FED. ROAD REG. NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	R-AD 31(1)	1	

INDEX OF SHEETS

COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
COLORADO PROJECT NO. R-AD 31(1)
STATE HIGHWAY NO. 30
ARAPAHOE COUNTY

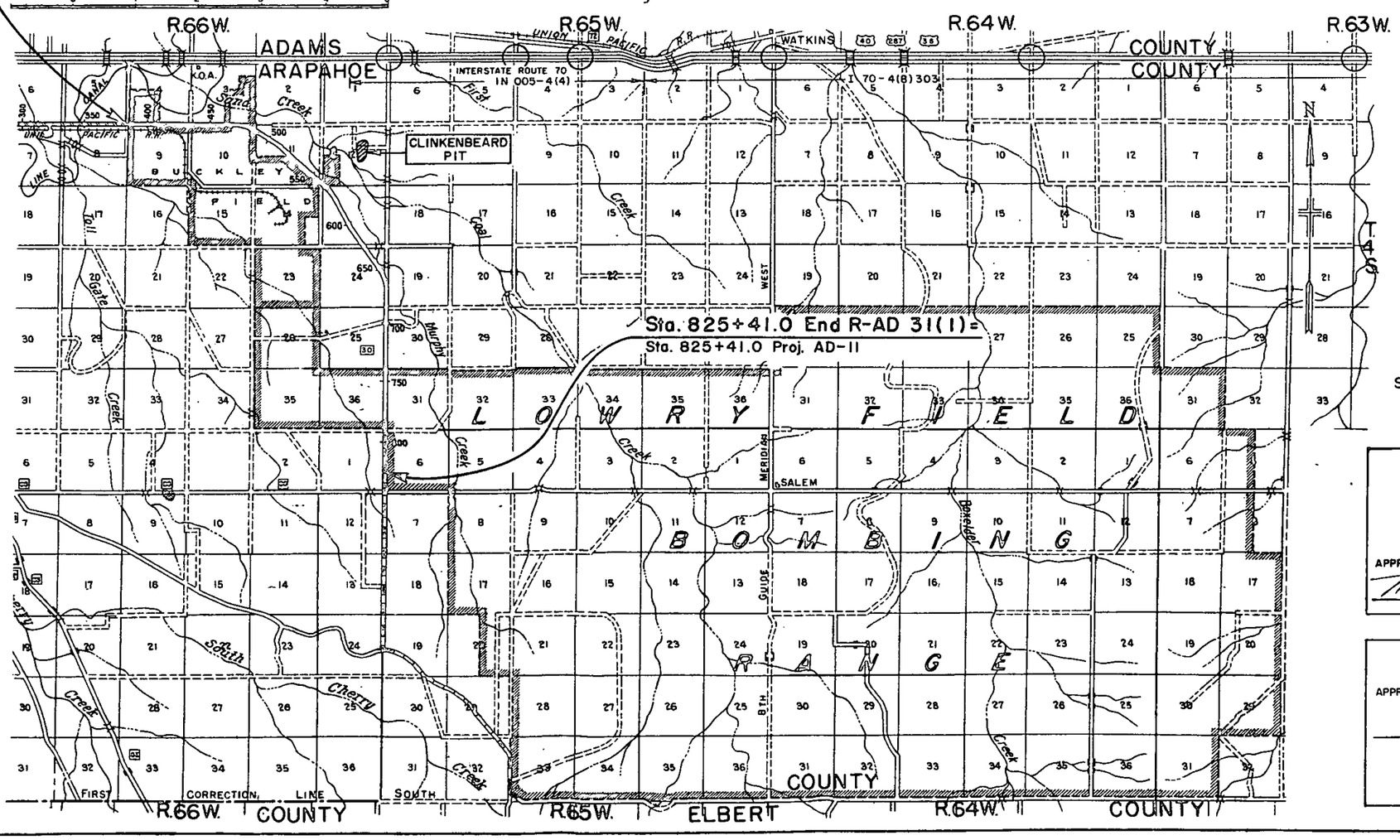
CONVENTIONAL SIGNS

CENTER LINE OF SURVEY
RIGHT OF WAY LINES
TOWNSHIP OR RANGE LINES
SECTION LINES
ONE QUARTER SECTION LINES
COUNTY LINE
RAILROAD TRACKS
BARBED WIRE FENCE
POLE LINES
ACCESS POINTS

Sta. 386+91.5 Beg. R-AD 31(1) =
Sta. 386+91.5 Proj. AD-11

SCALES OF ORIGINAL TRACINGS
ON PLAN, 1 IN. - 100 FT.
ON PROFILE { 1 IN. - 100 FT. HORIZONTAL / 1 IN. - 10 FT. VERTICAL

GROSS LENGTH OF PROJECT - } 43,849.5 Ft. = 8.305 Miles
NET LENGTH OF PROJECT - }



See Special Provisions for Notice to Bidders

COLORADO DEPARTMENT OF HIGHWAYS.

APPROVED: Mark T. Watrous 6-8-61
CHIEF ENGINEER DATE

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS.

APPROVED _____ DATE

DIVISION ENGINEER

TABULATION OF LENGTH & DESIGN DATA

STATION	DESCRIPTION	ROADWAY Lin. Ft.
386+91.5	Beg. R-AD 31(1) = 386+91.5 Proj. AD-11	43,849.5
825+41.0	End R-AD 31(1) = 825+41.0 Proj. AD-11	
TOTAL		43,849.5

SUMMARY	Lin. Ft.	Miles
ROADWAY (Net & Gross Length)	43,849.5	8.305

DESIGN DATA	
Maximun. Grade	4.04%
Maximum Degree of Curve	2°00'
Minimum N.P.S.D. Horizontal	1000'
Minimum N.P.S.D. Vertical	613'
Maximum Design Speed	70 M.P.H.

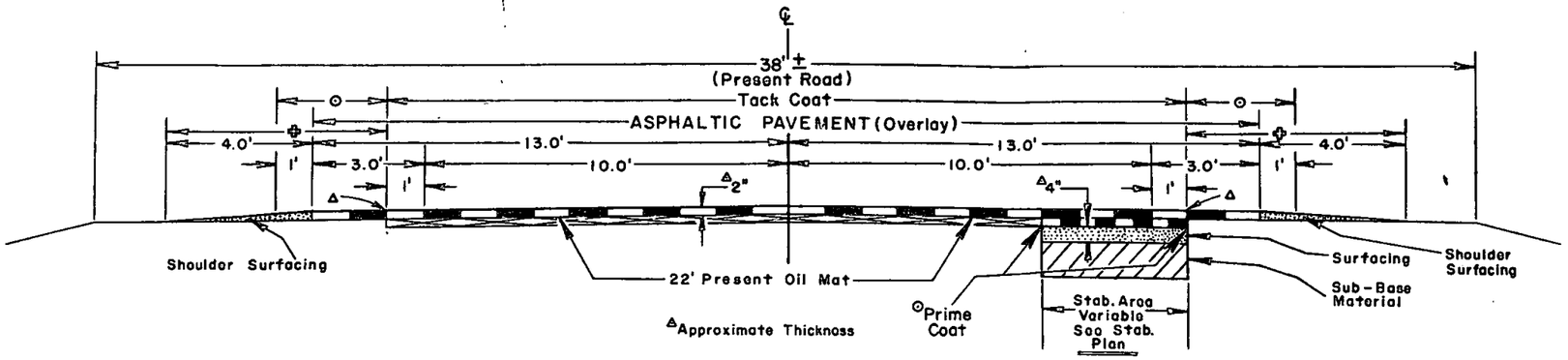
G.S.

TYPICAL CROSS SECTIONS OF IMPROVEMENT

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	R-AD 31(1)	2	

Rev. 6-27-61 Added Note - G.S.

"A"
TYPICAL SECTION
STA. 448+00 to STA. 825+41.0



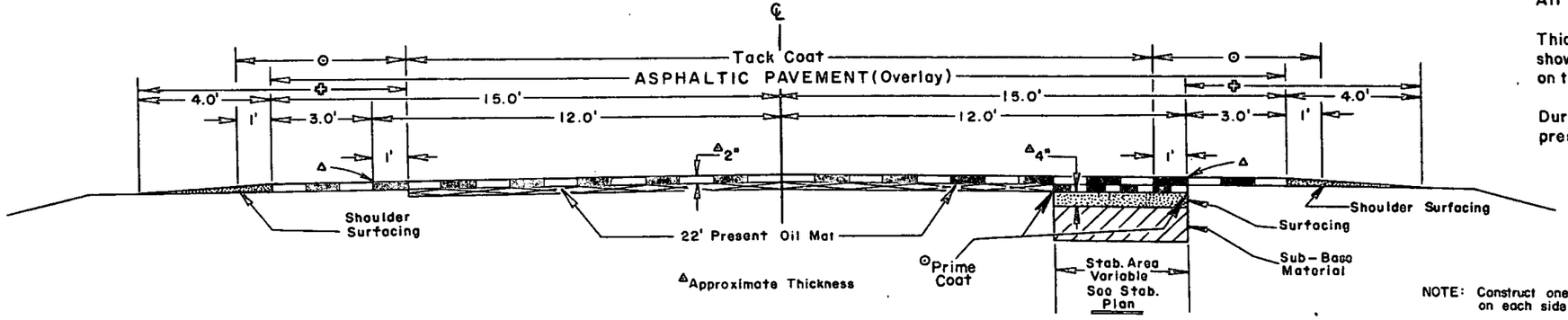
△ Approximate Thickness

⊙ Prime Coat

✥ Blading Area.

△ Location of White Stripe.

"B"
TYPICAL SECTION
STA. 386+91.5 to STA. 448+00



△ Approximate Thickness

NOTE: Construct one half of Section "B" on each side of Median.

Approximate 2" compacted thickness of Gravel or Crushed Rock Surfacing shall be placed in separate courses at the following rates per 100 lin. ft. of Roadway:

	TYPICAL SECTION "A"	TYPICAL SECTION "B"	
ASPHALTIC PAVEMENT (OVERLAY)	32	36	Tons / Sta.
SHOULDER SURFACING	5	5	Tons / Sta.

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted January 1, 1958.

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

For preliminary plan quantities of Asphaltic Road Materials the following rates of application were used.

PRIME COAT MC _____ @	0.40	gals. per Sq. Yd.
TACK COAT AC (85-100 ___ Penetration) @	0.10	gals. per Sq. Yd.
PAVING ASPHALT (85-100 ___ Penetration) @	6.00	lbs. / Sq. Yd. / Inch

Rate of application and grade of Asphaltic Material shall be as determined by the Engineer at time of application.

All Superelevation is to match the present road.

Thickness of Sub-Base, Surfacing & Asphaltic Pavement Materials as shown on plans is approximate only. These materials are to be placed on the basis of Tonnages Shown on Plans.

During construction of this project, traffic will be required to use the present traveled roadway except where detours are shown on plans.

Rev. 7-11-61 Eliminated Unclassified Excavation, Sta. Yd. Overhaul & Yd. Mi. Overhaul -G. S.

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	R-AD 31 (1)	3	

SURFACING PLAN

MATERIAL TO BE PLACED	SOURCE	TONS USED	
		PLANT MIX	BASE COURSE Grading C
386+91.5 to 448+00	UNDESIGNATED	2,199	306 ✣
448+00 to 825+41.0	UNDESIGNATED	12,077	1,887 ✣
From Stabilization Plan	UNDESIGNATED	2,314	4,627
TOTALS		16,590	6,820

✣ Shoulder Surfacing

SUB-BASE MATERIAL PLAN

It is estimated that material for Sub-Base for the Project is available in the vicinity of the Pit indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

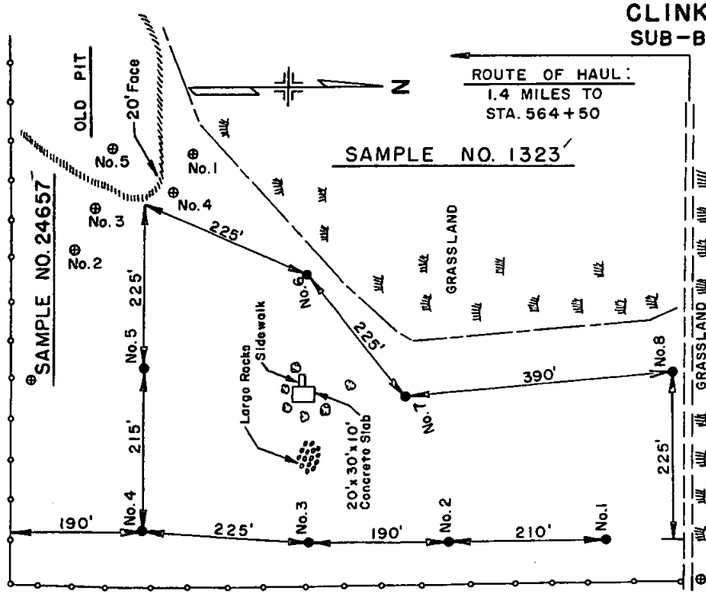
Alteration of this plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	TONS USED		TON MILE OVERHAUL
		ø Thickness	Class 3	
From Stabilization Plan	CLINKENBEARD PIT R=69	See Stabilization Plans	13,657	50,016
Est. for Irregularities	CLINKENBEARD PIT R=69		1,366	5,002
TOTALS			15,023	55,018

ø Approximate Thickness, Based on Curve "E"

CLINKENBEARD PIT
SUB-BASE MATERIAL ONLY

LOCATION: N.E.1/4, SEC.12, T.4S, R.66W.
QUANTITY AVAILABLE: 150,000 CU. YDS.



LOG OF PIT

TEST NO.	DEPTH IN FEET	DESCRIPTION
1	0.0 - 2.0	SANDY LOAM - SAMPLE NO.1
1A	2.0 - 8.0	SAND - SAMPLE NO.1A
1B	8.0 - 12.0	CLAY - NO SAMPLE
1C	12.0 - 13.0	SAND - SIMILAR TO NO. 1A
2	0.0 - 0.5	SANDY LOAM - SIMILAR TO NO.1
2A	0.5 - 9.0	SAND - SIMILAR TO NO. 1A
3	0.0 - 13.0	SAND - SIMILAR TO NO. 1A CLAY AT 13.0'
4	0.0 - 18.0	SAND - SIMILAR TO NO. 1A CLAY AT 18.0'
5	0.0 - 22.0	SAND - SIMILAR TO NO. 1A CLAY AT 22.0'
6	0.0 - 18.0	SAND - SAMPLE NO. 6
7	0.0 - 17.0	SAND - SIMILAR TO NO. 6
8	0.0 - 15.0	SAND - SIMILAR TO NO. 1A
1	0.0 - 20.0	BLOWSAND - SAMPLE NO. 1
2	0.0 - 20.0	BLOWSAND - SIMILAR TO NO. 1
3	0.0 - 12.0	CLAYEY SAND - SAMPLE NO. 3
4	0.0 - 20.0	BLOWSAND - SAMPLE NO. 4
5	0.0 - 5.0	SILTY SAND - SAMPLE NO. 5
5A	5.0 - 20.0	SAND - SIMILAR TO NO. 1 becoming courser with increasing depth.

GUARD POSTS

STATION	REMOVE & RESET	
	SIDE	NO.
432+00 to 439+50	Lt.	11
450+75 to 461+30	Lt.	6
467+10	Lt.	1
479+00 to 482+90	Lt.	5
487+20 to 495+75	Rt.	7
488+95 to 492+95	Lt.	5
567+95 to 574+60	Lt.	5
568+40 to 568+60	Rt.	2
603+70 to 609+70	Rt.	6
648+95 to 670+35	Lt.	16
781+15 to 787+20	Lt.	4
781+15 to 787+20	Rt.	4
809+80 to 815+40	Lt.	6
809+80 to 815+40	Rt	6
TOTAL		84

SUMMARY OF APPROXIMATE QUANTITIES

UNIT NO.	ITEM	UNIT		PROJECT TOTAL
11	Reset Mail Boxes	L. S.		•
11	Reset Guard Posts	Each		84
~~13~~	~~Unclassified Excavation~~	~~Cu. Yd.~~		~~11,000~~
~~13~~	~~Stripping~~	~~Cu. Yd.~~		~~200~~
17	Wetting	M Gal.		330
~~18~~	~~Station Yard Overhaul~~	~~Sta. Yd.~~		~~120,000~~
~~18~~	~~Yard Mile Overhaul~~	~~Yd. Mi.~~		~~7,300~~
18	Ton Mile Overhaul	Ton Mi.		55,100
23	Sub-Base Material (Class 3)	Ton		15,100
26	Gravel or Crushed Rock Surfacing (Grading C)	Ton		6,900
29	Asphalt (85 - 100 Penetration)(Tack Coat)	Ton		50
30	Asphaltic Road Material MC (Prime)	Gal.		21,300
32	Plant Mixed Asphaltic Surfacing	Ton		16,600
107	Blading	Hour		150
	FORCE ACCOUNT			
	STATE FORCES			
	Signing & Striping Entire Project	L. S.		•

✱STABILIZATION PLAN
(CONTINUED FROM SHEET NO. 4)

★STA. TO STA.	SIDE	LENGTH OF STAB. LIN. FT.	WIDTH OF STAB. LIN. FT.	UNCL. EXCAV. CU. YDS.	SUB-BASE MATERIAL ø THICK INCHES	SUB-BASE MATERIAL TONS USED	SURFACING TONS USED BASE COURSE	SURFACING TONS USED PL. MIX	PRIME SQ. YDS.	OVERHAUL STATION YARDS	OVERHAUL YARD MILES	DISPOSAL AREA
788+46 - 797+93	RT.	947	5	337	17	446.5	105.5	57.0	526			687+00-697+00
790+60 - 792+28	LT.	168	11	132	17	174.5	41.0	22.5	205			703+00-726+00
791+70	RT.	FIELD APPROACH		—	—	—	17.0	—	—	20,174	1,525	746+00-750+50
795+16 - 796+10	LT.	94	5	34	17	44.5	10.5	6.0	52			
796+10 - 799+20	LT.	310	11	243	17	322.0	76.0	41.0	379			
797+93 - 799+20	RT.	127	11	100	17	132.0	31.0	17.0	155			
800+59 - 802+95	RT.	236	11	185	17	245.0	58.0	31.5	288			
802+95 - 806+02	RT.	307	5	110	17	145.0	34.0	18.5	171			
806+02 - 807+13	RT.	111	7	56	17	73.5	17.5	9.5	86			
807+13 - 808+71	RT.	158	11	124	17	164.0	39.0	21.0	193			
808+71 - 816+00	RT.	729	6	311	17	412.5	97.5	52.5	486			
817+28 - 818+78	RT.	150	7	75	17	99.0	23.5	13.0	117	8,540	58	781+00 - 786+75
819+58 - 820+10	RT.	52	5	19	17	24.5	6.0	3.5	29			805+00 - 815+00
822+00 - 823+10	LT.	110	5	40	17	52.0	12.5	7.0	62			
822+05 - 823+64	RT.	159	5	57	17	75.0	18.0	10.0	88			
824+70 - 827+50	RT.	280	5	100	17	132.0	31.0	17.0	156			
TOTALS				10,910		13,657.0	4,626.5	2,314.0	21,201	119,297	7,260	

★ Approximate location, may be changed by the Engineer.
✱ For Estimate Purposes Only.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 31 (1)	8	

S.W. 1/4 SEC. 5
T. 4 S. R. 66 W.

S.E. 1/4 SEC. 5
T. 4 S. R. 66 W.

S.W. 1/4 SEC. 4
T. 4 S. R. 66 W.

N

P.O.T. 360144.5

Sta. 386+91.5 Beg. R-AD 31 (1) =
Sta. 386+91.5 Proj. AD-11

P.I. 386191.5
Δ = 0°7'16" R

Mail Box

N 89°52'43" E

S 89°59'47" E

N.W. 1/4 SEC. 8
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 8
T. 4 S. R. 66 W.

N.W. 1/4 SEC. 9
T. 4 S. R. 66 W.

600' V.C.

+0.08%

+0.92%

+0.95%

F.L. 61.9

F.L. 78.4

EXCAV.	5200
EMBANK. 95%	
STA. YD. O.H.	31,460
YD. MI. O.H.	40
BORROW	
BOR. SOURCE	

PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 311(1)	9	

S.W. 1/4 SEC. 4
T. 4 S. R. 66 W.

S.E. 1/4 SEC. 4
T. 4 S R. 66 W.

N.W. 1/4 SEC. 9
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 9
T. 4 S. R. 66 W.

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO., DATE, BY

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK, NO., STRUCTURE NOTE NO. CHKD., DATE, BY

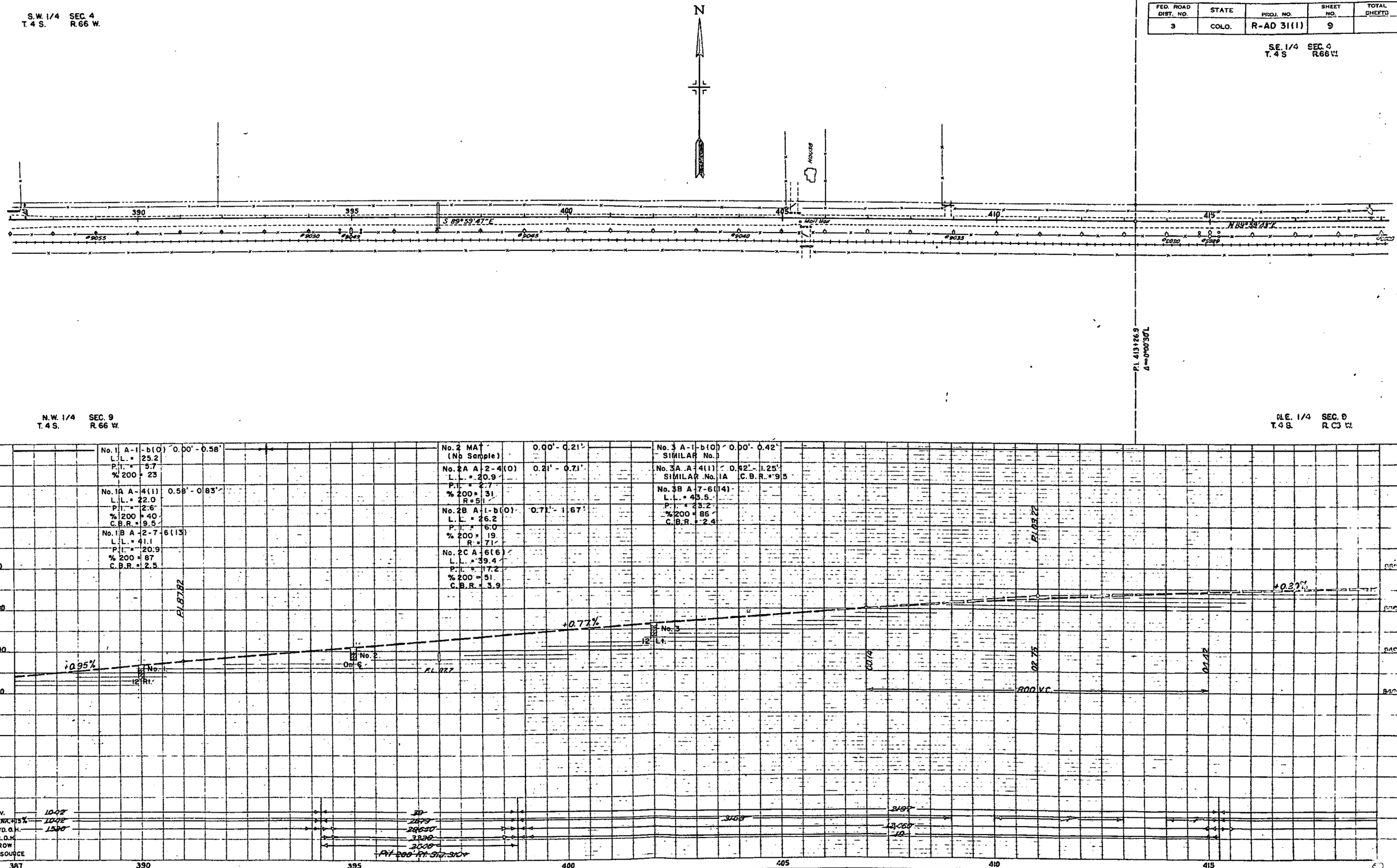


PLATE 1 — PLAN - PROFILE O. F. S. & S. E. PROJECT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	COLO.	R-AD 31(1)	10	

S.E. 1/4 SEC. 4
T. 4 S. R. 66 W.

S.W. 1/4 SEC. 3
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 9
T. 4 S. R. 66 W.

N.W. 1/4 SEC. 10
T. 4 S. R. 66 W.

N

36" X 19" Conc. Pipe

30' Bar Gate

P.O.T. 449+16.9

30' Bar Gate

FRAME BLD'G

FR. Bldg

P.I. 439+61.4
Δ = 0°-51½' L

N 89°-59'-43" E

N 89°-54'-13" E

420 425 430 435 440 445 450

#9025 #9020 #9015 #9005 #9000 #8995

No. 4 MAT 0.00'- 0.17'
(No Sample)

No. 4A A-4(1) 0.17'- 0.67'
SIMILAR No. 1A C.B.R. = 9.5

No. 4B A-7-6(13) 0.67'- 1.67'
SIMILAR No. 1B C.B.R. = 2.5

No. 4C A-7-6(14)
SIMILAR No. 3B C.B.R. = 2.4

No. 5 MAT 0.00'- 0.08'
(No Sample)

No. 5A A-1-b(0) 0.08'- 0.58'
L.L. = 21.9 R. = 71
P.I. = 1.8
%200 = 18

No. 5B A-7-6(14)
SIMILAR No. 3B C.B.R. = 2.4

No. 6 MAT 0.00'- 0.08'
(No Sample)

No. 6A A-1-b(0)
SIMILAR No. 5A R = 71

No. 6B A-7-6(14)
SIMILAR No. 3B C.B.R. = 2.4

600' V.C.

600' V.C.
N.P.S.D. 97.4

600' V.C.
N.P.S.D. 84

P.I. 14.80

P.I. 07.72

P.I. 15.40

P.I. 29.90

+0.30%

+1.18%

+0.10%

+1.50%

-0.15%

No. 4
No. 4A
No. 4B
6' Lt.

No. 5
No. 5A
No. 5B
On ℄

No. 6
No. 6A
No. 6B
12' Rt.

F.L. 08.7

SWEEPING ONLY

5530 5520 5510 5500

418 420 425 430 435 440 445 450

PLAN
PLOTTED
NOTE BOOK
NO.

PROF
PLOTTED
NOTE BOOK
NO.

PLATE I—PLAN—PROFILE

FED. ROAD DIST NO.	STATE	PROJ. NO.	CONTROL NO.	
9	COLO.	R-AD 31(1)	11	

S.W. 1/4 SEC. 3
T. 4 S. R.66 W.

S.E. 1/4 SEC. 3
T. 4 S. R.66 W.

N.W. 1/4 SEC. 10
T. 4 S. R.66 W.

N.E. 1/4 SEC. 10
T. 4 S R.66 W.

N

POT 464+18

B.M. On R/W & Ref. Pt. Marker
40' Lt. Sta. 465+50
Elev. 5519.86

R/W

450 455 460 465 470 475 480

N 89°54'13"E

N 89°51'43"E

Perm. Marker

Underground Telephone Cable.
(6' Deep).

465+99.5
P.I. 25.51 Ahead
Δ = 0°01'52"
0.1/2

P.C. 472+93.8
T 368

Δ 31°51'30"R
D 2°
T 817.7
L 1592.9
R 2865.0
H.S.D. = 1000'

No. 7 MAT 0.00'- 0.13'
(No Sample)
No. 7A A-1-b(0) 0.13'- 0.46'
SIMILAR No. 5A R = 71
No. 7B A-7-6(14)
SIMILAR No. 3B C.B.R. = 2.4

No. 8 A-1-b(0) 0.00'- 0.67'
L.L. = NV
P.I. = NP
% 200 = 12
R = 80
No. 8A A-7-6(14)
SIMILAR No. 3B C.B.R. = 2.4

No. 9 MAT 0.00'- 0.08'
(No Sample)
No. 9A A-1-b(0) 0.08'- 1.17'
SIMILAR No. 8 R=80
No. 9B A-7-6(14)
SIMILAR, No. 3B C.B.R. = 2.4

No. 10 A-1-b(0) 0.00'- 0.03'
SIMILAR No. 8 R = 80
No. 10A A-6(11)
L.L. = 37.7
P.I. = 19.7
% 200 = 72
C.B.R. = 2.9

5530
5520
5510
5500
5490

-0.13%

No. 7
No. 7A
No. 7B
11' Rt.

P.I. 26.80

F.L. 23.9

No. 8
No. 8A
12' Lt.

28.30

27.20

25.85

22.40

F.L. 14.0

800' V.C.

N.P.S.D. 1188'

No. 9
On ℄
No. 9A
No. 9B

-0.10%

P.I. 28.10

-2.00%

No. 10
No. 10A
12' Rt.

F.L. 98.3

11.40

07.40

02.10

800' V.C.

N.P.S.D. 1105'

SHEARING ZONE

PLATE 1 - PLAN - PROFILE

FED. ROAD DIST. NO.	STATE	PROJ. NO	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	12	

S.E. 1/4 SEC. 3
T. 4 S. R. 66 W.

N.W. 1/4 SEC. 11
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 10
T. 4 S. R. 66 W.

Sta. 493+94.8

1123.8' to N.E. Cor. Sec. 10

N 89° 51' 45" E

3° 51' 30"

3° 58' 16.47" E

R/W

Δ 3°51'30" R
D 2°
T 817.7
L 1592.9
R 2865.0

Δ 13°31' R
D 1°
T 679.0
L 1351.7
R 5730.0

PT. 488+92.0

PC. 501+28.0

No. 11 MAT 0.00'-0.08'
(No Sample)

No. 11A A-2-4(0) 0.08'-1.0'
L.L. = 23.8
P.I. = 6.4
% 200 = 29
R = 47

No. 11B A-6(10)
L.L. = 38.4
P.I. = 21.0
% 200 = 61
C.B.R. = 3.1

No. 12 MAT 0.00'-0.08'
(No Sample)

No. 12A A-2-4(0)
L.L. = 21.1
P.I. = 3.0
% 200 = 23
R = 63

No. 12B A-6(10)
SIMILAR No. 11B C.B.R. = 3.1

P.B.M. Bronze Tablet in Top Nw. of Conc. Box Culv.
Elev. 5477.32

600' V.C.

400' V.C.

+5.00%

+0.56%

-0.83%

F.L. 90.4

F.L. 82.8

F.L. 62

F.L. 71.7

F.L. 80.0

No. 11
No. 11A
9' Rt. No. 11B

No. 12
No. 12A
11' Rt. No. 12B

P.I. 75.10

P.I. 82.66

22.10

8.18

17.02

16.78

8.54

9.85

8.47

5510
5500
5490
5480
5470
5460

480
485
490
495
500
505
510

PLAN
SURVEYED
PLOTTED
NOTE BOOK
CALCS CHECKED
NO. OF MAT CHECKED
DATE
BY

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
STRUCTURE BOR'NS CH. CO.
NO.
DATE
BY

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 8K(1)	48	

N.E. 1/4 SEC. 11
T. 4 S. R. 66 W.

P.I. 516+54.9

P.O.T. 527+06.9

P.O.T. 531+35.4

P.O.T. 534+50

R/W

R/W

R/W

R/W

70.71'

70.71'

20.71'

20.71'

45°

45°

S 58°16'41" E

S 44°45'41" E

515

520

525

530

535

540

50'

50'

50'

Δ 13°31' R
D 1°
T 679.0
L 1351.7
R 5730.0
H.S.D > 1300'

+26.7
P.T. 523+58.6

N.W. 1/4 SEC. 11
T. 4 S. R. 66 W.

S.W. 1/4 SEC. 11
T. 4 S., R. 66 W.

S.E. 1/4 SEC. 11
T. 4 S. R. 66 W.

No. 13 A-2-4(0) 0.00'-0.67'
SIMILAR No. 12A R=63

No. 13A A-6(6)
L.L. = 31.4
P.I. = 14.1
% 200 = 57
C.B.R. = 3.9

No. 14 A-2-4(0) 0.00'-0.50'
SIMILAR No. 12A R=63

No. 14A A-6(6)
SIMILAR No. 13A C.B.R. = 3.9

No. 15 A-2-4(0) 0.00'-0.83'
SIMILAR No. 12A R=63

No. 15A A-6(6)
SIMILAR No. 13A C.B.R. = 3.9

No. 16 MAT 0.00'-0.17'
(No. Sample)

No. 16A A-2-4(0) 0.17'-1.0'
L.L. = 24.0
P.I. = 5.0
% 200 = 22
R = 63

No. 16B A-6(6)
SIMILAR No. 13A C.B.R. = 3.9

P.O.B.M. - On RW Marker & Ref. Point
50' Rt. Sta 522+77
Elev. 5491.08

5520
5510
5500
5490
5480

400' V.C.

+1.20%

+0.60%

+1.08%

+1.40%

No. 13
No. 13A
13' Lt.

No. 14
No. 14A
13' Rt.

No. 15
No. 15A
13' Lt.

No. 16
No. 16A
3' Rt.
No. 16B

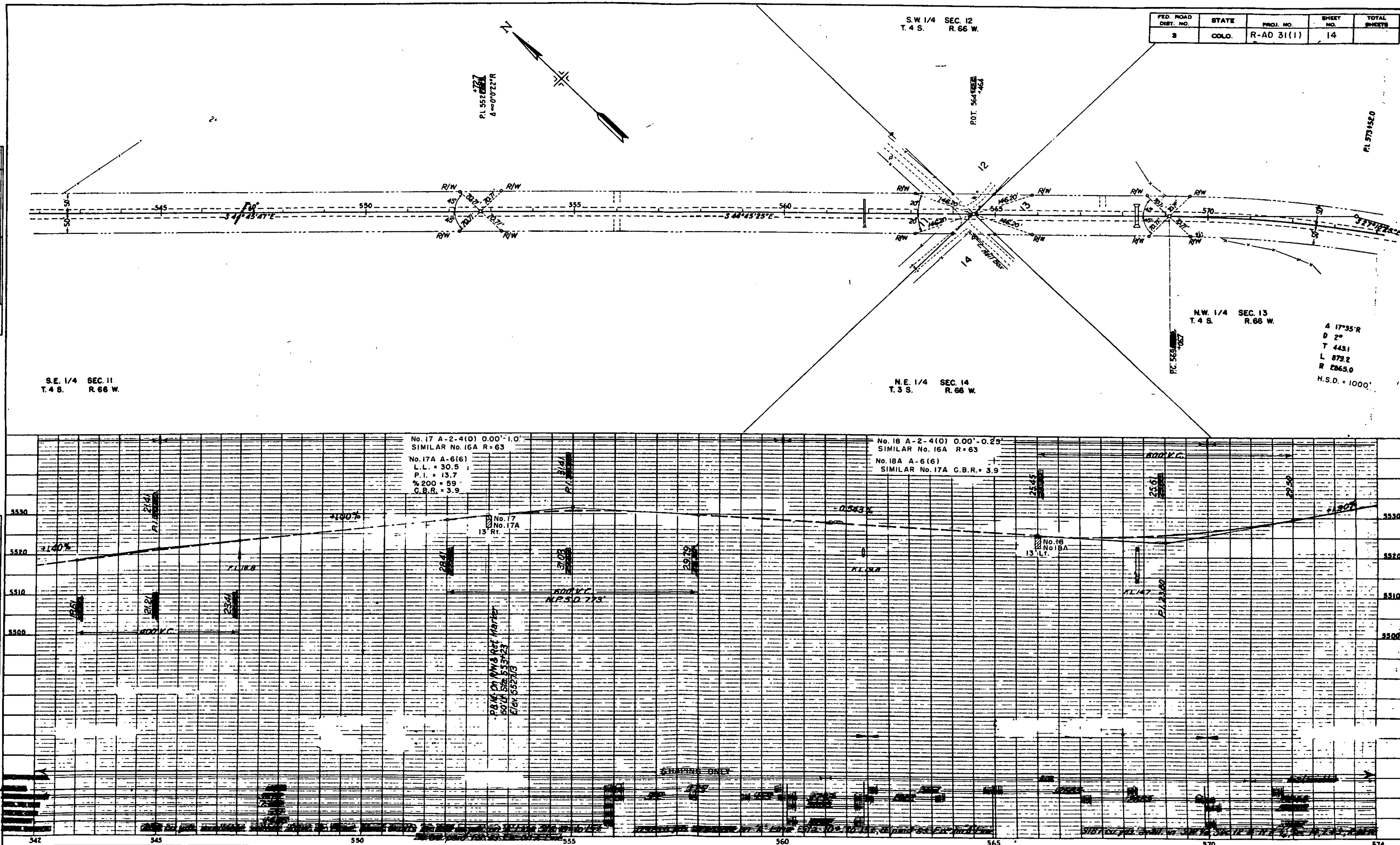
600' V.C.
N.P.S.P. 1340'

SHAPING ONLY

511
515
520
525
530
535
540
543

PLATE 1 - PLAN, PROFILE & PROJECT DETAILS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 31(1)	14	



FED. ROAD DIST. NO.	STATE	PROJ. NO.	PROJ. NO.	TOTAL SHEETS
3	COLO.	R-AD 31(1)	18	

PLAN — DATE — BY
SURVEYED
PLOTTED
NOTE BOOK — ALIGNMENT CHECKED
NO. — RT. OF WAY CHECKED

P.I. 573+52.8

P.O.T. 580+22.6

P.O.T. 593+04.8

P.C. 602+75.3

Δ 8°52'30"L
D 1°
T 444.7
L 887.5
R 5730.0

S 44°45'25"E

50'

50'

575

580

585

590

S 27°10'25"E

595

600

605

50'

50'

P.T. 577+68.1

Δ 17°35'R
D 2°
T 443.1
L 879.2
R 2865.0

N.W. 1/4 SEC. 13
T. 4 S. R. 66 W.

S.W. 1/4 SEC. 13
T. 4 S. R. 66 W.

No. 19 A-2-4(0) 0.00'-0.33'
SIMILAR No. 16A R = 63
No. 19A A-6(6)
SIMILAR No. 17A C.B.R.=3.9

No. 20 A-2-4(0) 0.00-0.17'
SIMILAR No. 16A R=63
No. 20A A-6(6)
SIMILAR No. 17A C.B.R.=3.9

No. 21 A-2-4(0) 0.00'-0.33'
SIMILAR No. 16 R=63
No. 21A A-6(6)
SIMILAR No. 17A C.B.R.=3.9

PROFILE — DATE — BY
SURVEYED
PLOTTED
NOTE BOOK — GRADES CHECKED
NO. — STRUCTURE NOTES CHKD.

5560
5550
5540
5530
5520

+1.90%
+0.80%
+0.30%

P.I. 44.70
P.I. 50.30
P.I. 55.40

No. 19.
No. 19A
13' Rt.

No. 20
No. 20A
13' Lt.

No. 21
No. 21A
14' Rt.

F.L. 30.6
F.L. 44.4
F.L. 48.3

39.00
43.87
47.10
48.70
50.05
50.90
54.80
55.70

600' V.C.
N.P.S.D. 962'
400' V.C.
400' V.C.

EXCAV. CLASS.
EXCAV.
EMBANK. TS
STA. YD. O.H.
YD. M.L.O.H.
BORROW
BORR. SOURCE

A-6, A-7
57
102 102
123 123
300
100
300
279 279
360 360

573 575 580 585 590 595 600 605

FED. ROAD DIST NO.	STATE	PROJ. NO.	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	16	

S.E. 1/4 SEC. 13
T. 4 S. R. 66 W.

Δ 8°52'30" L
D 1°
T 444.7
L 887.5
R 5730.0
H.S.D. >1300'

P.I. 611+62.8

P.O.T. 628+54.8

Sta 627+48.3
1931.70 S.E. Cor. Sec. 13

S 27°10'25" E

S 36°02'55" E

54°13'30"

50'

605 610 615 620 625 630 635

P.I. 607+20.0

S.W. 1/4 SEC. 13
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 24
T. 4 S. R. 66 W.

No. 22 A-2-4(0) 0.00'-0.25'
SIMILAR No. 16A R = 63

No. 22A A-6(6)
SIMILAR No. 17A C.B.R. = 3.9

No. 23 A-2-4(0) 0.00'-0.25'
L.L. = 24.5
P.I. = 7.6
% 200 = 27
R = 35

No. 23A A-6(6)
SIMILAR No. 17A C.B.R. = 3.9

No. 24 A-2-4(0) 0.00'-0.42'
SIMILAR No. 23 R = 35

No. 24A A-6(6)
SIMILAR No. 17A C.B.R. = 3.9

5600 5590 5580 5570 5560 5550

400' V.C.

200' V.C.

400' V.C.

200' V.C.

-0.90%

+0.60%

+1.57%

+1.35%

No. 22
No. 22A
12' Rt.

No. 23
No. 23A
12' Lt.

No. 24
No. 24A
12' Rt.

P.I. 607+20.0 — 35.40
6+20 — 57.20
P.I. 611+62.8 — 61.70
6+80 — 60.80
6+62 — 61.62
6+30 — 62.30
P.I. 615+90 — 65.90
6+70 — 64.70
6+39 — 66.39
6+04 — 69.04
P.I. 619+50 — 80.03
81.54
82.95
F.L. 624.0

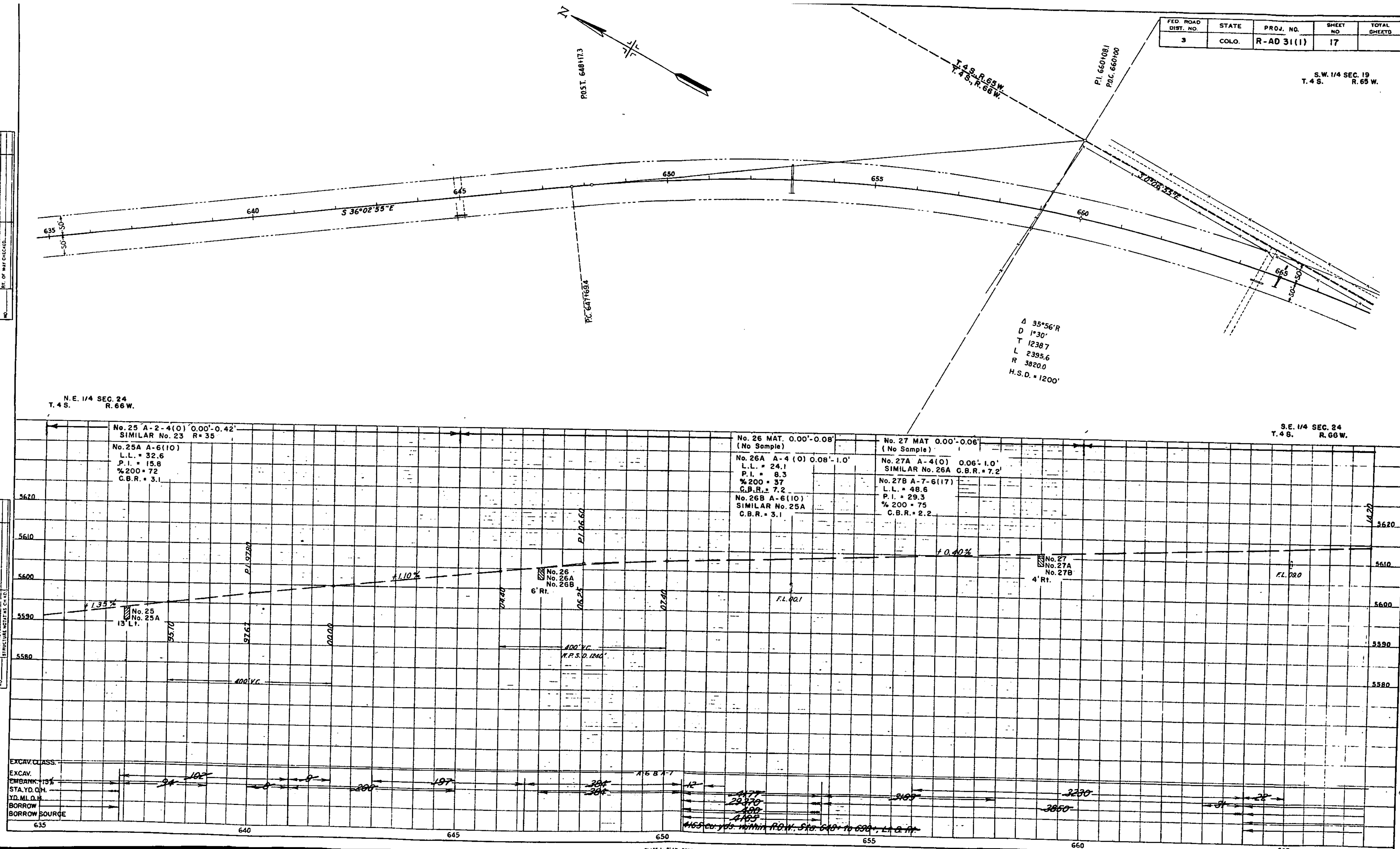
EXCAV. CLASS.
EXCAV. 780
EMBANK. 115% 780 — 620
STA. YD. O.H. 435 — 455
YD. MI. O.H.
BORROW 1970 — 21,480 — 450 — 1068
BORR. SOURCE 1869 cu. yds. within R.O.W., Sta. 5+76* to 600*, Lt. & Rt.
Sta 6 Rt. 257 — 284 — 24
1410 — 6700 — 40 — 1410
1610 cu. yds. within R.O.W., Sta. 600* to 692*, Lt. & Rt.
64 — 490 — 40 — 490 — 1894 — 1490 — 1634
1634 cu. yds. within R.O.W., Sta. 639* to 648*, Lt. & Rt.

PLAN
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
PT. OF WAY CHECKED
NO.
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
CROSS CHECKED
B. M.'S NOTED
STRUCTURE NOTES AS (14.0)
NO.
DATE

PLATE I—PLAN—PROFILE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	17	



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 31(1)	18	

S.W. 1/4 SEC. 19
T. 4 S. R. 65 W.

N.W. 1/4 SEC. 30
T. 4 S. R. 65 W.

N

P.I. 685+73.1
Δ=0°02' R

19 | 30

24 | 25

T. 4 S., R. 65 W.
T. 4 S., R. 66 W.

610 | 615 | 680 | 685 | 690 | 695

S. 0°06'55" E. | S. 0°04'55" E.

50' | 50'

Δ. 35°56' R.
D. 1°30'
T. 1238.7'
L. 2395.6'
R. 3820.0

P.T. 671+65.0

S.E. 1/4 SEC. 24
T. 4 S. R. 66 W.

N.E. 1/4 SEC. 25
T. 4 S. R. 66 W.

No. 28 A-4(0) 0.00'-0.42'
SIMILAR No. 26A C.B.R.=7.2
No. 28A A-7-6(17)
SIMILAR No. 27B C.B.R.=2.2

No. 29 A-4(0) 0.00'-0.58'
SIMILAR No. 26A C.B.R.=7.2
No. 29A A-7-6(17)
SIMILAR No. 27B C.B.R.=2.2

No. 30 A-4(0) 0.00'-0.5'
SIMILAR No. 26A C.B.R.=7.2
No. 30A A-7-6(17)
SIMILAR No. 27B C.B.R.=2.2

5640
5630
5620
5610

400' V.C.
14.20
13.45
17.60

+0.50%
+1.30%
+0.80%
+0.60%
+1.85%

P.I. 15.00

No. 28
No. 28A
13' Lt.

F.I. 19.7

P.I. 20.60

No. 29
No. 29A
11' Rt.

28.00
30.40
32.40
400' V.C.

P.I. 36.90

No. 30
No. 30A
12' Rt.

F.I. 35.4

36.00
36.82
37.50
200' V.C.

39.90
41.73
43.80
400' V.C.

P.I. 41.10

4665

EXCAV. CLASS.					A-6, A-7		
EXCAV.		130		864		694	
EMBANK. 15%				864		694	
STA. YD. O.H.	3105			930		1,060	
YD. MI. O.H.	32,470						
BORROW	1,410						
BORR. SOURCE	2,957						

666 | 670 | 675 | 680 | 685 | 690 | 695 | 698

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK, STRUCTURE NOTES CH. NO., BY, DATE

FED. ROAD DIST. NO	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 31(1)	19	

N.W. 1/4 SEC. 30
T. 4 S. R. 65 W.

S.W. 1/4 SEC. 30
T. 4 S. R. 65 W.

N

50' 50'

100 105 110 715 720 725

S. 0° 04' 55" E. S. 0° 05' 47" E.

Mail Box

P.I. 712+18.4
Δ = 0° 00' 52" L.

N.E. 1/4 SEC. 25
T. 4 S. R. 66 W.

S.E. 1/4 SEC. 25
T. 4 S. R. 66 W.

PLAN
SURVEYED
PLOTTED
CROSS CHECKED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NOTE BOOK
NO.
STRUCTURE NOTES ON H.D.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
STRUCTURE NOTES ON H.D.
BY
DATE

No. 31 A-4(0) 0.00'-0.50'
SIMILAR No. 26A C.B.R.= 7.2

No. 31A A-7-6(17)
SIMILAR No. 27B C.B.R.=2.2

No. 32 A-4(0) 0.00'-0.17'
SIMILAR No. 26A C.B.R.=7.2

No. 32A A-7-6(17)
SIMILAR No. 27B C.B.R.=2.2

No. 33 A-2-4(0) 0.00'-0.25'
L.L. = 22.9
P.I. = 5.1
% 200 = 26
C.B.R.= 13.6

No. 33A A-7-6(12)
L.L. = 41.0
P.I. = 20.4
% 200 = 82
C.B.R. = 2.7

No. 34 A-2-4(0) 0.00'-0.25'
SIMILAR No. 33 C.B.R.= 13.6

No. 34A A-7-6(12)
SIMILAR No. 33A C.B.R.=2.7

No. 35 A-2-4(0) 0.00'-0.33'
SIMILAR No. 33 C.B.R.=13.6

No. 35A A-7-6(12)
SIMILAR No. 33A C.B.R.=2.7

5680
5670
5660
5650
5640

44.80
+1.85%
46.65
P.I. 52.20
51.11
53.40
F.I. 49.4
600' V.C.
H.P.S.D. 802'
No. 31
No. 31A
12' Lt.
No. 32
No. 32A
12' Lt.
+0.40%
F.I. 52.6
No. 33
No. 33A
12' Rt.
400' V.C.
57.80
59.05
61.80
P.I. 59.60
+1.90%
No. 34
No. 34A
12' Lt.
65.10
68.20
72.30
P.I. 62.70
F.I. 58.0
+2.30%
No. 35
No. 35A
12' Rt.

EXCAV. CLASS.
EXCAV.
EMBANK. 15
STA. YD. C.H.
YD. MI. O.H.
BORROW
BORR. SOURCE

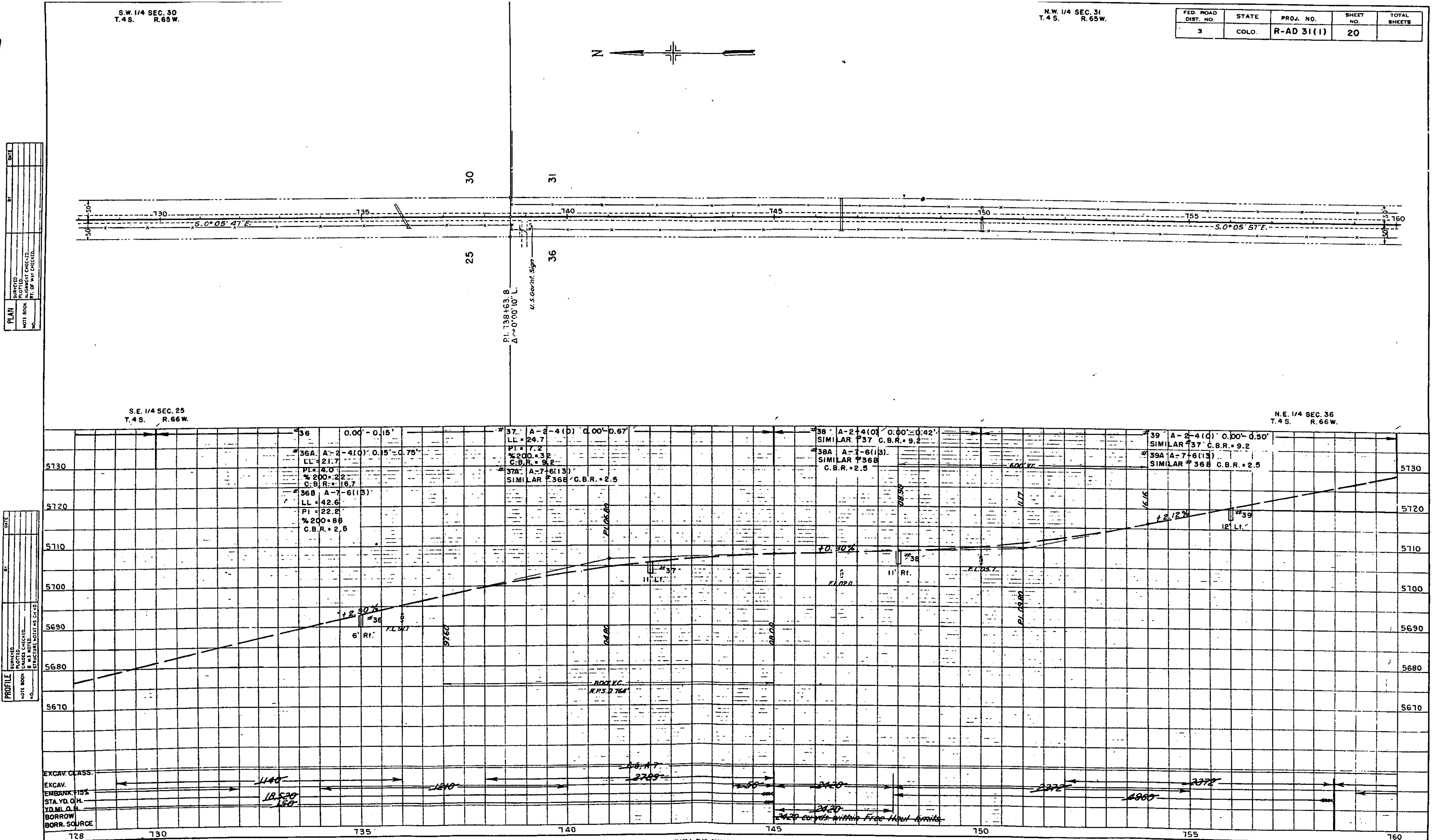
A-6, A-7
544
544
150
295
295
370
370
172
2923
3220
220
2923
2935

1,200 cu. yds. within R.B.M. sta. 728+ to 740+ 1¢ & Rt.
1623 cu. yds. available in N.E¼ Sec. 25 & N.W. ¼ Sec. 31, T. 4S., R. 65 W.

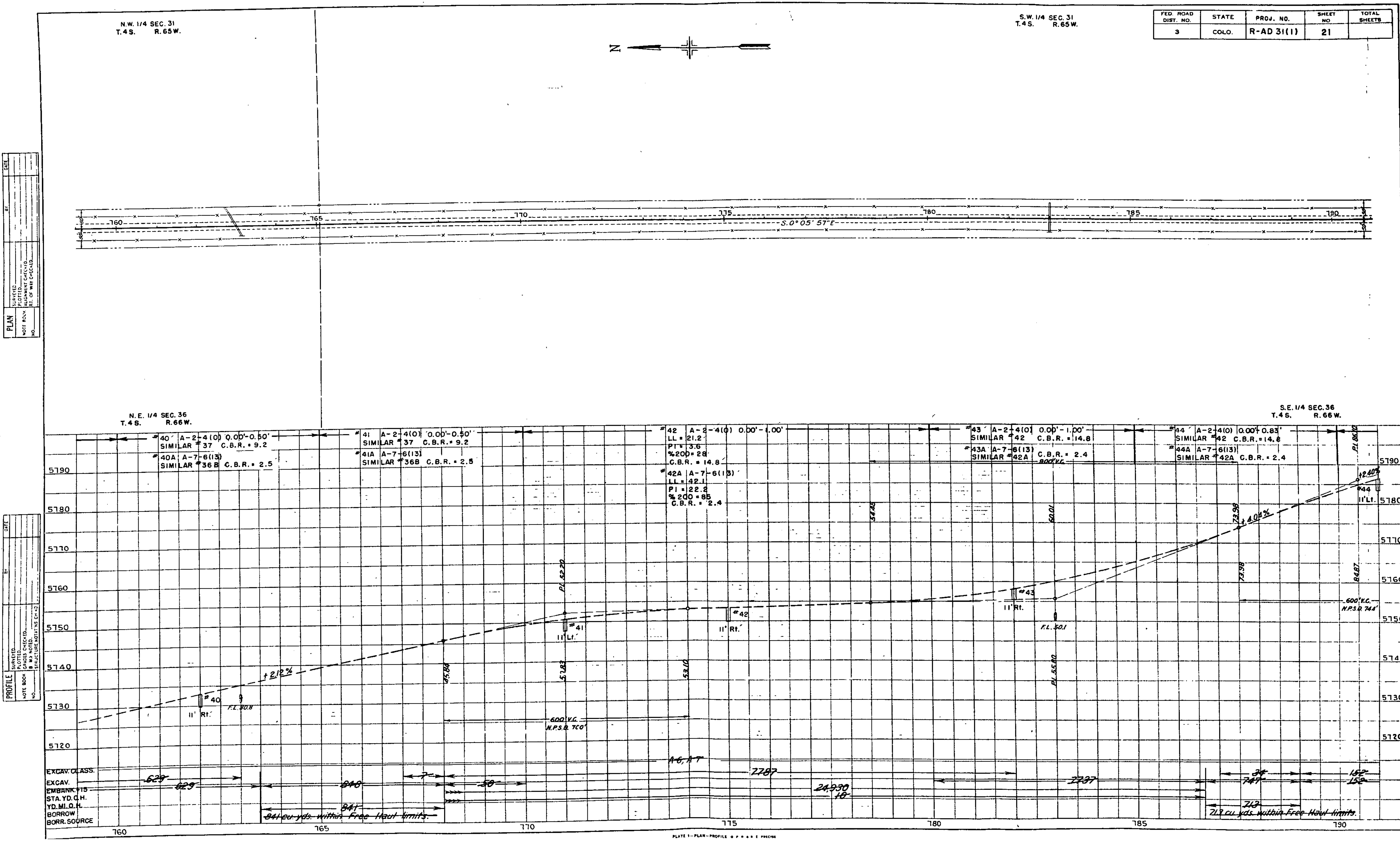
697 700 705 710 715 720 725 729

PLATE 1 — PLAN — PROFILE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	R-AD 31(1)	20	



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	21	



FED. ROAD DIST NO	STATE	PROJ. NO.	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	22	

S.W. 1/4 SEC. 31 T. 4 S. R. 65 W.

N.W. 1/4 SEC. 6 T. 5 S. R. 65 W.

S.W. 1/4 SEC. 6 T. 5 S. R. 65 W.

S.E. 1/4 SEC. 36 T. 4 S. R. 66 W.

N.E. 1/4 SEC. 1 T. 5 S. R. 66 W.

S.E. 1/4 SEC. 1 T. 5 S. R. 66 W.

T. 4 S., R. 65 W. / T. 5 S., R. 65 W.

T. 4 S., R. 66 W. / T. 5 S., R. 66 W.

N

31

36

6

U.S. Army Sign

U.S. Govt. Land Office Mon. Mail Box

P.I. 791 + 13.50 Δ = 0° 05' 57"

S.0°05'57"E.

S.0° 23' 09"W.

50' 50'

790 795 800 805 810 815 820

PLAN — SURVEYED — PLOTTED — CHECKED — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED — PLOTTED — CHECKED — NOTE BOOK — NO. — BY — DATE

No. 45 A-2-4(0) 0.00'-1.00'
SIMILAR No. 42 C.B.R.=14.8

No. 45A A-7-6(13)
SIMILAR No. 42A C.B.R.=2.4

No. 46 A-2-4(0) 0.00'-0.50'
SIMILAR No. 42 C.B.R.=14.8

No. 46A A-7-6(13)
SIMILAR No. 42A C.B.R.=2.4

No. 47 A-2-4(0) 0.00'-0.92'
SIMILAR No. 42 C.B.R.=14.8

No. 47A A-7-6(13)
SIMILAR No. 42A C.B.R.=2.4

No. 48 A-2-4(0) 0.00'-1.17'
SIMILAR No. 49 C.B.R.=16.6

No. 48A A-7-6(16)
SIMILAR No. 49A C.B.R.=2.3

No. 49 A-2-4(0) 0.00'-1.00'
L.L. = 21.4
P.I. = 3.2
%200 = 23
C.B.R. = 16.6

No. 49A A-7-6(16)
L.L. = 47.4
P.I. = 26.8
%200 = 85
C.B.R. = 2.3

5830 5820 5810 5800 5790 5780

P.I. 12.50 P.I. 16.10 P.I. 08.60

600' V.C. N.P.S.D. 744'

900' V.C. N.P.S.D. 613'

600' V.C.

+2.40% +1.10% +2.25% +2.40%

No. 45 No. 45A 11' Rt.

No. 46 No. 46A 12' Lt.

No. 47 No. 47A 12' Rt.

No. 48 No. 48A 11' Lt.

No. 49 No. 49A 12' Rt.

F.L. 39.3

08.56 07.55 05.30 03.11 09.35 26.90

84.87 33.30 08.70

EXCAV. CLASS.
EXCAV. 180 320
EMBANK. +15% 345
STA. YD. O.H
YD. MI. O.H.
BORROW
BORR. SOURCE

A-6, A-7 2363 2950 2363 3888 1023 1039 2390

246 cu. yds. within Free Haul limits.

2886 cu. yds. within Free Haul limits.

PLATE 1 — PLAN — PROFILE

CHARLES BRUNING COMPANY INC

FED ROAD DIST. NO	STATE	PROJ. NO.	SHEET NO	TOTAL SHEETS
3	COLO.	R-AD 31(1)	23	

S.W. 1/4 SEC. 6
T. 5 S. R. 65 W.

NW 1/4 SEC 7
T5S R65W

N

Δ. 89°52' L.
D. 3°
T. 1905.4'
L. 2995.6'
R. 1910.0'

PC 825+41.0
B. LINE

835

830

825

R/W

50'

MAIN LINE

Sta. 825+41.0 End R-AD 31(1) =
Sta. 825+41.0 Proj. AD-11

S 0°23'03" W.

840

60°

Project marker

Δ=8°15'L
T=68.9
D=6°
L=137.5

PC 845+19.9

PT 844+51.3

PT 846+57.4

29' BW gate

R E A Pole line

S 0°25' W.

BEGIN X LINE PC 843+82.4

Δ=8°15'R
T=68.9
D=6°
L=137.5

PT 845+88.8

S.E. 1/4 SEC. 1
T. 5 S., R. 66 W.

No. 50 A-2-4(0) 0.00'-0.83'
SIMILAR No. 49 C.B.R. = 8.6

No. 50A A-7-6(16)
SIMILAR No. 49A C.B.R. = 2.2

R.B.M.-On R/W & Reference Marker
50' Lt. Sta. 825+41.0
Elev. 5833.13

No. 50
No. 50A
11' Lt.

+2.40%

-0.922%

-3.40%

800' V.C.

200' V.C.

400' V.C.

N P 50.266'

N P 50.670'

F.L. 30.1

F.L. 24.8

P.I. 35.50

P.I. 33.50

P.I. 27.20

P.I. 44.30

P.I. 38.95

P.I. 13.40

P.I. 58.14.95

R.B.M.-On R/W & Reference Marker
50' Lt. Sta. 843+96
Elev. 5842.68

NE 1/4 SEC 12
T5S R66W

5850
5840
5830
5820

26.90
33.90
34.67
34.62
29.97
30.74
30.60
32.55
22.55
41.95 + 75
44.95
40.25 + 75

EXCAV.
EMBANKMENT

321
825
830
835
840
844
845
850

PLATE 3 — PLAN — PROFILE

PLAN
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
NO.
PT. OF WAY CHECKED

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
NOTE BOOK
STRUCTURE NOTATIONS CHECKED
NO.

DATE
BY