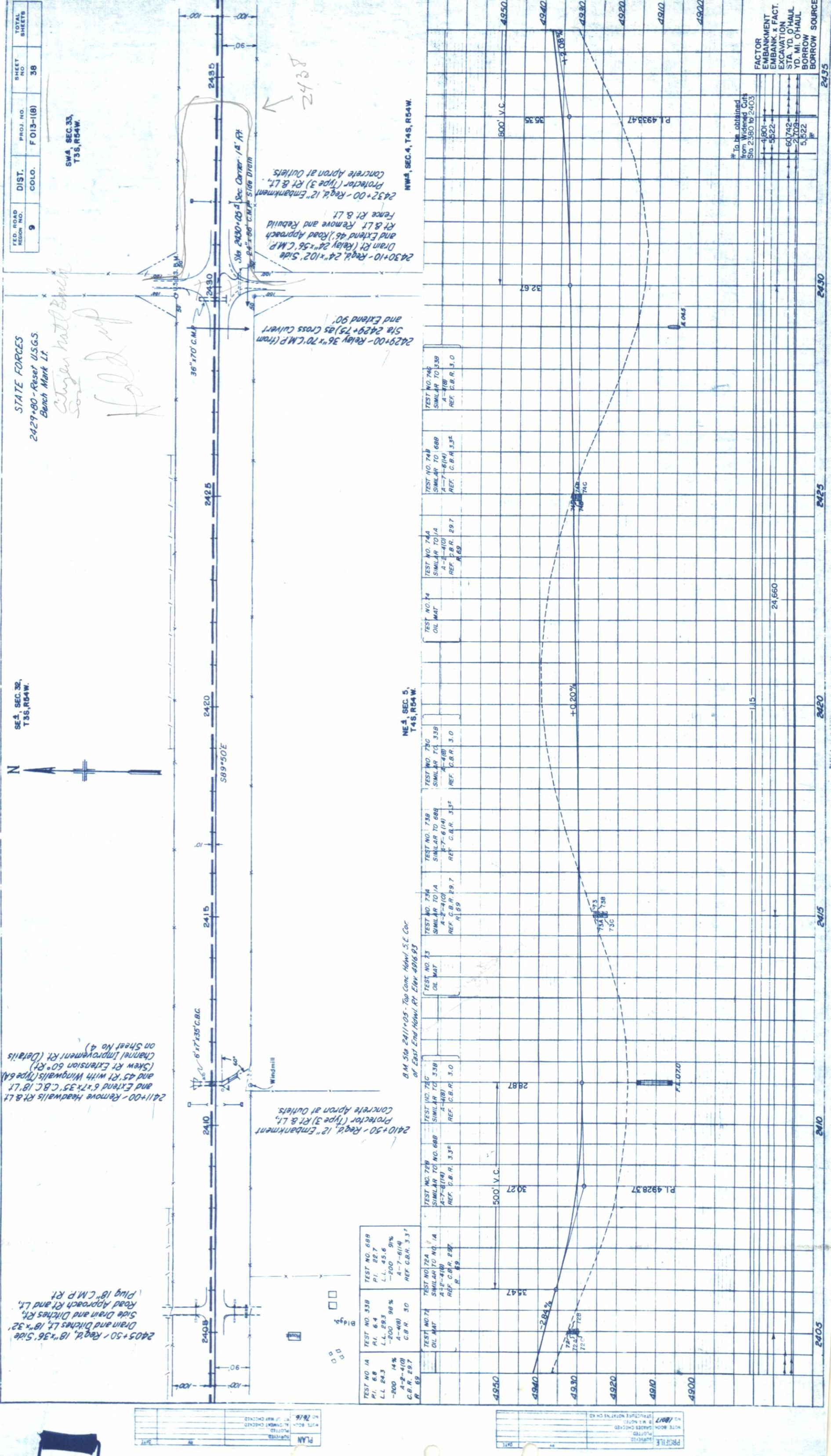
E 1/2, SEC. 3, T3S, R54W.

FED. ROAD DIST. PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	36	

2374+00 - Req'd, 18"x26" Side Drain and Road Approach Lt.

FED. ROAD REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F013-1(8)	37	





STATE FORCES
2429+80 - Reset USGS
Bench Mark Lt.

SE 1, SEC. 32,
T36, R54W.

SW 1/4, SEC. 33,
T36, R54W.

FED. ROAD
REGION NO. 9

DIST. COLO.
F013-1(8)

SHEET NO. 38

TOTAL
SHEETS

2405

2410

2415

2420

2425

2430

2435

2440

2445

2450

2455

2460

2465

2470

2475

2480

2485

2490

2495

2500

2505

2510

2515

2520

2525

2530

2535

2540

2545

2550

2555

2560

2565

2570

2575

2580

2585

2590

2595

2600

2605

2610

2615

2620

2625

2630

2635

2640

2645

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2655

2660

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2670

2675

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2685

2690

2695

2700

2705

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3975

3980

3985

3990

3995

4000

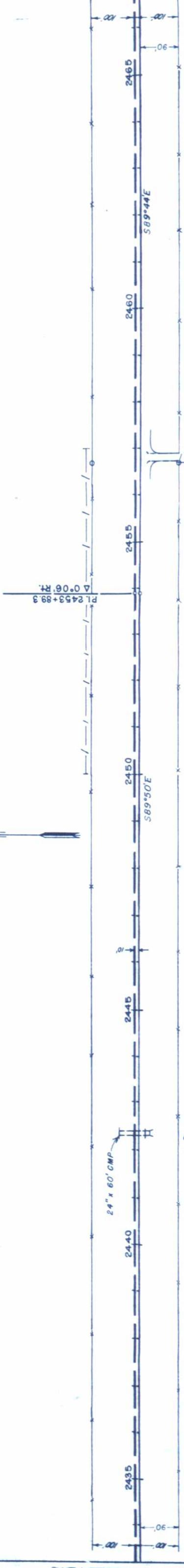
4005

4010

SW 1/2, SEC. 33, T3S, R64W.

SE 1/2, SEC. 33, T3S, R64W.

FED. ROAD REGION NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-1(B)	39	



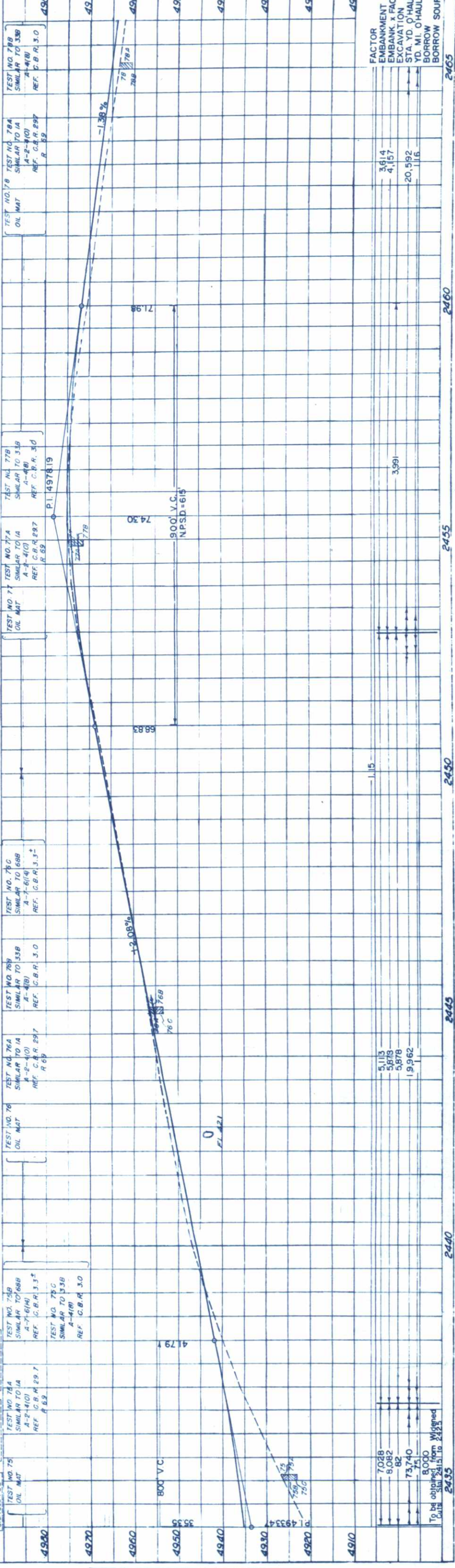
2442+35 - Extend 24" x 60' C.M.P. at Inlet

2456+80 - Reg'd. Road Approach Rt.

TEST NO. 1-A PI. 68 LL. 243 %200-91 A-2-4(10) CBR-297 R-69	TEST NO. 33-B PI. 64 LL. 293 %200-98 A-4(8) CBR-30 Sta. 2015+00	TEST NO. 68-B PI. 227 LL. 456 %200-91 A-7-6(14) CBR-332 Sta. 2365+00
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NW 1/2, SEC. 4,
T4S, R64W.

NE 1/2, SEC. 4,
T4S, R64W.



TEST NO. 71 OIL MAT	TEST NO. 71A SIMILAR TO 1A A-2-4(10) REF. C.B.R. 297 R 69	TEST NO. 77B SIMILAR TO 33B A-4(8) REF. C.B.R. 30	TEST NO. 78A SIMILAR TO 1A A-2-4(10) REF. C.B.R. 297 R 69	TEST NO. 78B SIMILAR TO 33B A-4(8) REF. C.B.R. 30
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TEST NO. 76 OIL MAT	TEST NO. 76A SIMILAR TO 1A A-2-4(10) REF. C.B.R. 297 R 69	TEST NO. 76B SIMILAR TO 33B A-4(8) REF. C.B.R. 30	TEST NO. 76C SIMILAR TO 68B A-7-6(14) REF. C.B.R. 332
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TEST NO. 75 OIL MAT	TEST NO. 75A SIMILAR TO 1A A-2-4(10) REF. C.B.R. 297 R 69	TEST NO. 75B SIMILAR TO 68B A-7-6(14) REF. C.B.R. 332	TEST NO. 75C SIMILAR TO 33B A-4(8) REF. C.B.R. 30
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TEST NO. 78 OIL MAT	TEST NO. 78A SIMILAR TO 1A A-2-4(10) REF. C.B.R. 297 R 69	TEST NO. 78B SIMILAR TO 33B A-4(8) REF. C.B.R. 30
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7028	5113	3991	3614	4910
8082	5818		4157	4920
82	5878			4930
73,740	19,962		20,592	4940
8,000			116	4950
To be obtained from Wiggins Cul. Sta. 2415 to 2425				4960
				4970
				4980

FACTOR EMBANKMENT
EMBANK x FACT.
EXCAVATION
STA. YD. O'HAUL
YD. MI. O'HAUL
BORROW SOURCE

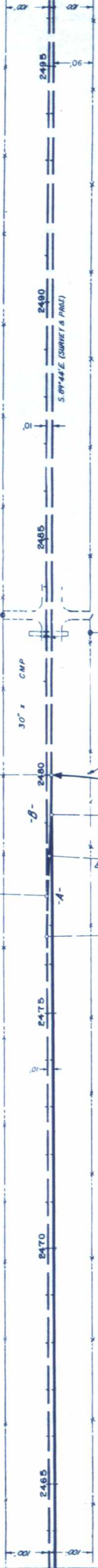
SE 1/2, SEC. 33, T3S, R54W.

S 1/2, SEC. 34, T3S, R54W.

FED. ROAD RES. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 013-1(8)	40	



PI 2477+46.4
PT 2480+00.0



PC 2476+61.6
PT 2479+15.6
PVC 2478+30.8

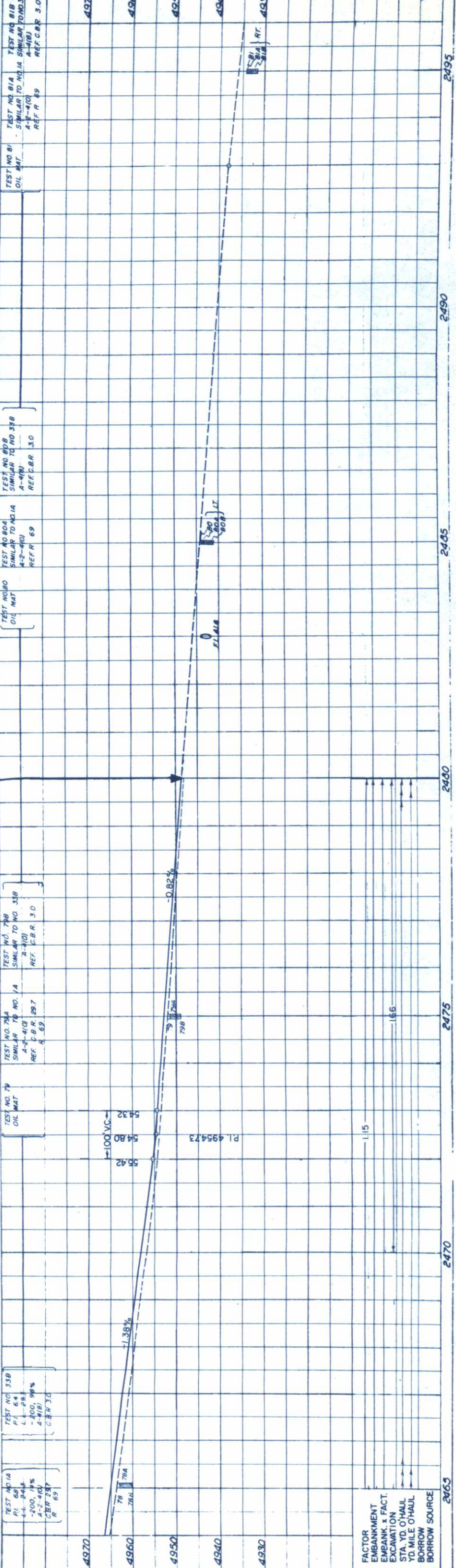
STA. 2480+00 END F 013-1(8) =
BEGIN F 013-1(7)

-A#8-
 $\Delta = 3^{\circ}23'30''$
 $D = 2^{\circ}00'$
 $T = 84.8'$
 $L = 169.2'$
 $R = 2865.0'$

B.M. 100' R.I. Sta. 2476+
Hub & Guard (In fence line)
Elev. 4947.70

NE 1/4, SEC. 4,
T4S, R54W.

N 1/2, N 1/2, SEC. 3,
T4S, R54W.



TEST NO. 338
PI 6.4
L 2.28
-200, 98%
A-1(8)
C.B.R. 3.0

TEST NO. 1A
PI 6.8
L 2.41
-200, 14%
A-2-4(10)
C.B.R. 2.7
R 6.9

TEST NO. 78A
SIMILAR TO NO. 1A
A-2-4(10)
REF. C.B.R. 29.7
R 6.9

TEST NO. 78B
SIMILAR TO NO. 338
A-2-4(10)
REF. C.B.R. 3.0

TEST NO. 80A
SIMILAR TO NO. 1A
A-2-4(10)
REF. R 6.9

TEST NO. 80B
SIMILAR TO NO. 338
A-2-4(10)
REF. C.B.R. 3.0

TEST NO. 81
OIL MAT

TEST NO. 81A
SIMILAR TO NO. 1A
A-2-4(10)
REF. R 6.9

TEST NO. 81B
SIMILAR TO NO. 338
A-2-4(10)
REF. C.B.R. 3.0

FACTOR
EMBANKMENT
EMBAK. x FACT.
EXCAVATION
STA. YD. O'HAUL
YD. MILE O'HAUL
BORROW SOURCE