

COLORADO DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. S 0105(2) STATE HIGHWAY NO. 127 JACKSON COUNTY

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S0105(2)	1	

State Line - South

INDEX OF SHEETS	
SHEET NO.	
1.	Sketch Map, Title Page, and Tabulation of Length & Design Data.
2.	Typical Sections
3.	Summary of Approximate Quantities.
4.	Surfacing Plan & Borrow Material Plan.
5.	Pit Locations
6 & 7.	List of Structures.
8.	Standard Methods for Superelevation & Widening of Curves (Crowned Highways) M-1-D
9.	Standard Side Approach Roads, Flaring, Gut Slope Treatment & Widening at Bridges and at Crest of Grades M-2-EN
10.	Standard Marker Posts & Bench Marks M-7-D
11.	Standard Types of Railroad Warning Signs M-18-C
12.	Standard Timber Guard Posts M-19-E
13 & 14.	Standard Roadway Construction Traffic Signs M-29-C
15.	Standard Methods of Backfill Around Structures M-60-B
15A.	Standard Headwalls and Aprons for CMP Culverts M-102-J
16.	Standard Types of Ditches & Construction Methods M-107-D
17-27.	Alignment Plan & Profile
28.	Summary of Earthwork Quantities
29-52.	Cross Sections

SEE SPECIAL PROVISIONS FOR NOTICE TO BIDDERS

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED
Moore T. Williams 5-24-60
CHIEF ENGINEER DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

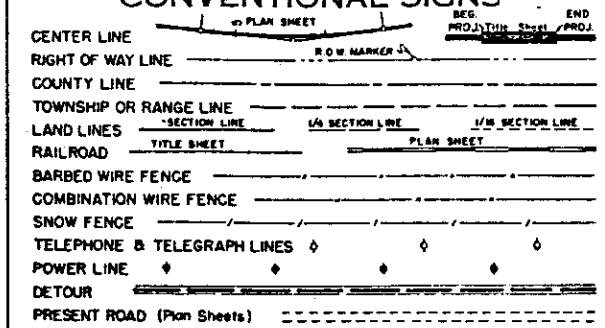
APPROVED

DIVISION ENGINEER

DATE

D.L.V.

CONVENTIONAL SIGNS



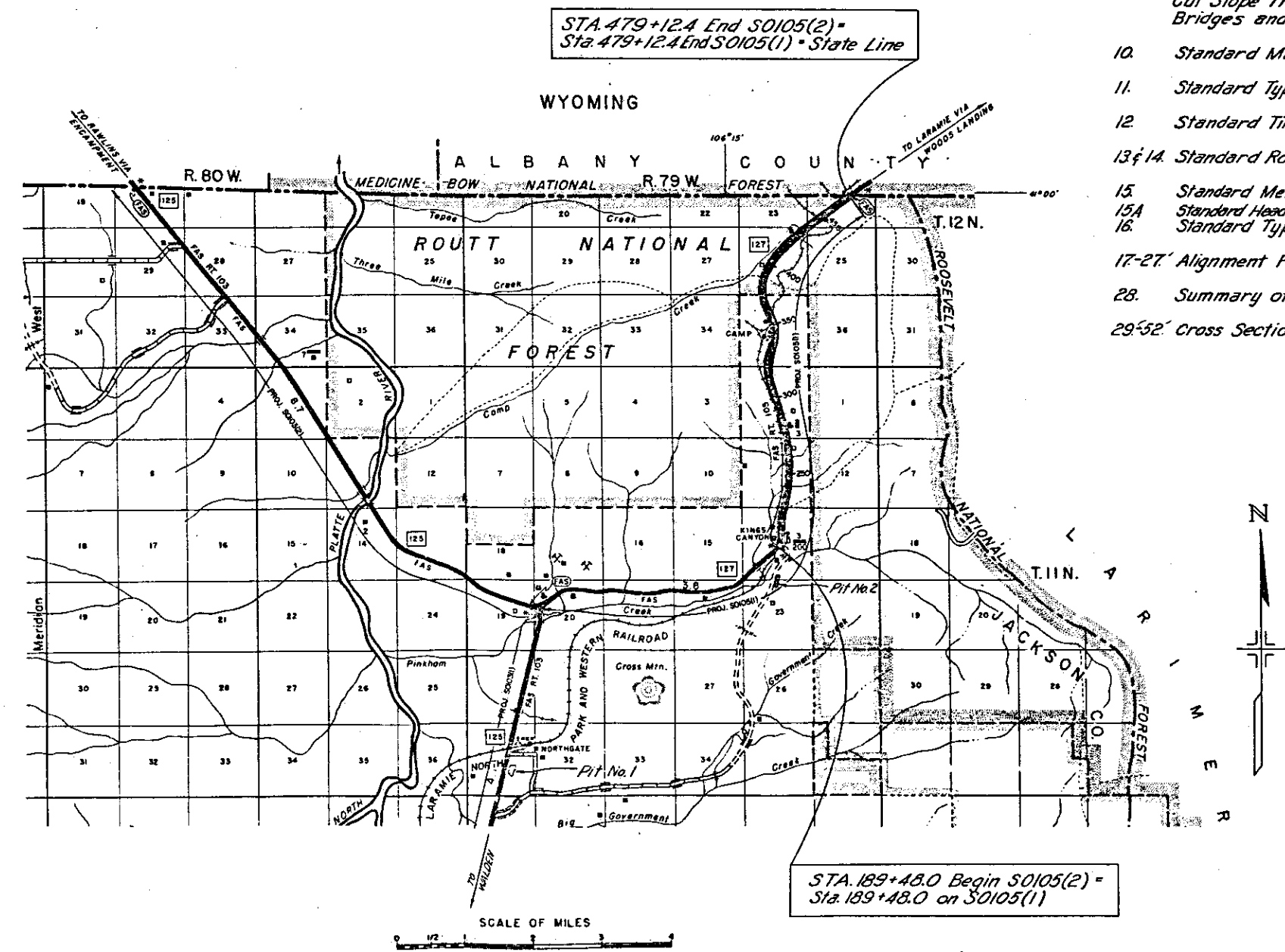
TABULATION OF LENGTH & DESIGN

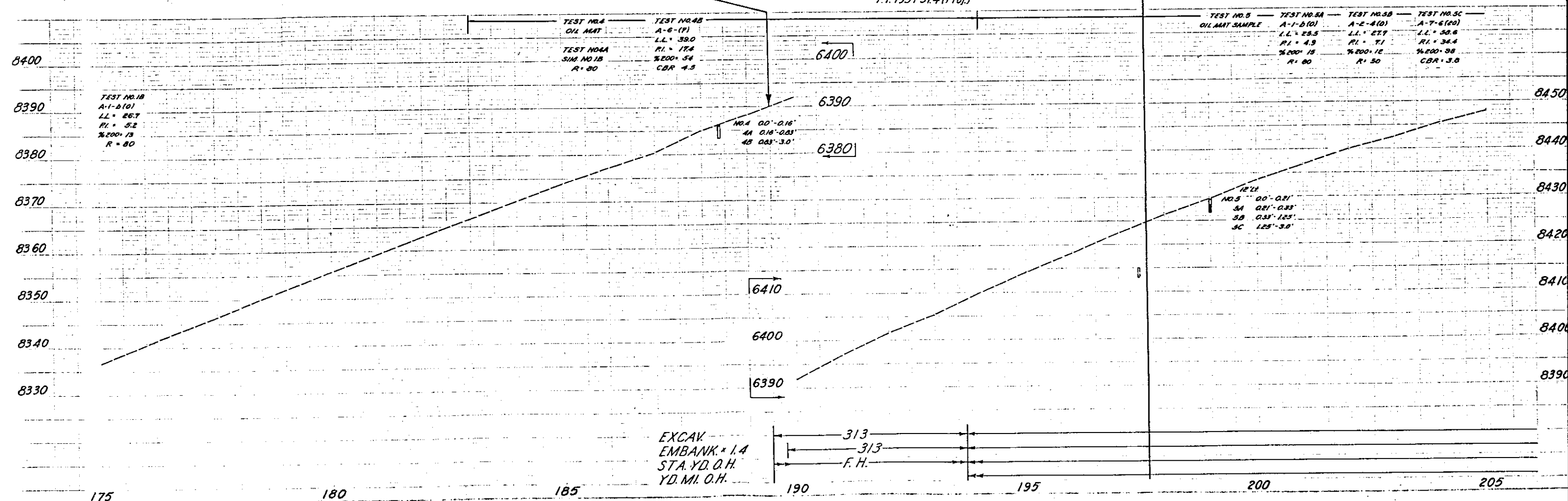
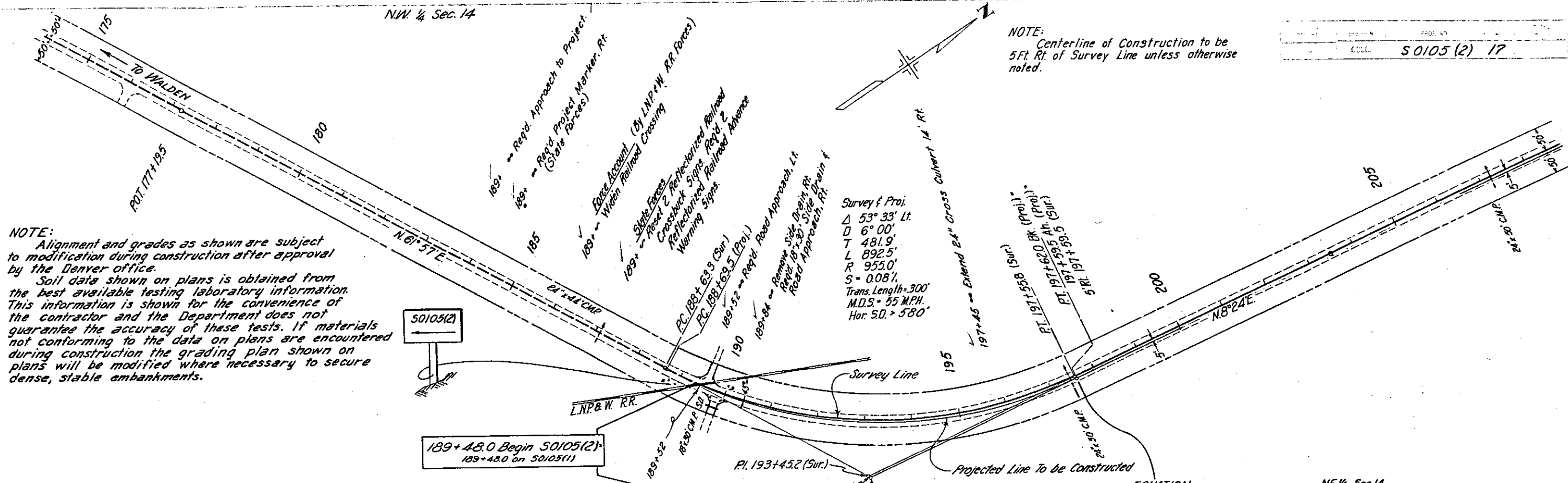
STATION	22' ROADWAY Lin. Ft.	33' ROADWAY Lin. Ft.
189+48.0 Begin S0105(2) = 189+48.0 on S0105(1)	814.0'	
197+62.0 Bk. = Equation 197+69.5 Ah.	7,047.5'	
268+07.0 Bk. = Equation 268+10.0 Ah.	9,592.7'	
364+02.7 Boundary of Routt National Forest	249.6'	
366+52.3 Bk. = Equation 366+39.6 Ah.	8,457.4'	
450+97.0 End 22' Roadway = 450+97.0 Begin 33' Roadway		409.5'
455+06.5 Bk. = Equation 455+07.8 Ah.		978.8'
464+86.6 Bk. = Equation 464+38.4 Ah.		61.6'
465+00 End 33' Roadway = 465+00 Begin 22' Roadway	1,412.4'	
479+12.4 End S0105(2) = 479+12.4 End S0105(1) = Colorado-Wyoming State Line.		
TOTALS	27,573.6'	1,449.9'
SUMMARY		
22' Roadway	27,573.6'	5.222 Miles
33' Roadway	1,449.9'	0.275
Project Totals	29,023.5'	5.497
DESIGN DATA		
Maximum Grade	7.00 %	
Maximum Degree of Curve	10°00'	
Minimum N.P.S.D. Horizontal	290'	
Minimum N.P.S.D. Vertical	285'	
Maximum Design Speed	40 M.P.H.	

SCALES OF ORIGINAL DRAWINGS

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

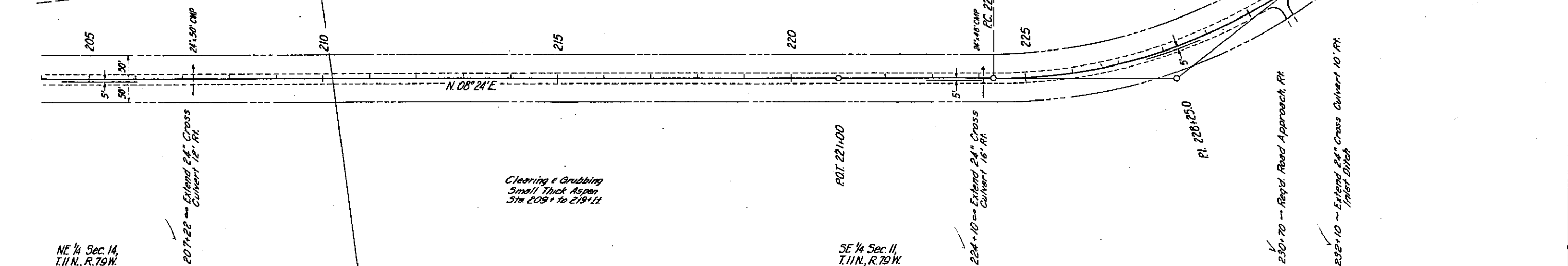
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT } 29,023.5 Ft. = 5.497 Mi.
NET LENGTH OF PROJECT }





SW 1/4 Sec. 11,
T. 11 N., R. 79 W.

5 0105(2) 18



Clearing & Grubbing
Small Thick Aspen
Sta. 209+ to 219+ ft.

SE 1/4 Sec. 11,
T. 11 N., R. 79 W.

✓
230.70 → Req'd. Road Approach, Rt.

✓ 232+10 ~ Extend 24" Cross Culvert 10' Rt.
Inlet Ditch

[illegible]

EXCAV.	3177
EMBANK * 1.4	3177
STA. YD. O. H.	16,957
YD. MI. O. H.	72

1866 1131
1866 1131
5030 F.H.

225 230 235

NOTE:
Centerline of Construction to be
5 Ft. Rt. of Survey Line unless otherwise
noted.

N.W. 1/4 Sec. 11
T. 11 N., R. 79 W.



Survey & Proj.
Δ 35° 05' Lt.
D 6° 00'
T 301.9'
L 584.7'
R 955.0'
S = 0.08%
Trans Length = 300'
M.D.S. = 55 M.P.H.
Hor. S.D. = 580'

S 0105 (2) 19

S.W. 1/4 Sec. 2

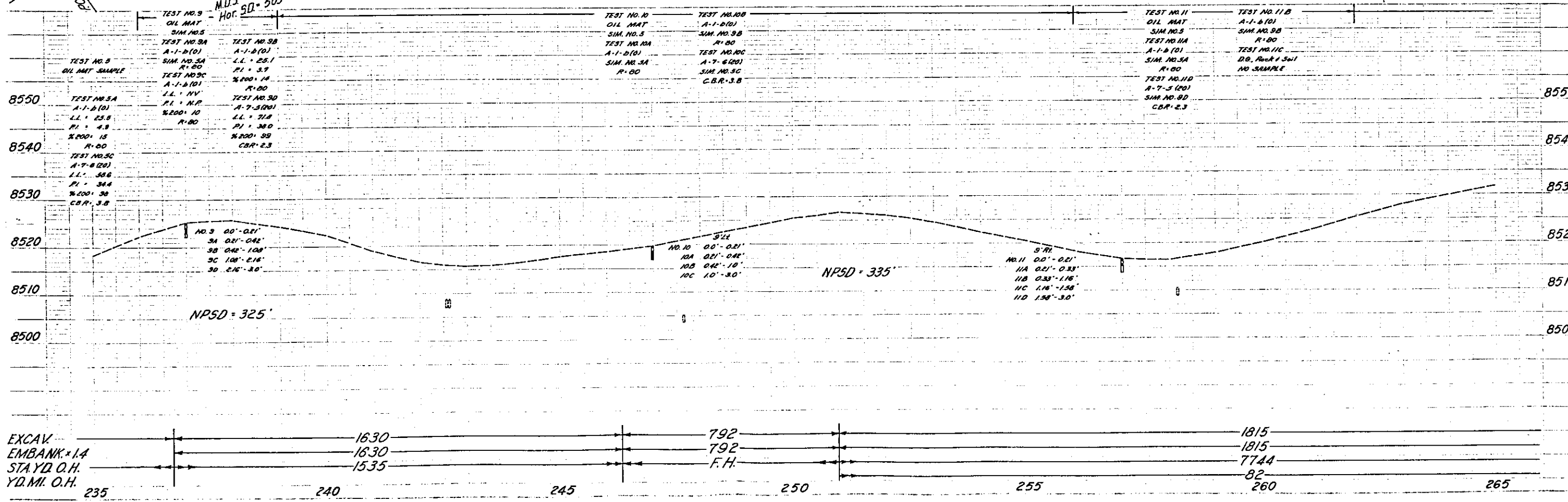
PI. 265 + 30.0 (Proj.)

PI. 265 + 35.7 (Sur.)

Survey & Proj.
Δ 61° 32' Rt.
D 10° 00'
T 341.1'
L 615.4'
R 573.0'
S = 0.08%
Trans Length = 250'
M.D.S. = 44 M.P.H.
Hor. S.D. = 290'

S.E. 1/4 Sec. 2

N.E. 1/4 Sec. 11



8550
8540
8530
8520
8510
8500

TEST NO. 9
OIL MAT
SIM. NO. 5
TEST NO. 9A
A-1-B (0)
SIM. NO. 5A
R-80
TEST NO. 9C
A-1-B (0)
I.L. - NV
P.L. - NP
%200 - 10
R-80
TEST NO. 9D
A-1-B (0)
I.L. - 23.5
P.L. - 4.8
%200 - 15
R-80
TEST NO. 9E
A-1-B (0)
I.L. - 58.6
P.L. - 34.4
%200 - 38
CBR - 3.8

TEST NO. 10
OIL MAT
SIM. NO. 5
TEST NO. 10A
A-1-B (0)
SIM. NO. 3A
R-80
TEST NO. 10B
A-1-B (0)
SIM. NO. 9B
R-80
TEST NO. 10C
A-7-G (00)
SIM. NO. 5C
CBR - 3.8

TEST NO. 11
OIL MAT
SIM. NO. 5
TEST NO. 11A
A-1-B (0)
SIM. NO. 5A
R-80
TEST NO. 11D
A-7-S (20)
SIM. NO. 9D
CBR - 2.3

TEST NO. 11B
A-1-B (0)
SIM. NO. 9B
R-80
TEST NO. 11C
D.G. Rock & Soil
NO SAMPLE

NO. 9 00' - 0.21'
9A 0.21' - 0.42'
9B 0.42' - 1.08'
9C 1.08' - 2.16'
9D 2.16' - 3.0'

NO. 10 00' - 0.21'
10A 0.21' - 0.42'
10B 0.42' - 1.0'
10C 1.0' - 3.0'

NO. 11 00' - 0.21'
11A 0.21' - 0.33'
11B 0.33' - 1.16'
11C 1.16' - 1.58'
11D 1.58' - 3.0'

NP5D = 325'

NP5D = 335'

SW 1/4 Sec. 2

NOTE: Centerline of Construction to be
5' R.I. of Survey Line unless otherwise
noted.



S 0105(2)

20

NW 1/4 Sec. 2

$\Delta = 14^\circ 28'$
 $D = 3^\circ 00'$
 $T = 242.5'$
 $L = 482.2'$
 $R = 1910.0'$

$S = 0.077\%$
Trans. Length = 300'
M.D.S. = 70 mph
Hor. S.D. = 820'

$\Delta = 23^\circ 21'$
 $D = 5^\circ 00'$
 $T = 236.8'$
 $L = 467.0'$
 $R = 1146.0'$

$S = 0.08\%$
Trans. Length = 300'
M.D.S. = 60 mph
Hor. S.D. = 640'

PC 292+12.7

24+64' CMP

295

N 07° 06' W

N 07° 22' E

285

290

PT 278+60.7

30+84' CMP

280

PC 273+93.7

24+66' CMP

275

270

To Pine Springs
Service Cabins

24+50' CMP

PT 268+04.3 (Proj.)
268+07.0 BK (Proj.)
268+10.0 A.R. (Proj.)
5' R.I. PT 268+10.0 (Sur.)

Survey & Proj.

$\Delta = 61^\circ 32'$
 $D = 10^\circ 00'$
 $T = 341.1'$
 $L = 615.4'$
 $R = 573.0'$

$S = 0.08\%$
Trans. Length = 250'
M.D.S. = 44 mph
Hor. S.D. = 290'

EQUATION

268+34 ~ Extend 24" Cross Culvert 8' Rt.
270+00 ~ Rep'd. Road Approach Rt.

273+77 ~ Extend 24" Cross Culvert 8' Rt. Inlet Ditch, Rt.

278+00 ~ Extend 30" Cross
Culvert 12' Rt. Inlet
Ditch, Rt.

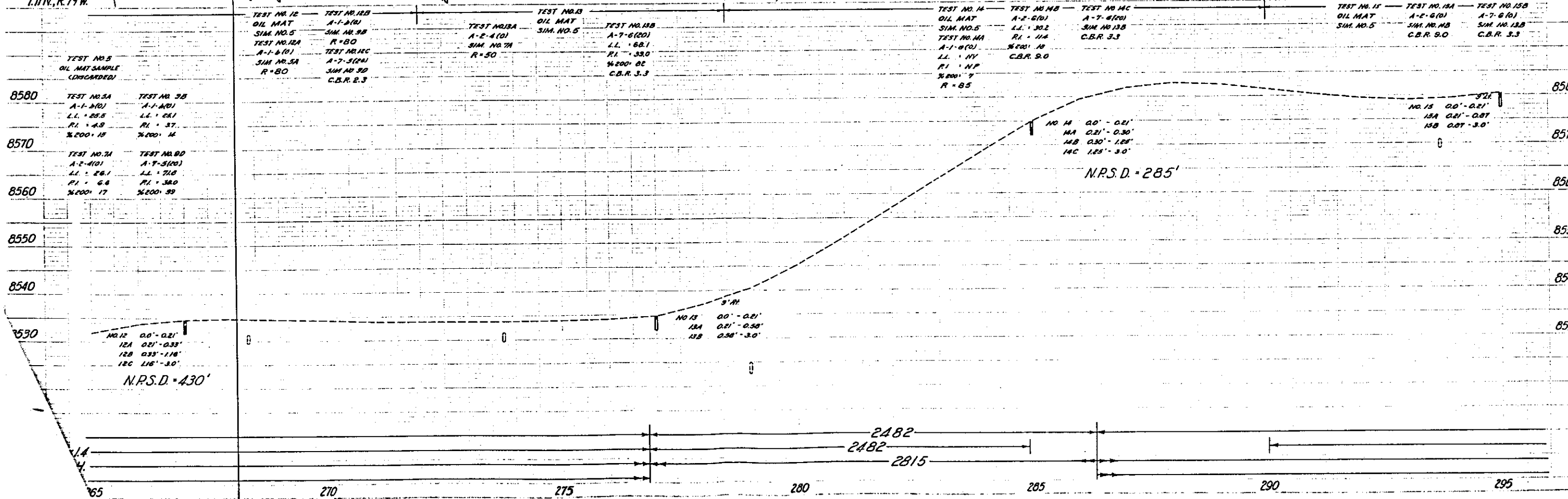
284+30 ~ Remove Side Drain, Rt.
Repl. w/ 24" Side
Drain & Road Approach, Rt.

293+70 ~ Remove 2' x 12" 24" Cross Culvert
Rt. Extend 14' Rt. Inlet Ditch, Rt.

NE 1/4 Sec. 11,
T.11N., R.79W.

SE 1/4 Sec. 2,
T.11N., R.79W.

NE 1/4 Sec. 2



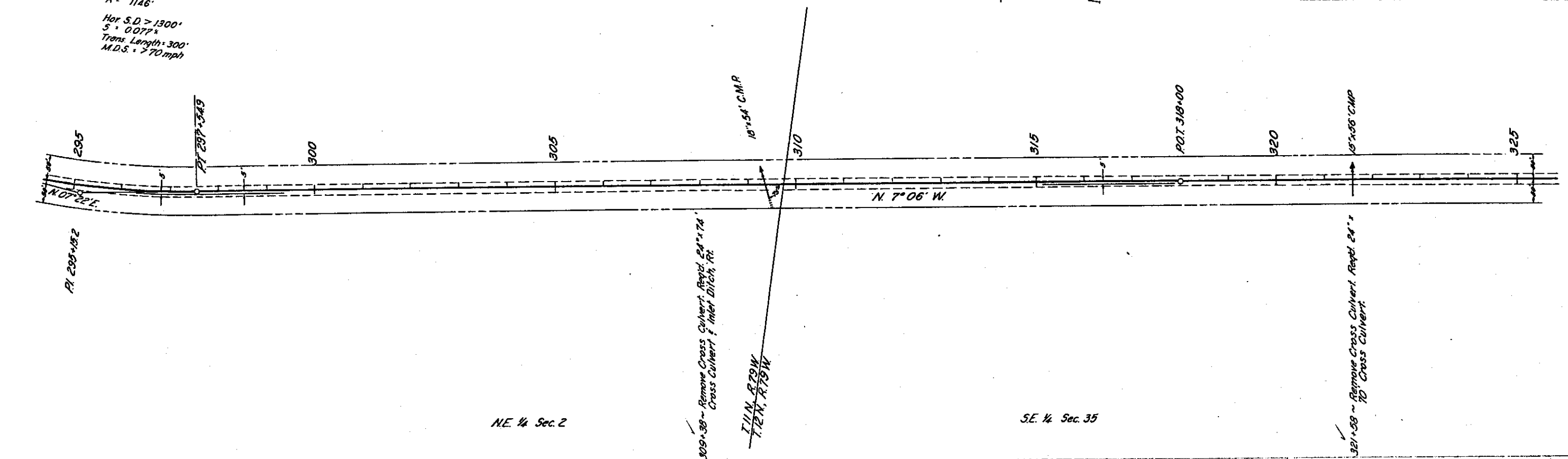
$\Delta = 14^{\circ}28'11''$
 $D = 3^{\circ}00'$
 $T = 242.5'$
 $L = 482.2'$
 $R = 1146'$
 Hor. S.D. > 1300'
 $S = 0.077\%$
 Trans. Length = 300'
 M.D.S. = 70 mph

NOTE: Centerline of Construction to be 5' Rt. of Survey Line.

NW 1/4 Sec. 2

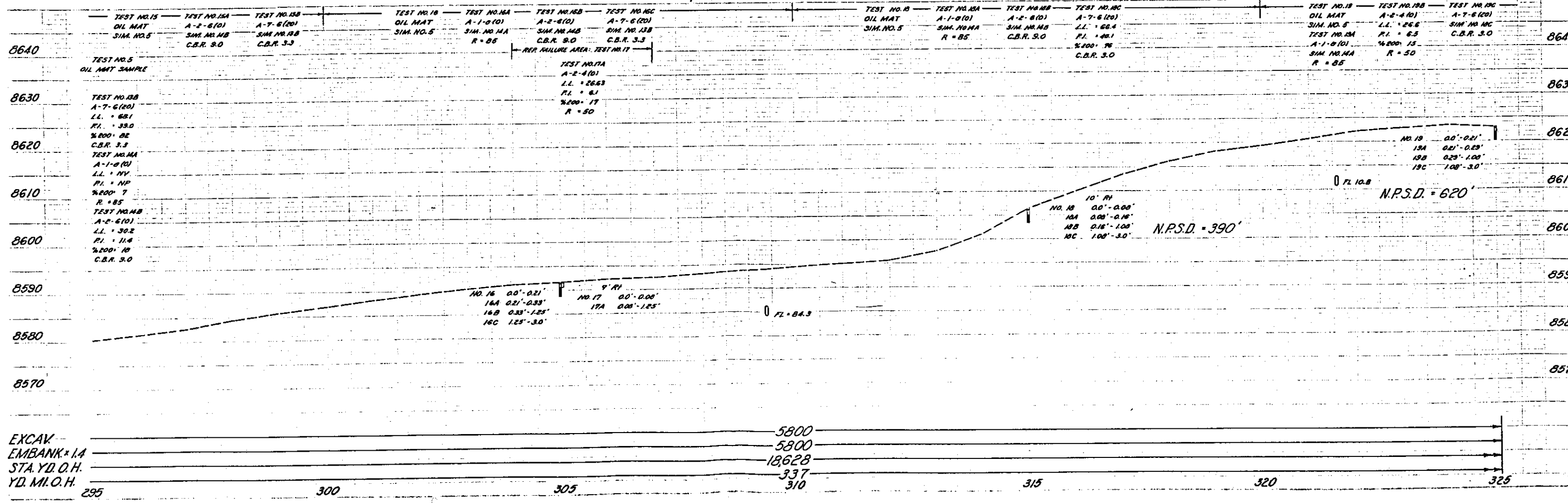
SW 1/4 Sec. 35

SD 105 (2) 21



NE 1/4 Sec. 2

SE 1/4 Sec. 35



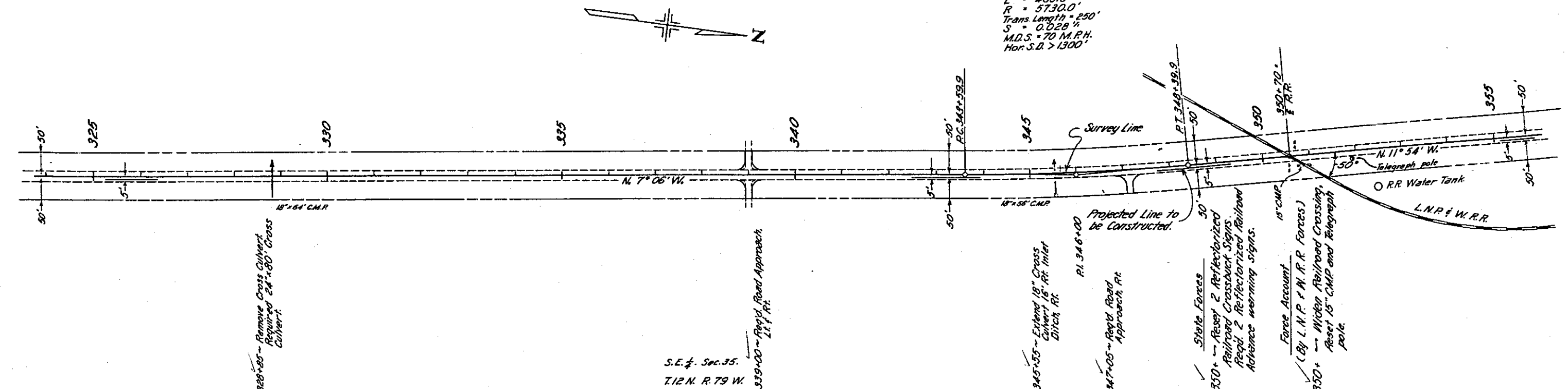
EXCAV
 EMBANK x 1.4
 STA. YD. O.H.
 YD. M.I. O.H.

S. W. 1/4, Sec. 35

NOTE: Centerline of Construction
to be 5 ft. Rt. of Survey Line.

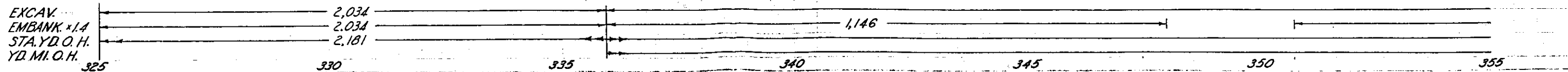
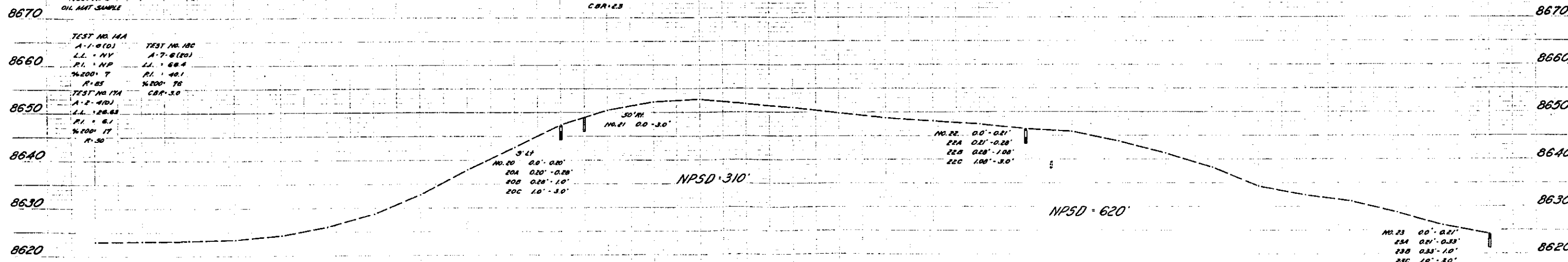
S 0105 (2) 22

$\Delta = 4^{\circ}48'$
 $D = 1^{\circ}00'$
 $T = 240.11'$
 $L = 480.0'$
 $R = 5730.0'$
Trans Length = 250'
 $S = 0.028\%$
M.D.S. = 70 M.P.H.
Hor. S.D. > 1300'



S.E. 1/4, Sec. 35.
T. 12 N. R. 79 W.

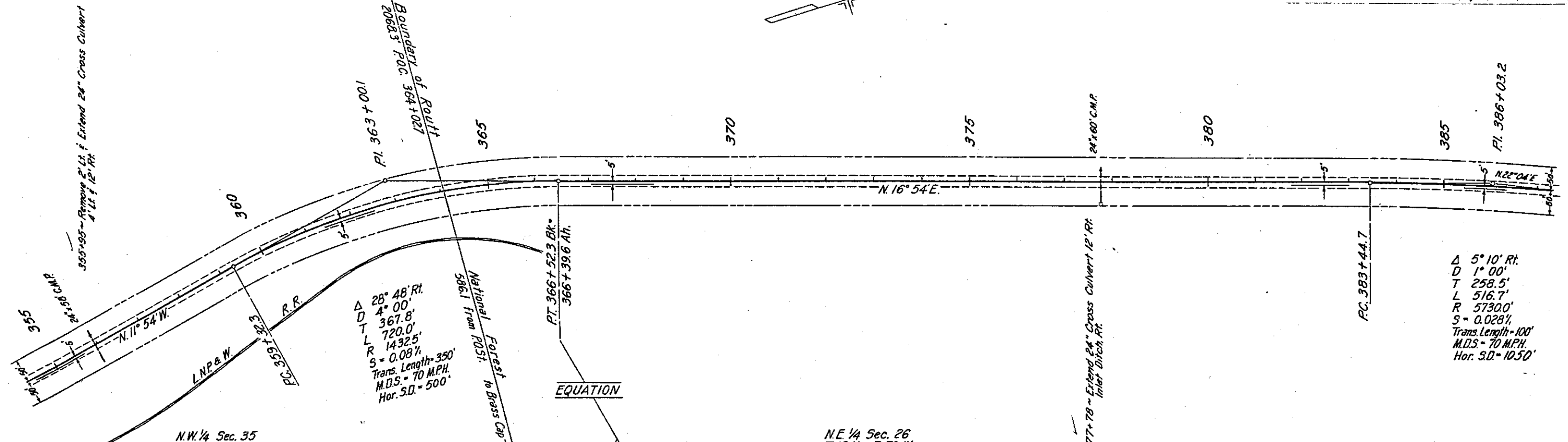
TEST NO. 19 OIL MAT SIM. NO. 5 TEST NO. 19A A-1-6(0) SIM. NO. 19A R. 85	TEST NO. 19B A-2-4(0) SIM. NO. 5 TEST NO. 19B A-1-6(0) SIM. NO. 19B R. 85	TEST NO. 20 OIL MAT SIM. NO. 5 TEST NO. 20A A-1-6(0) SIM. NO. 20A R. 85	TEST NO. 20B A-2-4(0) SIM. NO. 19B TEST NO. 20C A-7-6(20) SIM. NO. 20C C.B.R. 3.0	TEST NO. 21 (CUT BANK MAT.) A-7-5(10) SIM. NO. 21 C.B.R. 2.3	TEST NO. 22 OIL MAT SIM. NO. 5 TEST NO. 22A A-1-6(0) SIM. NO. 22A R. 85	TEST NO. 22B A-2-4(0) SIM. NO. 22B TEST NO. 22C A-7-6(20) SIM. NO. 22C C.B.R. 2.3	TEST NO. 23 OIL MAT SIM. NO. 5 TEST NO. 23A A-1-6(0) SIM. NO. 23A R. 85	TEST NO. 23B A-2-4(0) SIM. NO. 23B TEST NO. 23C A-7-6(20) SIM. NO. 23C C.B.R. 2.3
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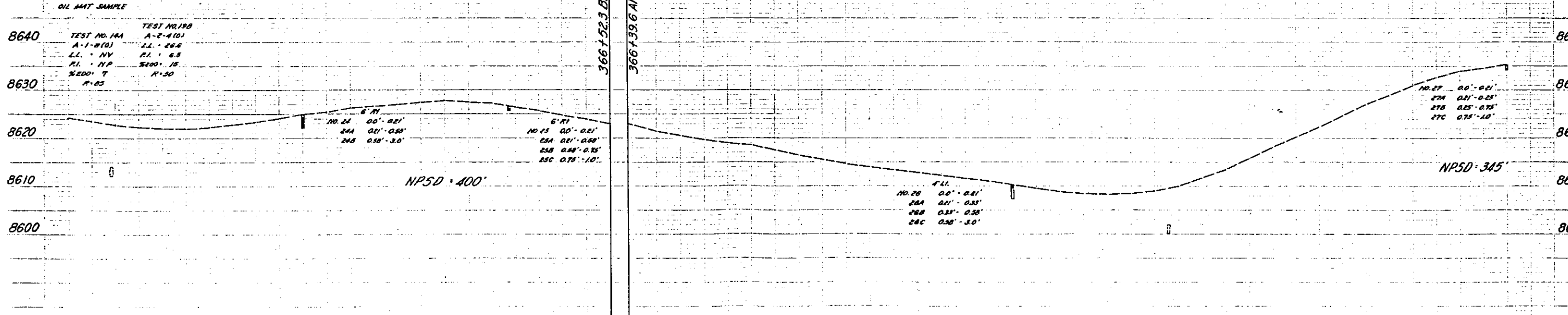
NOTE: Centerline of Construction to be 5 Ft. Rt. of Survey Line.

S.W. 1/4 Sec. 26

50 105 (2) 23

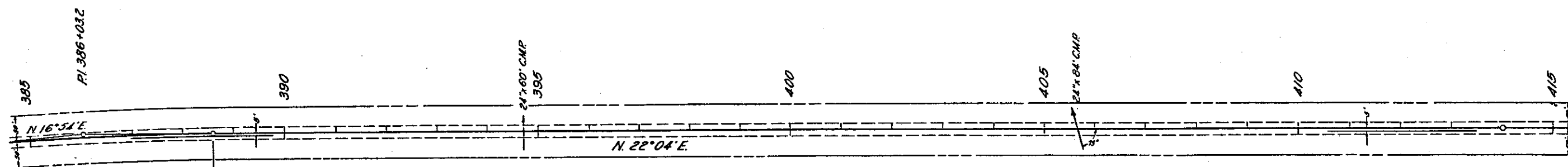
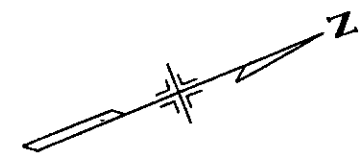


TEST NO. 23 OIL MAT SIM. NO. 5 TEST NO. 23A A-1-B(10) SIM. NO. 1A R = 85	TEST NO. 23B A-2-4(10) SIM. NO. 1B R = 50 TEST NO. 23C A-7-6(12) SIM. NO. 1A R = 85 P.I. = 30.2 %200 = 52 CBR = 5.2	TEST NO. 24 OIL MAT SIM. NO. 5 TEST NO. 24A A-2-4(10) L.L. = 25.6 P.I. = 62 %200 = 18 R = 50	TEST NO. 24B A-7-6(11) L.L. = 52.3 P.I. = 85.1 %200 = 69 CBR = 4.9	TEST NO. 25 OIL MAT SIM. NO. 5 TEST NO. 25A A-2-4(10) SIM. NO. 2A R = 50	TEST NO. 25B A-7-6(11) SIM. NO. 2B CBR = 4.9 TEST NO. 25C ROCK (QUARTZ ANTHRACITE)	TEST NO. 26 OIL MAT SIM. NO. 5	TEST NO. 26A A-1-B(10) SIM. NO. 1A R = 85	TEST NO. 26B A-2-4(10) SIM. NO. 1B R = 50	TEST NO. 26C A-7-6(11) SIM. NO. 2B CBR = 4.9	TEST NO. 27 OIL MAT SIM. NO. 5 TEST NO. 27A A-1-B(10) SIM. NO. 1A R = 85 TEST NO. 27C ROCK - NO SAMPLE	TEST NO. 27B A-2-4(10) SIM. NO. 1B R = 50
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EXCAV	5,135	1,764
EMBANK. x 1.4	3,689	1,764
STA. YD. O.H.	22,436	2,985
YD. M.I.O.H.	280	

50105(2) 24



$\Delta = 5^{\circ}10' \text{ Rt.}$
 $D = 1^{\circ}00'$
 $T = 258.5$
 $R = 5730'$
 $L = 516.7'$
 $\text{Hor. S.D.} = 1050'$
 $S = 0.028\%$
 $\text{Trans. Length} = 100'$
 $\text{M.D.S.} = 70 \text{ mph}$

P.T. 388+61.4

✓ 994+72 ~ Extend 24" Cross Culvert 6' Rt.

405+65 ~ Remove Cross Culvert. Req'd. 24" x 84' Cross Culvert.

POT 11/19/00

T.12N., R.79W.

S.E. 1/4 Sec. 26

N.E. 1/4 Sec 26

TEST NO. 27	TEST NO. 27B	TEST NO. 28	TEST NO. 28A	TEST NO. 28B	TEST NO. 28C	TEST NO. 28D	TEST NO. 29	TEST NO. 29A	TEST NO. 29B	TEST NO. 29C	TEST NO. 30	TEST NO. 30B	TEST NO. 30C
OIL MAT	A-2-G(1)	OIL MAT	A-1-G(1)	A-2-G(1)	A-2-G(1)	A-7-S(1)	OIL MAT	A-1-G(1)	A-2-S(1)	A-2-G(1)	OIL MAT SAMPLE	A-2-G(1)	A-2-G(1)
SIM. NO. 5	SIM. NO. 15B	SIM. NO. 5	SIM. NO. 15A	LL - 27.0	LL - 38.5	SIM. NO. 61	SIM. NO. 5	SIM. NO. 15A	SIM. NO. 15B	SIM. NO. 15C	SIM. NO. 28B	SIM. NO. 28B	LL - 36.0
TEST NO. 28A	R-30	R-05	R-05	RI - 9.6	RI - 14.7	CBR-23	R-05	R-30	R-30	CBR-0.0	RI - 17.8	RI - 17.8	RI - 17.8
A-1-G(1)	TEST NO. 27C			%200-15	%200-31		TEST NO. 29D				TEST NO. 30A	TEST NO. 30B	%200-48
SIM. NO. 1A	ROCK			R-50	CBR-80		A-7-G(1)				A-7-G(1)	A-7-G(1)	A-7-G(1)
R-05	NO SAMPLE						SIM. NO. 21				SIM. NO. 1A	SIM. NO. 24B	CBR-4.8
							CBR-4.3				R-05		

8650 TEST NO. 5
OIL MAT. SAMPLE

TEST NO 4A
A-1-B(0)
8640 L.L. = NV
R.I. = NP
% 200 = 10
R. 25

8630 TEST NO. 198
A-2-4(01)
L.L. = 26.6
P.L. = 6.5
W.200 = 15
P.50

8620 TEST NO. 21
A-7-3(10)
L.L. = 66.0
P.L. = 24.6
%COO = 99
8610 C86-21

0610 CBR: 2.3
TEST NO. 248
A-7-6(M)
L. + SR. 9
RI = 25.1
8600 % 200: 69
CBR: 4.9

8590

EXCAV. -
EMBANK. x 1.4
STA. YD. O.H. -
YD. MI. O.H. -

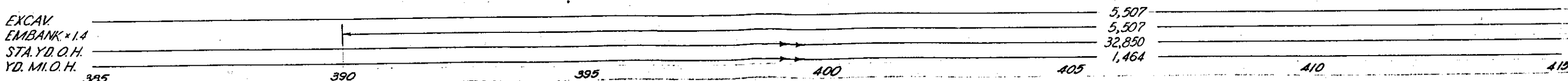
12" RY	
NO. 28	0.0° - 0.08
28A	0.08° - 0.16
28B	0.16° - 0.66
28C	0.66° - 1.41
28D	1.41° - 3.0°

110.29	00° - 0.21'
23A	021° - 0.28'
23B	028° - 0.66'
23C	066° - 1.41'
23D	141° - 3.0'

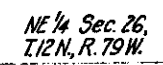
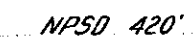
FL 142

10.30	0.0' - 0.25'
30A	0.25' - 0.33'
30B	0.33' - 1.0'
30C	1.0' - 2.33'
30D	2.33' - 3.0'

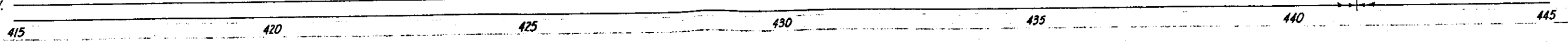
NP5D-345



50105(2) 25

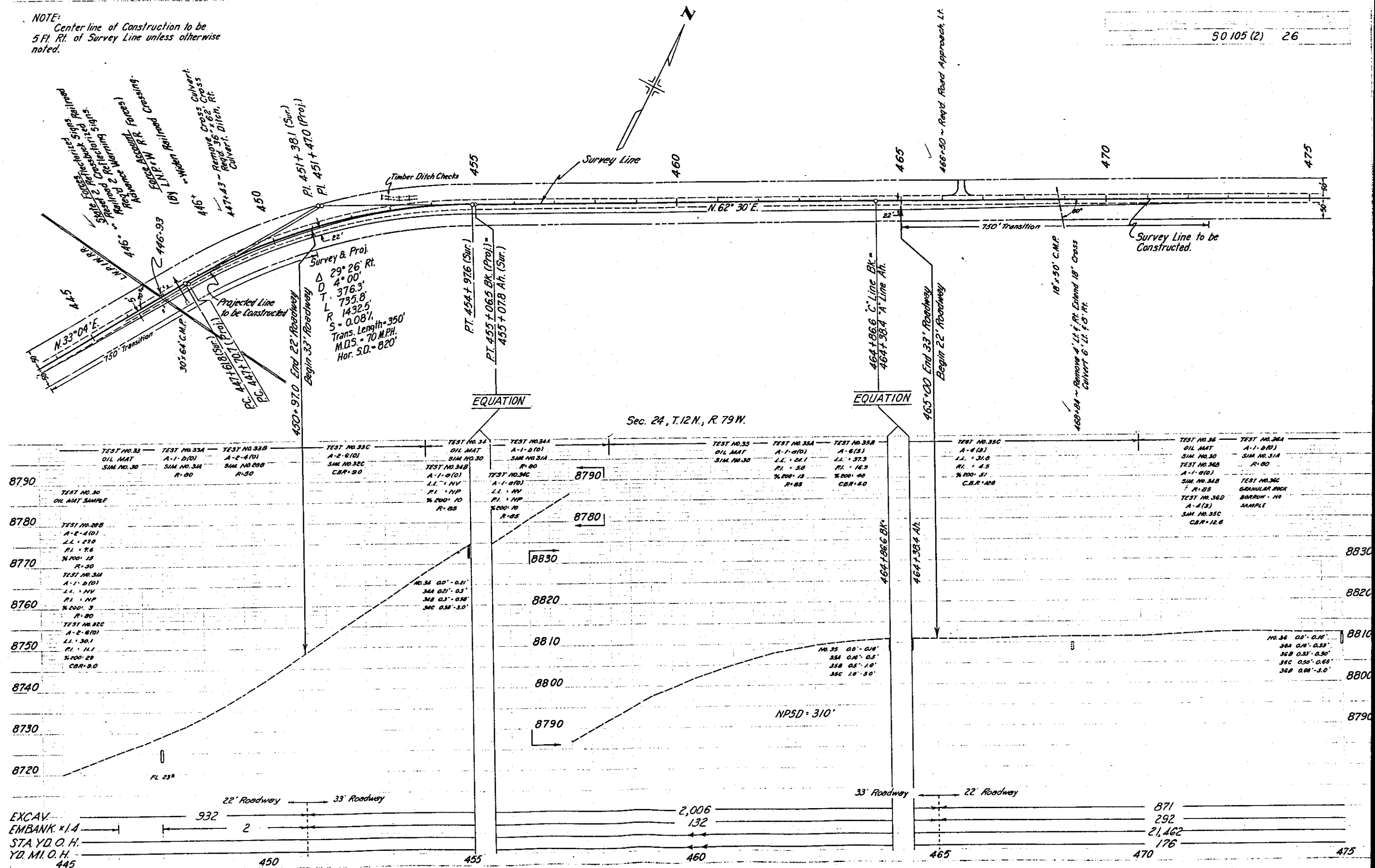
SW 1/4 Sec. 24

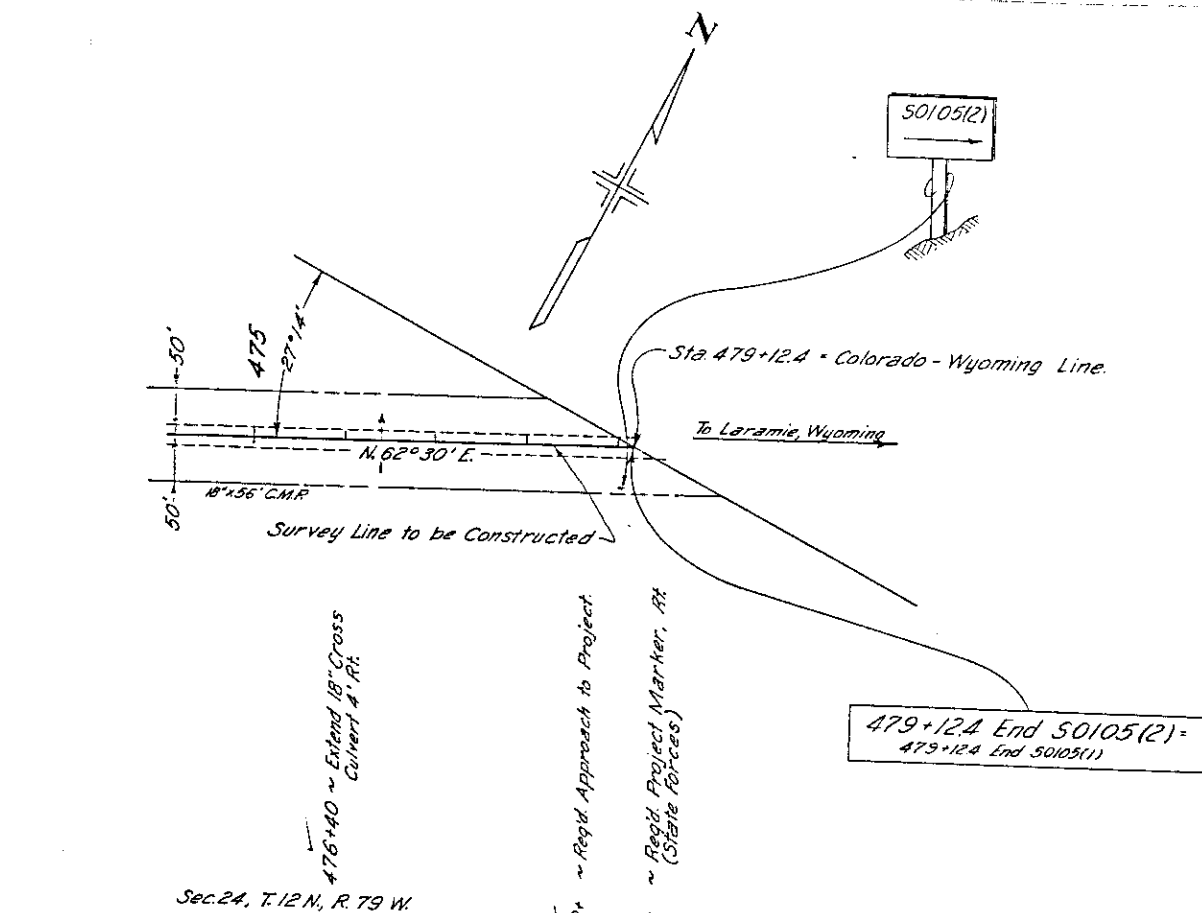
- 3,383 -



NOTE: Center line of Construction to be 5 Ft. Rt. of Survey Line unless otherwise noted.

50 105 (2) 26





TEST NO. 36 OIL MAT SIM. NO. 30 TEST NO. 36A A-1-B (10) SIM. NO. 31A R-80	TEST NO. 36B A-1-B (10) SIM. NO. 34B R-85 TEST NO. 36C A-1-B (10) SIM. NO. 31A R-80	TEST NO. 36D A-4 (13) SIM. NO. 35C CBR-12.6
TEST NO. 30 OIL MAT SAMPLE TEST NO. 31A A-1-B (10) LL-1 HV PI-1 HP %200+9 R-80	TEST NO. 31B A-1-B (10) LL-1 HV PI-1 HP %200+10 R-85	TEST NO. 35C A-4 (13) LL-1 81.8 PI-1 4.5 %200+51 CBR-12.6

EXCAV. —————
 EMBANK. x 1.4 —————
 STA. YD. O.H. —————
 YD. MI. O.H. —————
 475