COLORADO
Department of Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.

r500001038

Description:
ROW Plans 24X36

Route # and Mile Points:
SH 145

Originating Office:
ROW/Survey

File Name:
S 0153(7)_ROW(.PDF)

Box Location:
20 (TUBE-19)of 38

For assistance, or to request changes to this form,
please email helpdesk@msimaging.com.

MOUNTAIN STATES
IMAGING

S 0153(7)

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S 0153 (7)	1	

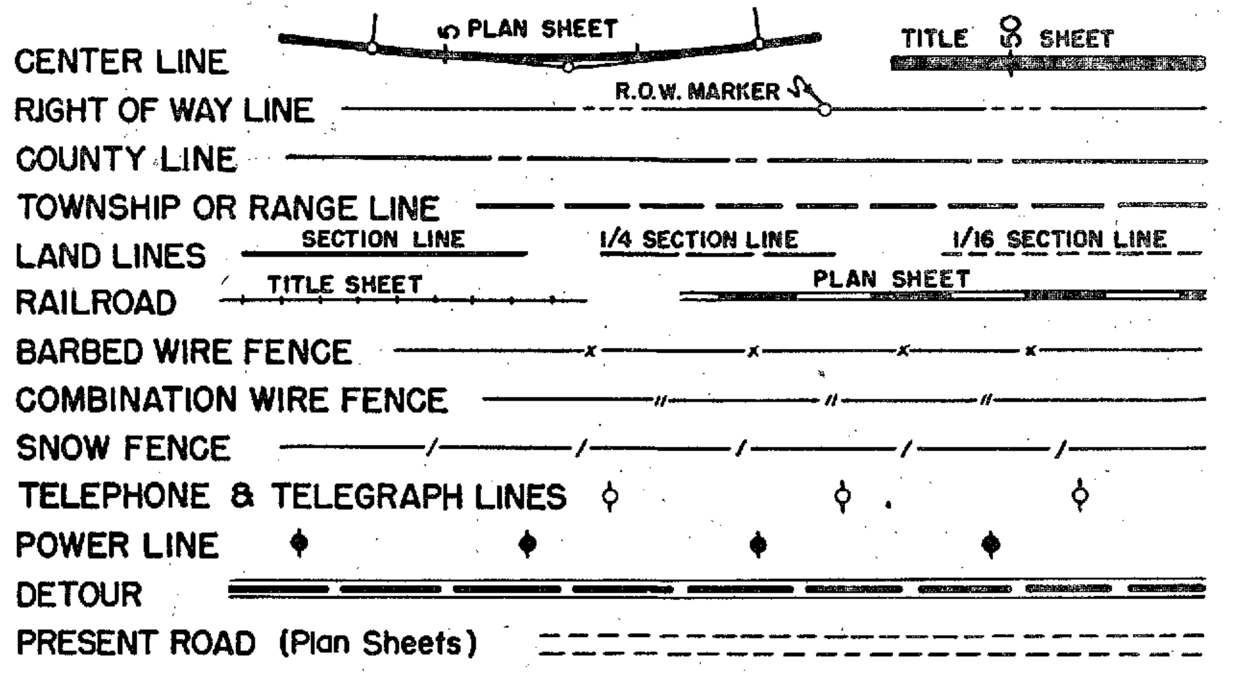
COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. S 0153(7)
STATE HIGHWAY NO.145
SAN MIGUEL & DOLORES COUNTIES

INDEX OF SHEETS

SHEET NO. 1 TITLE PAGE, SKETCH MAP AND TABULATION OF LENGTH & DESIGN DATA
2 TYPICAL SECTION, GENERAL NOTES, SUMMARY OF APPROXIMATE QUANTITIES, SUB-BASE PLAN AND PIT INFORMATION
3- 4 LIST OF STRUCTURES
5 STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES M-1-C
6 STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & AT CREST OF GRADES M-2-EM
7 STANDARD MARKER POSTS AND BENCH MARKS M-7-C
8- 9 STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS M-29-B
10 STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS M-107-C
11- 20 ALIGNMENT PLAN AND PROFILE
21- 22 SUMMARY OF EARTHWORK QUANTITIES
23-221 CROSS SECTIONS
7a STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS M-10-B

CONVENTIONAL SIGNS

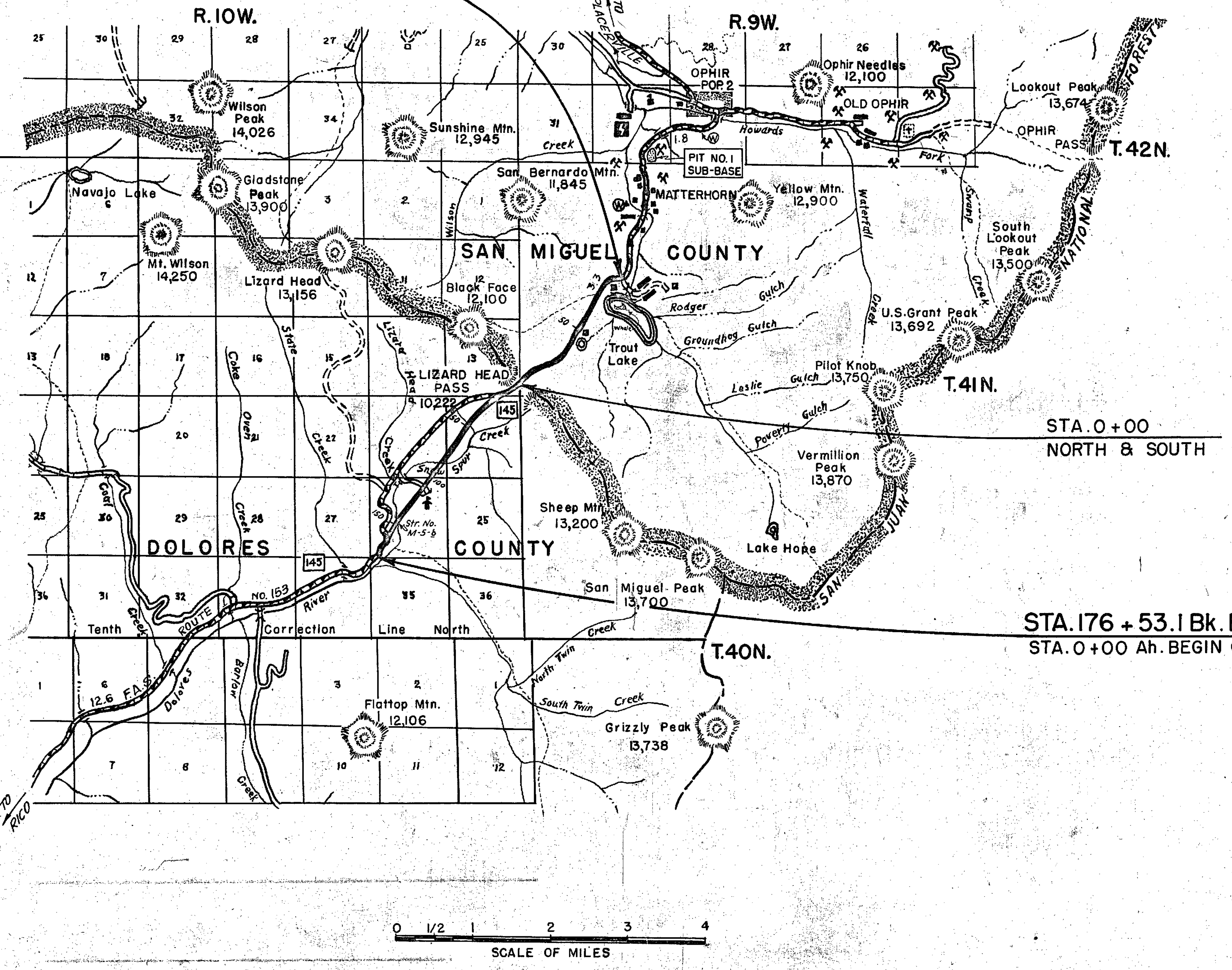


CENTER LINE
PLAN SHEET
TITLE SHEET
RIGHT OF WAY LINE
R.O.W. MARKER
COUNTY LINE
TOWNSHIP OR RANGE LINE
LAND LINES
SECTION LINE
1/4 SECTION LINE
1/16 SECTION LINE
RAILROAD
TITLE SHEET
PLAN SHEET
BARBED WIRE FENCE
COMBINATION WIRE FENCE
SNOW FENCE
TELEPHONE & TELEGRAPH LINES
POWER LINE
DETOUR
PRESENT ROAD (Plan Sheets)

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 } 27,153.6 FT. = 5.143 MI.
NET LENGTH OF PROJECT }

STA. 95 + 81.0 Bk. BEGIN S 0153 (7) =
STA. 0+00 Ah. BEGIN C 50-0145-05



N
TO PLACERVILLE
R.10W.
R.9W.
25
30
29
28
27
25
30
28
27
26
Wilson Peak 14,026
32
34
Sunshine Mtn. 12,945
31
Creek
OPHIR POP. 2
Ophir Needles 12,100
OLD OPHIR
Howards
Fork
1.8
PIT NO. 1 SUB-BASE
Lookout Peak 13,674
OPHIR PASS
T.42N.
Navajo Lake
6
1
Gladstone Peak 13,900
3
2
1
Wilson
San Bernardo Mtn. 11,845
MATTERHORN
Yellow Mtn. 12,900
Waterfall
Swamp
South Lookout Peak 13,500
NATIONAL
FOREST
Mt. Wilson 14,250
12
7
Lizard Head 13,156
11
12
Black Face 12,100
SAN MIGUEL COUNTY
3.3
Rodger
Gulch
Groundhog Gulch
Creek
U.S. Grant Peak 13,692
Creek
50
Trout Lake
13
18
17
Coke
16
State
15
Lizard Head
13
LIZARD HEAD PASS 10222
145
Leslie Gulch
Pilot Knob 13,750
T.41N.
Poverty Gulch
20
Oven 21
Creek
22
Creek
Creek
Snow Spur
100
150
Str. No. M-5-6
Vermillion Peak 13,870
STA. 0+00
NORTH & SOUTH
25
30
Coal
29
Creek
28
27
25
Sheep Mtn. 13,200
Lake Hope
DOLORES COUNTY
145
San Miguel Peak 13,700
SAN JUAN
36
31
32
NO. 153
River
35
36
Tenth Correction Line North
Creek
ROUTE
T.40N.
1
6
12.6 F.A.S.
Dolores
Barlow
Creek
3
2
1
North Twin Creek
South Twin Creek
Flattop Mtn. 12,106
Grizzly Peak 13,738
7
8
10
11
12
TO RICO
0 1/2 1 2 3 4
SCALE OF MILES

STA. 176 + 53.1 Bk. END S 0153(7)
STA. 0+00 Ah. BEGIN C 58-0145-02

TABULATION OF LENGTH & DESIGN DATA

STATION	LIZARD HEAD NORTH ROADWAY LIN. FT.	LIZARD HEAD SOUTH ROADWAY LIN. FT.
95 + 81.0 Bk. Begin S 0153 (7) = *0 + 00 Ah. Begin C 50-0145-05*		
	2,831.0	
67 + 50 Ah. = 67 + 00 Bk.		
	6,700.0	
0 + 00 San Miguel Co. - Dolores Co. Line		
		13,389.5
133 + 89.5 Bk. = 134 + 20.0 Ah.		
		4,233.1
176 + 53.1 Bk. End S 0153 (7) = *0 + 00 Ah. Begin C 58-0145-02*		
TOTALS	*9,531.0*	*17,622.6*
SUMMARY	LIN. FT.	LIN. FT.
Roadway - Lizard Head - North	*9,531.0*	*1.805*
Roadway - Lizard Head - South	*17,622.6*	*3.338*
TOTALS	*27,153.6*	*5.143*

DESIGN DATA

Maximum Degree of Curve	*12° 00'*
Maximum Grade	*7.0 %*
Minimum N.P.S.D. (Horizontal)	*310'*
Minimum N.P.S.D. (Vertical)	*440'*
Maximum Design Speed.	*40 M.P.H.*

NOTICE TO BIDDERS

IT IS RECOMMENDED THAT BIDDERS ON THIS PROJECT GO OVER THE PLAN DETAILS WITH ONE OF THE FOLLOWING FIELD REPRESENTATIVES OF THIS DEPARTMENT:

B. C. BRIGHT, PROJECT ENG. DURANGO
HOME PHONE: 1385-R
G. F. MC. NICHOLAS, CONST. ENG. DURANGO
HOME PHONE: 1558-W
OFFICE PHONE: 29

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED:
Mark U. Watrous *8-17-56*
CHIEF ENGINEER DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: ______ DATE

______
DISTRICT ENGINEER

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1962

PLAN		BY	DATE
NOTE BOOK NO. 19378	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE		BY	DATE
NOTE BOOK NO. 19382	SURVEYED		
	PLOTTED		
	GRADES CHECKED		
	B. M.s NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	11	

Note: See Sheet No. 14 for Beginning of Project.
Sta. 1+00 - Req'd 24" x 64' Cross Culvert.
Sta. 3+00 - Req'd 24" x 64' Cross Culvert.
Sta. 6+00 - Req'd 24" x 72' Cross Culvert.
Sta. 7+50 - Req'd 24" x 52' Cross Culvert. Inlet Bowl (W=10') & Outlet Ditch (W=3')
6+ to 10+ - Remove 200 Lin. Ft. Fence.
Sta. 12+00 - Req'd 24" x 96' Cross Culvert.
Sta. 17+25 - Req'd 24" x 60' Cross Culvert. Inlet Bowl (W=10') Remove 18" x 36' C.M.P. Lt.
Sta. 20+10 - Remove Comb. 15" C.M.P. and Wd. Box Culvert
Sta. 20+50 - Req'd 24" x 58' Cross Culvert. Inlet Bowl (W=10')
Sta. 23+50 - Req'd 24" x 50' Cross Culvert. Inlet Bowl (W=10') & Outlet Ditch (W=3')
Sta. 28+50 - Req'd 24" x 62' Cross Culvert.
NE 1/4 Sec. 18, T. 41N, R. 9W.
Θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
Δ = 42°26' L.
Δc = 29°56'
D = 5°00'
Tc = 306.34'
Lc = 598.67'
R = 1145.92'
Ts = 570.69'
HSD = 460'
Θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
N
P.O.T. 0+00
5
P.I. 10+04.0
15
T.S. 19+37.3
20
S.C. 21+87.3
25
C.S. 27+86.0
S.T. 30+36.0
P.I.S. 28+69.4
P.I. 25+08.0
P.I.S. 21+04.1
P.T. 14+82.0
P.C. 5+23.7
Note: Power Poles are Western Colo. Power Co.
SAN MIGUEL COUNTY
DOLORES COUNTY
FOREST
NATIONAL
UNCOMPAHGRE
SAN JUAN NATIONAL FOREST
County Line Marker
N. 51°26' E.
TO RICO
55°20'
23°20'30"
100'
N. 61°01' E.
Present
18" x 36' C.M.P.
Comb. 15" C.M.P. & W.B.C. 60° Skew Rt.
Road
N. 18°35' E.
HSD = 1,070'
Δ = 9°35' R.
D = 1°00'
T = 480.3'
L = 958.3'
R = 5729.58'
Note: Lands north of the county line were not sub-divided. Land lines projected.
SW 1/4 Sec. 18, T. 41N, R. 9W.
SE 1/4 Sec. 18, T. 41N, R. 9W.
CLEARING & GRUBBING.
Sta. 0+00 to 2+00 - Light Willows & Brush.
Sta. 4+00 to 6+00 - Light Willows.
Sta. 9+50 to 10+50 - Light Spruce, Rt.
Sta. 11+50 to 13+00 - Heavy Willows
Sta. 17+00 to 18+00 - Light Spruce & Willows.

P.I. 10,247.47
44.49
41.71
36.14
22.39
P.I. 10,226.87
99.70
83.39
18.17
-1.8545 %
-5.4348 %
-5.4348 %
600' V.C.
N.P.S.D. 490'
1000' V.C.
N.P.S.D. 635'
FL = 35.3
FL = 32.3
FL = 23.0
FL = 27.4
FL = 02.4
FL = 82.1
FL = 65.4
FL = 49.9
FL = 21.4
10,250
10,240
10,230
10,220
10,210
10,200
10,190
10,180
10,180
10,170
10,160
10,190
10,180
10,170
10,180
10,170
10,160
10,150
10,140
10,130
10,120
10,110
Excav. Fac.
Excav.
Excav. x Fac.
Embank.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
8195
8195
8195
10,940
1.00
4508
4508
4508
F.H.
2351
2351
6329
10,068
4972
3978
.80
11,812
9450
1.00
0
5
10
15
20
25
30

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19378	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
NO. 19382	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	12	

N
Sta. 32+00 - Req'd 24"x 56' Cross Culvert. Inlet Bowl (W=10')
Sta. 36+50 - Req'd 24"x 72' Cross Culvert.
35
40
P.I.S. 41+21.5
P.I. 43+75.0
Sta. 45+00 - Req'd 24"x 48' Cross Culv. Inlet Bowl (W=10') & Outlet Ditch. (W=3)
45
Sta. 44+95 - Remove 24"x 23' C.M.P.
P.I.S. 46+18.6
Sta. 49+50 - Req'd 24"x 52' Cross Culvert. Inlet Bowl (W=10')
T.S. 50+00.5
S.C. 53+00.5
C.S. 54+88.8
55
S.T. 57+88.8
Sta. 60+00 - Req'd 24"x 58' Cross Culvert Inlet Bowl (W=10')
60
SE1/4 Sec. 7, T.41N., R. 9W.
Θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
Δ=29°18'L.
Δc=11°18'
D=6°00'
Tc=94.48'
Lc=188.33'
R=954.93'
Ts=400.53'
HSD=420'
Θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
30
S.T. 30+36.0
Power Poles are Western Colo. Power Co.
100'
100'
N. 18° 35' E.
Present
24"x 23' C.M.P.
N. 42° 44' E.
Road
30"x 28' C.M.P.
N. 13° 26' E.
100'
100'
T.S. 39+08.0
S.C. 42+28.0
C.S. 45+11.8
S.T. 48+31.8
Sta. 39+50 - Req'd 24"x 56' Cross Culvert.
Θs=6°24'
Ls=320.00'
U=213.47'
V=106.79'
Δ=24°09'R.
Δc=11°21'
D=4°00'
Tc=142.35'
Lc=283.75'
R=1132.39'
Ts=466.99'
HSD.=540'
Θs=6°24'
Ls=320.00'
U=213.47'
V=106.79'
NE1/4 Sec. 18, T.41N., R.9W.
Sta. 52+90 - Remove 30"x 28' C.M.P., Rt.
P.I.S. 52+00.8
Sta. 53+00 - Req'd 24"x 56' Cross Culvert. Inlet Bowl (W=10')
P.I. 54+01.0
7
18
8
17
P.I.S. 55+89.0
Sta. 57+00 - Req'd 24"x 82' Cross Culvert. Inlet Bowl (W=10')
SW1/4 Sec. 8, T.41N., R. 9W.
10,120
10,110
10,100
10,090
10,080
10,070
10,060
10,050
800' V.C.
12.74
-5.4348%
FL=02⁸
95.00
P.I. 10,091.00
85.72
-1.4333%
FL=79²
FL=77⁸
79.10
FL=73⁶
P.I. 10,073.80
70.38
600' V.C.
N.P.S.D.-440'
FL=54²
53.82
-5.9922%
43.84
10,060
10,050
10,040
10,050
10,040
10,030
43.84
FL=34⁴
-5.9922%
FL=05⁸
95.90
FL=92⁴
10,060
10,050
10,040
10,030
10,020
10,010
10,000
9990
Excav. Factor
Excav
Excav X Factor
Embank't
Sta. Yd. O'haul
Yd. Mi. O'haul
Borrow
Borrow Source
6562
6562
13,914
193,507
3266
1.00
16,102
16,102
278
4717
30
35
40
45
50
55
60

CLEARING & GRUBBING
Sta. 30+00 to 31+00 - Scattered Spruce & Willows
Sta. 36+00 to 41+00 - Heavy Willows.
Sta. 44+00 to 47+00 - Scattered Willows, Rt.
Sta. 57+50 to 60+50 - Heavy Spruce & Aspen, Lt.

PLATE 1—PLAN-PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

LIZARD HEAD SUMMIT—NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	13	

PLAN
SURVEYED
PLOTTED
NOTE BOOK NO. 19378
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

SE¼ Sec. 7, T.41N., R.9W.
NW¼ Sec. 8, T.41N., R. 9W.
SW¼ Sec. 8, T.41N., R.9W.
Z
60
65
70
75
85
90
100'
100'
P.O.T. 61+70.0
Sta. 62+00 - Req'd 24"x 46' Cross Culvert. Inlet Bowl (W=10')
P.O.T. 63+40.0
Sta. 64+50 - Req'd 24"x 98' Cross Culvert Fill hole, Lt.
Sta. 66+00 - Req'd 24"x 76' Cross Culvert.
P.O.T. 67+00 Bk. 67+50 Ah.
P.I.S. 68+89.8
Sta. 70+40 - Remove 18"x 25' C.M.P.
P.I. 70+43.0
P.I.S. 71+94.0
Sta. 70+50 - Req'd 24"x 80' Cross Culvert.
Sta. 75+45 - Remove 18"x 32' C.M.P.
Sta. 76+00 - Req'd 24"x 74' Cross Culvert. Dike at Inlet.
P.I.S. 76+74.8
Sta. 78+85 - Remove 24"x 26' C.M.P., Lt.
P.I. 78+43.0
Sta. 78+90 - Req'd 24"x 114' Cross Culvert Fill hole, Lt.
P.I.S. 80+00.2
Sta. 79+82 - Req'd 36"x 128' Cross Culvert. Fill hole, Lt.
N. 13°26' E.
18"x 25' C.M.P.
N. 28°16' E.
To Cabins
18"x 32' C.M.P.
24"x 26' C.M.P.
30"x 60' C.M.P.
N. 59°38' E.
15"x 28' C.M.P.
N. 40°49' E.
T.S. 67+56.4
S.C. 69+56.4
C.S. 71+27.3
S.T. 73+27.3
T.S. 75+41.3
S.C. 77+41.3
C.S. 79+33.4
S.T. 81+33.4
T.S. 82+04.8
S.C. 84+04.8
C.S. 86+75.2
S.T. 88+75.2
EQUATION
Θ_s = 4°00'
L_s = 200.00'
U = 133.37'
V = 66.70'
Δ = 14°50' R.
Δ_c = 6°50'
D = 4°00'
T_c = 85.5'
L_c = 170.8'
R = 1432.39'
T_s = 286.59'
HSD = 1,050'
Θ_s = 4°00'
L_s = 200.00'
U = 133.37'
V = 66.70'
Θ_s = 8°00'
L_s = 200.00'
U = 133.47'
V = 66.79'
Δ = 31°22' R.
Δ_c = 15°22'
D = 8°00'
T_c = 96.62'
L_c = 192.08'
R = 716.20'
T_s = 301.68'
HSD = 750'
Θ_s = 8°00'
L_s = 200.00'
U = 133.47'
V = 66.79'
Θ_s = 4°00'
L_s = 200.00'
U = 133.37'
V = 66.70'
Δ = 18°49' L.
Δ_c = 10°49'
D = 4°00'
T_c = 135.62'
L_c = 270.42'
R = 1432.39'
T_s = 337.52'
HSD = 510'
Θ_s = 4°00'
L_s = 200.00'
U = 133.37'
V = 66.70'
Sta. 80+80 - Remove 30"x 60' C.M.P.
P.I.S. 83+38.2
Sta. 85+50 - Req'd 24"x 54' Cross Culvert. Inlet Bowl (W=10')
P.I. 85+42.3
Sta. 85+75 - Remove 15"x 28' C.M.P., Rt.
P.I.S. 87+41.9

CLEARING & GRUBBING
Sta. 62+50 to 64+00 - Heavy Spruce & Willows.
Sta. 64+00 to 66+50 - Heavy Willows.
Sta. 68+50 to 70+50 - Light Willows.
Sta. 75+50 to 76+00 - Heavy Spruce, Rt.
Sta. 78+50 to 80+00 - Heavy Willows & Light Spruce.
Sta. 85+00 to 86+00 - Light Willows & Spruce.

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M.S NOTED
STRUCTURE NOTATIONS CHK'D.
NOTE BOOK NO. 19322
BY
DATE

10,000
9990
9980
9970
9960
9950
9940
9930
9920
9910
9900
9890
9940
9930
9920
9,910
9900
9890
9880
9870
9860
9850
9840
9830
FL=92⁴
95.96
FL 80²
-5.9922%
FL=52°
FL=49°
53.96
53.96
-5.9922%
FL=28⁵
P.I. 9921.00
26.99
20.92
14.70
14.70
N.P.S.D. > 1,300'
200 V.C.
FL=93⁵
-6.3016%
FL=66²
FL=59⁸
FL=37²
1.00
1.00
13.97
Excav. Factor
Excavation
Excav. X Factor
Embank
Sta. Yd. O.H.
Yd. Mi. O.H.
6017
6017
15,253
4068
4068
8037
19,162
9924
9924
9924
60
65
70
75
80
85
90

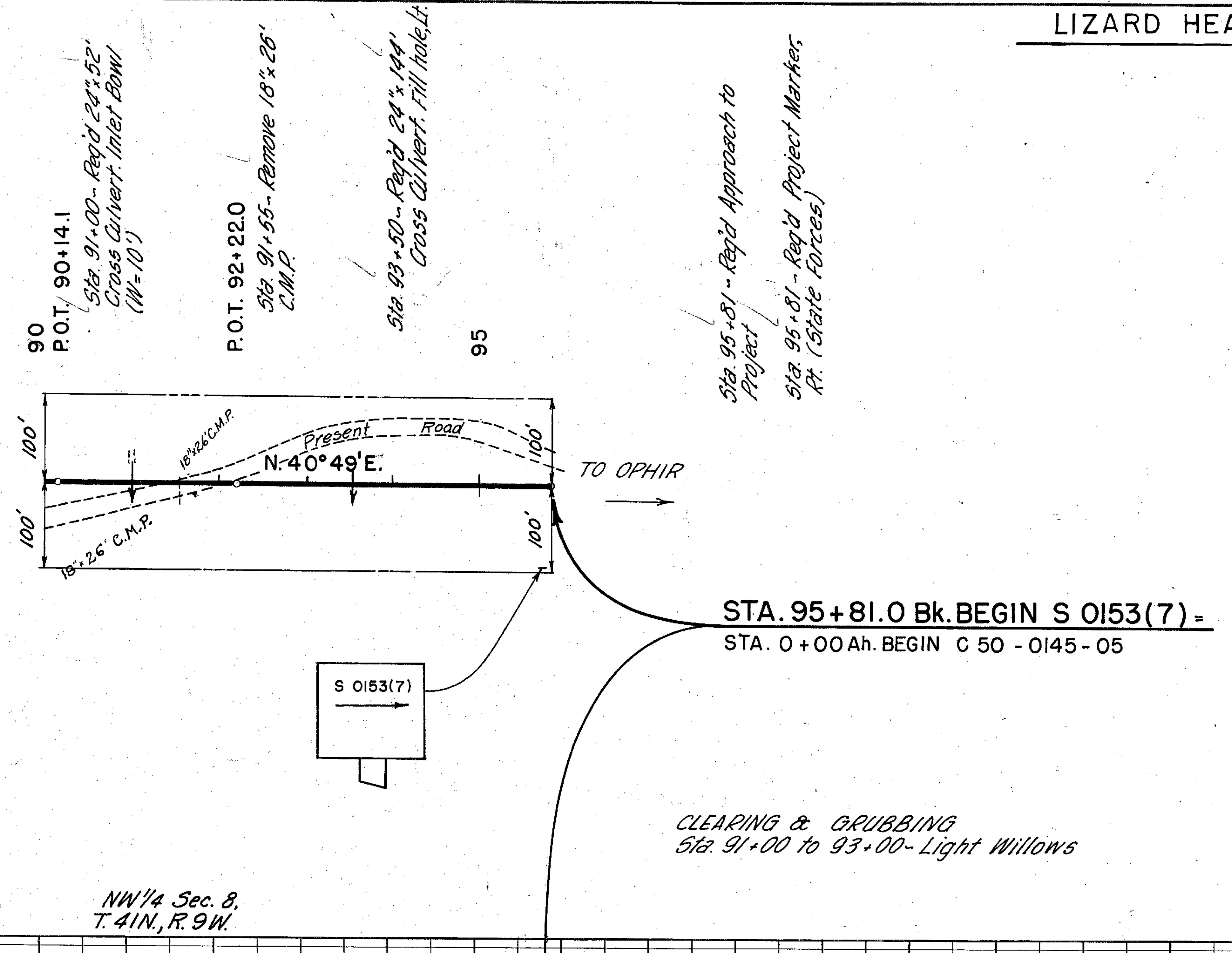
PLATE 1 — PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
NOTE BOOK NO. 19378	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	14	


90
P.O.T. 90+14.1
Sta. 91+00 - Req'd 24" x 52' Cross Culvert. Inlet Bowl (W=10')
P.O.T. 92+22.0
Sta. 91+55 - Remove 18" x 26' C.M.P.
Sta. 93+50 - Req'd 24" x 144' Cross Culvert. Fill hole, Lt.
95
Sta. 95+81 - Req'd Approach to Project
Sta. 95+81 - Req'd Project Marker, Rt. (State Forces)
N
100'
100'
100'
100'
18" x 26' C.M.P.
18" x 26' C.M.P.
Present Road
N. 40° 49' E.
TO OPHIR
STA. 95+81.0 Bk. BEGIN S 0153(7) =
STA. 0+00 Ah. BEGIN C 50 - 0145 - 05
S 0153(7)
CLEARING & GRUBBING
Sta. 91+00 to 93+00 - Light Willows
NW 1/4 Sec. 8, T. 41N., R. 9W.

PROFILE		BY	DATE
NOTE BOOK NO. 19382	SURVEYED		
	PLOTTED		
	GRADES CHECKED		
	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

9830
9820
9810
9800
9790
9780
9770
9760
9750
12.87
FL=04°
6.3015%
FL=68°
69.74
Excav. Fac
1.00
Excav.
7047
2
Exc X Fac.
7047
2
Embank
7047
18,350
Sta. Yd. O.H.
38,475
Borrow
18,348
Borrow Source
Widen Cut Sta 85 to 93
90
95

PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19277	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19281	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	15	

NE¼ Sec. 24
T.41N, R.10W.
P.O.T. 0+00
1+00 ~ Req'd Road Approach, Lt.
5
P.O.T. 5+87.6
10
3'x3'x60' W.B.C.
15
P.I. 16+58.4
20
22+10 ~ Remove 2.5'x3'x 45' W.B.C., Req'd 30"x68' Cross Culvert.
N
25
P.O.T. 26+00.0
P.I.S. 29+28.6
30
100'
100'
← TO OPHIR
S.51°26'W.
1.5'x3'x32' W.B.C.
2'x2'x24' W.B.C.
2.5'x3'x45' W.B.C.
S.63°00'W.
100'
100'
UNCOMPAHGRE NATIONAL FOREST
SAN MIGUEL COUNTY
DOLORES COUNTY
SAN JUAN NATIONAL FOREST
4+00 ~ Req'd 36"x54' Cross Culvert.
9+07 ~ Remove 3'x3'x60' W.B.C., Lt., Req'd 36"x72' Cross Culvert.
P.C. 12+71.5
13+00 ~ Remove 1.5'x3'x32' W.B.C., Req'd 24"x72' Cross Culvert, Inlet Bowl (W=10').
Δ=11°34'
D=1°30'
T=386.86'
L=771.11'
R=3819.72'
HSD=800'
17+67 ~ Remove 2'x2'x24' W.B.C., Req'd 24"x48' Cross Culvert, Inlet Bowl (W=10').
T.41N, R.9W.
T.41N, R.10W.
P.T. 20+42.6
CLEARING & GRUBBING
Sta. 8+50 to 9+50 ~ Light Willows, Rt.
Sta. 12+50 to 15+00 ~ Light Willows, Rt. & Lt.
Sta. 15+00 to 30+00 ~ Old Railroad Cross ties.
T.S. 27+95.1
S.C. 29+95.1
θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
SW¼ Sec. 18
SE¼ Sec. 13
T.41N, R.10W.
10,250
10,240
10,230
10,220
10,210
10,200
10,190
10,180
+1.8545%
P.I. 10247.27
44.49
41.73
FL=36²
FL=22²
FL=12²
FL=15²
FL=98²
-1.8483%
93.67
600' V.C.
NPSD=490'
Factor
Excav.
Exc.x Fac.
Emb'm't.
Sta.Yd.O.H.
Yd.Mi.O.H.
Borrow
Bor.Source
.85
1287
1094
1094
F.H.
66
56
1214
F.H.
7359
6828
888
755
8567
50,555
278
1859
1580
1214÷.85=1428
7303÷.85=8592
Widen Cut Rt Sta 1 to 3
Widen Cuts Rt. & Lt. Sta 4+25 to 7+00
0
5
10
15
20
25
30

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
NOTE BOOK NO. 19377	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE		BY	DATE
NOTE BOOK NO. 19381	SURVEYED		
	PLOTTED		
	GRADES CHECKED		
	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	16	

30
P.I. 30+72.0
P.I.S. 32+07.8
31+00 ~ Remove 2'x2'x32' W.B.C., Req'd 24"x54' Cross Culvert, Inlet Bowl (W=10').
35+15 ~ Remove 2'x2'x20' W.B.C., Req'd 24"x58' Cross Culvert.
36+50 ~ Req'd 24"x60' Cross Culvert.
35
100'
100'
2'x2'x32' W.B.C.
C.S. 31+41.0
S.T. 33+41.0
N. 89°20' W.
2'x2'x20' W.B.C.
Δ=27°40' R.
Δc=11°40'
D=8°00'
Tc=73.17'
Lc=145.83'
R=716.20'
Ts=276.87'
HSD = 350'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
41+00 ~ Req'd 24"x60' Cross Culvert.
T.S. 38+16.5
40
S.C. 40+56.5
Δ=25°50' L.
Δc=11°26'
D=6°00'
Tc=97.27'
Lc=190.56'
R=954.93'
Ts=339.52'
HSD = 860'
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
C.S. 42+47.0
S.T. 44+87.0
45
2'x2'x25' W.B.C.
43+50 ~ Remove 2'x2'x25' W.B.C., Req'd 24"x58' Cross Culvert.
P.I.S. 39+76.6
P.I. 41+56.0
P.I.S. 43+27.1
S. 64°50' W.
N
51+00 ~ Req'd 24"x58' Cross Culvert.
T.S. 49+82.9
50
S.C. 51+82.9
P.I.S. 51+16.4
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
Δ=58°10' L.
Δc=42°10'
D=8°00'
Tc=276.12'
Lc=527.08'
Ts=499.59'
R=716.20'
HSD = 750'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
60
S.T. 59+10.0
100'
100'
C.S. 57+10.0
1.5'x3'x30' W.B.C.
P.I.S. 57+76.8
55
S. 6°40' W.
P.I. 54+82.5
57+78 ~ Remove 1.5'x3'x30' W.B.C., Req'd 24"x44' Cross Culvert.
CLEARING & GRUBBING
Sta. 36+00 to 41+00 - Light Willows, Lt.
Sta. 56+00 to 58+00 - Light Willows, Lt.
Sta. 30+00 to 60+00 - Old Railroad Cross ties
NE 1/4 Sec. 24, T. 41N., R. 10W.
NW 1/4 Sec. 24, T. 41N., R. 10W.
10,200
10,190
10,180
10,170
10,160
10,150
10,140
10,130
93.67
FL=86±
FL=78²
FL=74³
FL=66⁴
FL=62⁴
-1.8483%
FL=49²
FL=39⁶
38.22
Factor
Excav.
Exc.x Fac.
Embank.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Bor. Source
.85
7332
6232
23
20
18
14
10,707
26,772
10,672 ÷ .85 = 12,555
Widen Cuts Rt. & Lt. Sta. 31 to Sta. 35
1
1
432
368
368
F.H.
135
114
1104
F.H.
990 ÷ .85 = 1165
Widen Cuts Rt. & Lt. Sta. 45 to Sta. 50
2654
3122
2654
5190
30
35
40
45
50
55
60

PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19377	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19381	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT—SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	17	

NW¼ Sec. 24.
T.41N., R.10W.
SW¼ Sec. 24.
T.41N., R.10W.
N
P.O.T. 61+51.0
64+22 ~ Remove 2'x 2.5'x 40' W.B.C., Req'd 24"x 72' Cross Culvert, Outlet Ditch.
P.I.S. 64+40.3
P.I. 66+22.0
P.I.S. 67+95.3
73+25 ~ Req'd 24"x 48' Cross Culvert, Inlet Bowl, (W=10').
P.I.S. 74+63.6
P.I. 75+91.0
P.I.S. 77+15.6
78+23 ~ Remove 1'x 1.5'x 14' W.B.C., Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10').
P.I.S. 82+48.3
83+30 ~ Remove 1'x 1.5'x 10' W.B.C.
P.I. 83+75.0
83+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10').
84+ to 89+ ~ Req'd Channel Change, Lt. (W=12').
P.I.S. 85+01.0
86+35 ~ Remove 1'x 1.5'x 13' W.B.C.
86+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10').
P.C. 86+33.8
88+20 ~ Remove 1'x 1.5'x 14' W.B.C.
88+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10').
Δ=11°34' L.
D=2°00'
T=290.20'
L=578.30'
R=2865.00'
HSD > 1,300'
60
65
70
75
80
90
100'
100'
S. 6°40' W.
2'x 2.5'x 40' W.B.C.
CREEK
S. 32°46' W.
1'x 1.5'x 14' W.B.C.
S. 49°32' W.
MEADOW
1'x 1.5'x 10' W.B.C.
CREEK
S. 58°37' W.
1'x 1.5'x 13' W.B.C.
1'x 1.5'x 14' W.B.C.
100'
100'
T.S. 62+80.1
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
S.C. 65+20.1
C.S. 67+15.1
Δ=26°06' R.
Δc=11°42'
D=6°00'
Tc=97.84'
Lc=195.00'
R=954.93'
Ts=341.87'
HSD=430'
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
S.T. 69+55.1
CLEARING AND GRUBBING
69+50 TO 73+00 ~ Light Willows, Lt. & Rt.
60+00 TO 90+00 ~ Old Railroad Ties
T.S. 72+96.8
Θs=6°15'
Ls=250.00'
U=166.77'
V=83.43'
S.C. 75+46.8
Δ=16°46' R.
Δc=4°16'
D=5°00'
Tc=42.69'
Lc=85.33'
R=1145.92'
Ts=294.16'
HSD=470'
C.S. 76+32.2
Θs=6°15'
Ls=250.00'
U=166.77'
V=83.43'
S.T. 78+82.2
T.S. 81+48.3
Θs=2°15'
Ls=150.00'
U=100.01'
V=50.01'
S.C. 82+98.3
Δ=9°05'
Δc=4°35'
D=3°00'
Tc=76.42'
Lc=152.78'
R=1909.86'
Ts=226.75'
HSD=600'
C.S. 84+51.0
Θs=2°15'
Ls=150.00'
U=100.01'
V=50.01'
S.T. 86+01.0
P.I. 89+24.0
10,140
10,130
10,120
10,110
10,100
10,090
10,080
10,138.22
FL=20'
FL=10⁰
-1.8483%
FL=01⁶
FL=90³
FL=84⁵
FL=81⁴
10,082.77
Factor
Excav.
Excav.x Fac.
Embank't
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
.85
134
114
1304
1109
7922
36407
224
7882
6699
2558
2174
2297
F.H.
145
123
60
65
70
75
80
85
90

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
NOTE BOOK	PLOTTED		
NO. 19377	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

LIZARD HEAD SUMMIT—SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	18	

Δ=11°34' L.
D=2°00'
T=290.2'
L=578.3'
R=2865.00'
HSD>1,300'
P.T. 92+12.1
P.I.S. 93+26.0
95
P.I. 96+82.5
P.I.S. 100+01.3
T.S. 101+18.4
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
Δ=44°29' L.
Δc=26°29'
D=6°00'
Tc=224.71'
Lc=441.39'
R=954.93'
Ts=541.99'
HSD=450'
107+50 ~ Req'd 18"x32' Side Drain, Lt. Road Approach, Rt. & Lt.
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
112+00 ~ Remove 1'x2.5'x16' W.B.C. Req'd 24"x44' Cross Culvert, Ditches.
120
115
N
90
100'
100'
S.47°03' W.
CREEK
45°
N.89°26'W.
S.C. 104+18.4
105
C.S. 108+59.8
110
S.T. 111+59.8
S. 46°05' W.
CREEK
MEADOW
1'x1.5'x14' W.B.C.
100'
100'
To Creek
T.S. 92+26.0
S.C. 93+76.0
θs=4°30'
Ls=150.00'
U=100.03'
V=50.03'
Δ=43°31' R.
Δ=34°31'
D=6°00'
Tc=296.7'
Lc=575.3'
R=954.93'
Ts=456.51'
HSD=470'
96+85 ~ Req'd 72"x100' Cross Culvert.
C.S. 99+51.3
S.T. 101+01.3
θs=4°30'
Ls=150.00'
U=100.03'
V=50.03'
102+50 ~ Req'd 24"x50' Cross Culvert, Inlet Bowl (W=10').
P.I.S. 103+18.7
P.I. 106+60.4
To Swamp Creek
109+00 ~ Req'd 24"x52' Cross Culvert, Inlet Bowl (W=10')
109+10 ~ Remove 1.5'x2'x15' W.B.C.
1.5'x2'x15' W.B.C.
P.I.S. 109+60.0
1'x2.5'x16' W.B.C.
117+00 ~ Req'd 24"x54' Cross Culvert.
SW1/4 Sec. 24, T.41N, R.10W.
SE1/4 Sec. 25, T.41N, R.10W.
10,090
10,080
10,070
10,060
10,050
10,040
10,030
10,020
10,010
-1.8483%
10,077.23
10,082.77
79.08
77.00
74.45
200' V.C.
N.P.S.D.=910'
FL=55'
FL=46⁶
-2.7779%
FL=29⁴
FL=21³
FL=03⁵
10,002.23
Factor
Excav.
Exc.xFac
Emb'k't
Sta.Yd.O.H
Yd.Mi.O.H
Borrow
Borrow Source
203
194
194
9
F.H.
6060
5150
1346
5141
1181
1389
1181
139
.85
7088
6023
8374
33,352
50
2766
2351
90
95
100
105
110
115
120

CLEARING AND GRUBBING
89+00 TO 95+00 ~ Light Willows and Brush
90+00 TO 120+00 ~ Old Railroad Ties

PROFILE		BY	DATE
	SURVEYED		
NOTE BOOK	PLOTTED		
NO. 19381	GRADES CHECKED		
	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

PLATE 1–PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
NOTE BOOK	PLOTTED		
NO. 19377	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
NOTE BOOK	PLOTTED		
NO. 19381	GRADES CHECKED		
	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	19	

NE 1/4 Sec. 26,
T.41N., R.10W.
120
100'
100'
124+00 ~ Req'd 24"x 92' Cross Culvert.
125
127+00 ~ Req'd 24"x 92' Cross Culvert.
T.S. 126+64.8
S. 46°05' W.
Θ_s = 6°15'
L_s = 250.00'
U = 166.77'
V = 83.43'
Δ = 23°44' L.
Δ_c = 11°14'
D = 5°00'
T_c = 112.69'
L_c = 224.67'
R = 1145.92'
T_s = 366.22'
HSD = 490'
S.C. 129+14.8
130
C.S. 131+39.5
Θ_s = 6°15'
L_s = 250.00'
U = 166.77'
V = 83.43'
S.T. 133+89.5 Bk. = 134+20.0 Ah.
135
Z
140
T.S. 143+86.9
145
Θ_s = 20°00'
L_s = 400.00'
U = 268.39'
V = 134.90'
HSD = 340'
Δ = 44°58' L.
Δc = 4°58'
D = 10°00'
Tc = 24.85'
Lc = 49.67'
R = 573.00'
Ts = 441.12'
S.C. 147+86.9
C.S. 148+36.6
150
Θ_s = 20°00'
L_s = 400.00'
U = 268.39'
V = 134.90'
100'
100'
P.I.S. 149+71.5
MEADOW
CREEK
S. 22°21' W.
CREEK
Road
Present
Channel Change
P.I.S. 128+31.6
P.I. 130+31.0
132+00 ~ Req'd 24"x 72' Cross Culvert.
P.I.S. 132+22.9
EQUATION
139+50 ~ Req'd 36"x 60' Cross Culvert.
132+ to 150+ ~ Req'd Channel Change, Rt. (W=20').
146+00 ~ Req'd 24"x 52' Cross Culvert, Inlet Bowl (W=10').
P.I.S. 146+55.3
P.I. 148+28.0
NW 1/4 Sec. 26,
T.41N., R.10W.
10,000
9990
9980
9970
9960
9950
9940
9930
9920
-2.7779%
10,002.33
95.67
9985.56
82.41
FL=70'
FL=57.3
9961.84
-5.9293%
800' V.C.
N.P.S.D. = 610'
FL=39'
133+89.5 Bk. =
134+20.0 Ah.
9938.75
9938.75
9922.15
9910
9900
9890
9850
9840
9830
-5.9293%
FL=97.3
9892.50
98.43
92.23
85.50
200' V.C.
N.P.S.D. = 760'
-7.0%
FL=59.0
9836.50
9910
9900
9890
9880
9870
9860
9850
9840
9830
Factor
Excav.
Exc. x Fac.
Emb'k't
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
.85
1.00
9267
6993
-9267 ÷ .85 = 10,902
Widen Cut Lt. & Rt.
Sta 118~121
26,626
26,626
26,626
111,197
91
1614
1614
1614
F.H.
120
125
130
135
140
145
150

CLEARING & GRUBBING
Sta. 121+50 to 132+00 ~ Heavy Buck Brush, Rt. & Lt.
Sta. 138+50 to 139+50 ~ Heavy Willows & Brush, Rt. & Lt.
Sta. 140+00 to 146+00 ~ Light Willows & Brush, Rt. & Lt.
Sta. 120+00 to 122+00 ~ Old Railroad Cross Ties.

PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C D H 134
April 1952

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	11	

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19378	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B.M.s NOTED		
NO. 19392	STRUCTURE NOTAT'NS CHK'D.		

Note: See Sheet No. 14 for Beginning of Project.
Sta. 1+00 ~ Req'd 24" x 64' Cross Culvert
Sta. 3+00 ~ Req'd 24" x 64' Cross Culvert
Sta. 6+00 ~ Req'd 24" x 72' Cross Culvert
Sta. 7+50 ~ Req'd 24" x 52' Cross Culvert Inlet Bowl (W=10') & Outlet Ditch (W=3')
6+ to 10+ ~ Remove 200 Lin. Ft. Fence.
Sta. 12+00 ~ Req'd 24" x 96' Cross Culvert
Sta. 17+25 ~ Req'd 24" x 60' Cross Culvert Inlet Bowl (W=10') Remove 18" x 36' C.M.P., Lt.
Sta. 20+10 ~ Remove Comb. 15" C.M.P. and Wd. Box Culvert.
Sta. 20+50 ~ Req'd 24" x 58' Cross Culvert Inlet Bowl (W=10')
Sta. 23+50 ~ Req'd 24" x 50' Cross Culvert Inlet Bowl (W=10') & Outlet Ditch (W=3')
Sta. 28+50 ~ Req'd 24" x 62' Cross Culvert
N
NE 1/4 Sec. 18, T. 41N., R. 9W.
P.O.T. 0+00
5
P.I. 10+04.0
15
T.S. 19+37.3
20
S.C. 21+87.3
25
C.S. 27+86.0
S.T. 30+36.0
θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
Δ = 42°26' L.
Δc = 29°56'
D = 5°00'
Tc = 306.34'
Lc = 598.67'
R = 1145.92'
Ts = 570.69'
HSD = 460'
θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
Note: Power Poles are Western Colo. Power Co.
SAN MIGUEL COUNTY
FOREST
NATIONAL
UNCOMPAHGRE
SAN JUAN NATIONAL FOREST
DOLORES COUNTY
County Line Marker
100'
100'
55°20'
TO RICO
N. 51°26' E.
23°20'30"
N. 61°01' E.
Present
18" x 36" C.M.P.
Comb. 15" C.M.P. & W.B.C. 60° Skew Rt.
Road
N. 18°35' E.
100'
100'
P.C. 5+23.7
HSD = 1,070
Δ = 9°35' R.
D = 1°00'
T = 480.3'
L = 958.3'
R = 5729.58'
P.T. 14+82.0
Note: Lands north of the county line were not sub-divided. Land lines projected.
P.I.S. 21+04.1
P.I. 25+08.0
P.I.S. 28+69.4
SW 1/4 Sec. 18 T. 41N., R. 9W.
SE 1/4 Sec. 18, T. 41N., R. 9W.
CLEARING & GRUBBING
Sta. 0+00 to 2+00 ~ Light Willows & Brush.
Sta. 4+00 to 6+00 ~ Light Willows.
Sta. 9+50 to 10+50 ~ Light Spruce, Rt.
Sta. 11+50 to 13+00 ~ Heavy Willows
Sta. 17+00 to 18+00 ~ Light Spruce & Willows
P.I. 10,247.47
44.49
-1.8545 %
FL = 35.9
41.71
FL = 32.3
36.14
FL = 23.0
FL = 27.4
P.I. 10,226.87
22.39
600' V.C.
N.P.S.D. 490'
FL = 02.4
99.70
-5.4348 %
1000' V.C.
N.P.S.D. 635'
FL = 82.1
83.39
83.39
FL = 65.4
FL = 49.9
-5.4348 %
FL = 21.4
18.17
10,250
10,240
10,230
10,220
10,210
10,200
10,190
10,180
10,180
10,170
10,160
10,190
10,180
10,170
10,180
10,170
10,160
10,150
10,140
10,130
10,120
10,110
Excav. Fac.
Excav.
Excav. x Fac.
Embank.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
8195
8195
8195
10,940
1.00
4508
4508
4508
F.H.
2351
2351
6329
10,068
4972
3978
.80
11,812
9450
1.00
0
5
10
15
20
25
30

PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	12	

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. L9378	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
NO. L9382	B. M.S. NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

N
SE1/4 Sec. 7, T.41N., R.9W.
SW1/4 Sec. 8, T.41N., R.9W.
NE1/4 Sec. 18, T.41N., R.9W.
ST. 30+36.0
Sta. 32+00 - Req'd 24" x 56" Cross Culvert Inlet Bowl (W.10')
Sta. 36+50 - Req'd 24" x 72" Cross Culvert
P.I.S. 41+21.5
P.I. 43+75.0
Sta. 43+00 - Req'd 24" x 48" Cross Culv. Inlet Bowl (W.10') & Outlet Ditch (W.3')
Sta. 44+95 - Remove 24" x 23' C.M.P.
P.I.S. 46+18.6
Sta. 49+50 - Req'd 24" x 52" Cross Culvert Inlet Bowl (W.10')
T.S. 50+00.5
S.C. 53+00.5
C.S. 54+88.8
ST. 57+88.8
Sta. 60+00 - Req'd 24" x 58" Cross Culvert Inlet Bowl (W.10')
Δ = 29°18' L.
Δ_c = 11°18'
D = 6°00'
T_c = 94.48'
L_c = 188.33'
R = 954.93'
T_s = 400.53'
HSD = 420'
θ_s = 9°00'
L_s = 300.00'
U = 200.26'
V = 100.24'
θ_s = 9°00'
L_s = 300.00'
U = 200.26'
V = 100.24'
Power Poles are Western Colo. Power Co.
Present
Road
N. 18°35' E.
N. 42°44' E.
N. 13°26' E.
24" x 23' C.M.P.
30" x 28' C.M.P.
100'
30
35
40
45
55
60
Sta. 39+50 - Req'd 24" x 56" Cross Culvert
T.S. 39+08.0
S.C. 42+28.0
C.S. 45+11.8
ST. 48+31.8
θ_s = 6°24'
L_s = 320.00'
U = 213.47'
V = 106.79'
Δ = 24°09' R.
Δ_c = 11°21'
D = 4°00'
T_c = 142.35'
L_c = 283.75'
R = 1132.39'
T_s = 466.99'
HSD = 540'
θ_s = 6°24'
L_s = 320.00'
U = 213.47'
V = 106.79'
Sta. 52+90 - Remove 30" x 28' C.M.P.
P.I.S. 52+00.8
Sta. 53+00 - Req'd 24" x 56" Cross Culvert Inlet Bowl (W.10')
P.I. 54+01.0
7 8
18 17
P.I.S. 55+89.0
Sta. 57+00 - Req'd 24" x 82" Cross Culvert Inlet Bowl (W.10')
CLEARING & GRUBBING
Sta. 30+00 to 31+00 - Scattered Spruce & Willows
Sta. 36+00 to 41+00 - Heavy Willows
Sta. 44+00 to 47+00 - Scattered Willows, Lt.
Sta. 57+50 to 60+50 - Heavy Spruce & Aspen, Lt.
10,120
10,110
10,100
10,090
10,080
10,070
10,060
10,050
10,060
10,050
10,040
10,030
10,020
10,010
10,000
9990
10,050
10,040
10,030
10,060
10,050
10,040
800' V.C.
12.74
-3.4348%
FL=02.8
95.00
P.I. 10,091.00
FL=79.2
85.72
FL=77.8
-1.4393%
78.10
FL=73.6
P.I. 10,073.80
70.38
800' V.C.
NPSD-440'
FL=54.2
53.82
-5.9972%
42.84
43.84
FL=34.4
-5.9972%
FL=05.6
95.90
FL=92.4
Excav. Factor
Excav.
Excav. x Factor
Embank't
Sta. Yd. O'haul
Yd. Mi. O'haul
Borrow
Borrow Source
6562
6562
13,914
1.00
16,102
16,102
193,507
3266
218
4717
30
35
40
45
50
55
60

PLATE 1 - PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

LIZARD HEAD SUMMIT—NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	13	

SE¼ Sec. 7, T.41N., R.9W.
NW¼ Sec. 8, T.41N., R.9W.
SW¼ Sec. 8, T.41N., R.9W.
N
P.O.T. 61+70.0
Sta. 62+00 - Req'd 24" x 46' Cross Culvert Inlet Bowl (W=10')
P.O.T. 63+40.0
Sta. 64+50 - Req'd 24" x 98' Cross Culvert Fill hole, Lt.
65
Sta. 66+00 - Req'd 24" x 76' Cross Culvert
P.O.T. 67+00 Bk. / 67+50 Ah.
P.I.S. 68+89.8
Sta. 70+40 - Remove 18" x 25' C.M.P.
70
P.I. 70+43.0
P.I.S. 71+94.0
Sta. 70+50 - Req'd 24" x 80' Cross Culvert
Sta. 75+45 - Remove 18" x 32' C.M.P.
75
Sta. 76+00 - Req'd 24" x 74' Cross Culvert. Dike at Inlet.
P.I.S. 76+74.8
Sta. 78+85 - Remove 24" x 26' C.M.P., Lt.
P.I. 78+43.0
Sta. 78+90 - Req'd 24" x 114' Cross Culvert Fill hole, Lt.
P.I.S. 80+00.2
Sta. 79+82 - Req'd 36" x 128' Cross Culvert Fill hole, Lt.
60
100'
100'
N.13°26'E.
18" x 25' C.M.P.
N.28°16'E.
18" x 32' C.M.P.
24" x 26' C.M.P.
30" x 60' C.M.P.
To Cabins
N.59°38'E.
15" x 28' C.M.P.
N.40°49'E.
100'
100'
85
90
T.S. 67+56.4
S.C. 69+56.4
C.S. 71+27.3
S.T. 73+27.3
T.S. 75+41.3
S.C. 77+41.3
C.S. 79+33.4
S.T. 81+33.4
T.S. 82+04.8
S.C. 84+04.8
C.S. 86+75.2
S.T. 88+75.2
Θs=4°00'
Ls=200.00'
U=133.37'
V=66.70'
Δ=14°50'R.
Δc=6°50'
D=4°00'
Tc=85.5'
Lc=170.8'
R=1432.39'
Ts=286.59'
HSD=1,050'
Θs=4°00'
Ls=200.00'
U=133.37'
V=66.70'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
Δ=31°22'R.
Δc=15°22'
D=8°00'
Tc=96.62'
Lc=192.08'
R=716.20'
Ts=301.68'
HSD=750'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
Θs=4°00'
Ls=200.00'
U=133.37'
V=66.70'
Δ=18°49'L.
Δc=10°49'
D=4°00'
Tc=135.62'
Lc=270.42'
R=1432.39'
Ts=337.52'
HSD=510'
Θs=4°00'
Ls=200.00'
U=133.37'
V=66.70'
Sta. 80+80 - Remove 30" x 60' C.M.P.
P.I.S. 83+38.2
Sta. 85+50 - Req'd 24" x 54' Cross Culvert. Inlet Bowl (W=10')
P.I. 85+42.3
Sta. 85+75 - Remove 15" x 28' C.M.P., Rt.
P.I.S. 87+41.9
EQUATION

CLEARING & GRUBBING
Sta. 62+50 to 64+00 - Heavy Spruce & Willows.
Sta. 64+00 to 66+50 - Heavy Willows.
Sta. 68+50 to 70+50 - Light Willows.
Sta. 75+50 to 76+00 - Heavy Spruce, Rt.
Sta. 78+50 to 80+00 - Heavy Willows & Light Spruce.
Sta. 85+00 to 86+00 - Light Willows & Spruce.

10,000
9990
9980
9970
9960
9950
9940
9930
9920
9910
9900
9890
9940
9930
9920
9.910
9900
9890
9880
9870
9860
9850
9840
9830
FL=92.9
95.90
FL=80.2
-5.9922%
FL=52.0
FL=49.0
53.96
53.96
-5.9922%
FL=28.5
26.99
P.I. 9921.00
20.93
14.70
N.P.S.D.=1,300
200 V.C.
14.70
FL=93.5
-6.3016%
FL=66.7
FL=59.8
FL=37.2
1.00
1.00
13.87
Excav. Factor
Excavation
Excav. X Factor
Embank
Sta. Yd. O.H.
Yd. Mi. O.H.
6017
6017
15,253
4068
4068
8837
19,162
9934
9924
9924
60
65
70
75
80
85
90

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	14	

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19379	RT. OF WAY CHECKED		

90
P.O.T. 90+14.1
Sta 91+00 - Req'd 24"x52' Cross Culvert Inlet Bowl (W=10')
P.O.T. 92+22.0
Sta 91+55 - Remove 18"x26' C.M.P.
Sta 93+50 - Req'd 24"x144' Cross Culvert. Fill hole, Lt.
95
Sta 95+81 - Req'd Approach to Project
Sta 95+81 - Req'd Project Marker, Rt. (State Forces)
N
100'
100'
100'
100'
18"x26' C.M.P.
Present Road
N.40°49'E.
18"x26' C.M.P.
TO OPHIR
S 0153(7)
9830
9820
9810
9800
9790
9780
9770
9760
9750
13.87
FL=04°
6.3015 %
FL=68⁸
69.74
90
95

STA. 95+81.0 Bk. BEGIN S 0153(7) =
STA. 0+00 Ah. BEGIN C 50 - 0145 - 05

CLEARING & GRUBBING
Sta 91+00 to 93+00 - Light Willows

NW¼ Sec. 8,
T.41N., R.9W.

Excav. Fac.	1.00	
Excav.	7047	2
Exc. X Fac.	7047	2
Embank	7047	18,350
Sta. Yd. O.H.		38,475
Borrow		18,348
Borrow Source		Widen Cut Sta 85 to 93

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
NO. 19382	B. M.s NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

PLATE 1 - PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19377	RT. OF WAY CHECKED		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	15	

P.O.T. 0+00
1+00 ~ Req'd Road Approach, Lt.
5
P.O.T. 5+87.6
10
3'x3'x60' W.B.C.
S.51°26' W.
← TO OPHIR
100'
100'
UNCOMPAHGRE NATIONAL FOREST
SAN MIGUEL COUNTY
DOLORES COUNTY
SAN JUAN NATIONAL FOREST
4+00 ~ Req'd 36"x54' Cross Culvert.
9+07 ~ Remove 3'x3'x60' W.B.C., Lt., Req'd 36"x72' Cross Culvert.
SW¼ Sec. 18
P.C. 12+71.5
1.5'x3'x32' W.B.C.
13+00 ~ Remove 1.5'x3'x32' W.B.C., Req'd 24"x72' Cross Culvert, Inlet Bowl (W=10').
15
P.I. 16+58.4
Δ = 11°34'
D = 1°30'
T = 386.86'
L = 771.11'
R = 3819.72'
HSD = 800'
2'x2'x24' W.B.C.
17+67 ~ Remove 2'x2'x24' W.B.C., Req'd 24"x48' Cross Culvert, Inlet Bowl (W=10').
T.41N., R.9W.
T.41N., R.10W.
P.T. 20+42.6
20
SE¼ Sec. 13
T.41N., R.10W.
22+10 ~ Remove 2.5'x3'x45' W.B.C., Req'd 30"x68' Cross Culvert.
Z
2.5'x3'x45' W.B.C.
S.63°00'W.
25
P.O.T. 26+00.0
P.I.S. 29+28.6
30
100'
100'
T.S. 27+95.1
S.C. 29+95.1
θs = 8°00'
Ls = 200.00'
U = 133.47'
V = 66.79'
NE¼ Sec. 24
T.41N., R.10W.
CLEARING & GRUBBING
Sta. 8+50 to 9+50 ~ Light Willows, Rt.
Sta. 12+50 to 15+00 ~ Light Willows, Rt. & Lt.
Sta. 15+00 to 30+00 ~ Old Railroad Cross ties.
10,250
10,240
10,230
10,220
10,210
10,200
10,190
10,180
+1.8545%
P.I. 10247.27
44.49
41.73
FL = 36⁰
600' V.C.
N.P.S.D. = 490'
FL = 22⁷
FL = 12⁰
-1.8483%
FL = 13⁰
FL = 98²
93.67
Factor
Excav.
Exc. x Fac.
Emb'm't.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Bor. Source
1214
F.H.
1214 ÷ .85 = 1428
Widen Cut Rt. Sta 1 to 3
1287
1094
1094
F.H.
66
56
7359
6828
7303 ÷ .85 = 8592
Widen Cuts Rt. & Lt. Sta 4+25 to 7+00
.85
888
755
50,555
278
8567
1859
1580
0
5
10
15
20
25
30

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19381	STRUCTURE NOTAT'NS CH'KD.		

PLATE 1 — PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19377	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19381	STRUCTURE NOTAT'NS CH'KD.		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	16	

30
P.I. 30+72.0
100'
100'
2'x2'x32' W.B.C.
P.I.S. 32+07.8
31+00 ~ Remove 2'x2'x32' W.B.C., Req'd 24"x 54' Cross Culvert, Inlet Bowl (W=10')
35+15 ~ Remove 2'x2'x20' W.B.C., Req'd 24"x 58' Cross Culvert.
35
36+50 ~ Req'd 24"x 60' Cross Culvert
N. 89°20' W.
2'x2'x20' W.B.C.
T.S. 38+16.5
41+00 ~ Req'd 24"x 60' Cross Culvert.
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
Δ=25°50' L.
Δc=11°26'
D=6°00'
Tc=97.27'
Lc=190.56'
R=954.93'
Ts=339.52'
HSD=860'
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
40
S.C. 40+56.5
C.S. 42+47.0
2'x2'x25' W.B.C.
S.T. 44+87.0
45
43+50 ~ Remove 2'x2'x25' W.B.C., Req'd 24"x 58' Cross Culvert.
S. 64°50' W.
51+00 ~ Req'd 24"x 58' Cross Culvert.
T.S. 49+82.9
50
S.C. 51+82.9
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
Δ=58°10' L.
Δc=42°10'
D=8°00'
Tc=276.12'
Lc=527.08'
Ts=499.59'
R=716.20'
HSD=750'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
55
60
S.T. 59+10.0
.001
.001
C.S. 57+10.0
1.5'x3'x30' W.B.C.
P.I.S. 57+76.8
S. 6°40' W.
C.S. 31+41.0
S.T. 33+41.0
Δ=27°40' R.
Δc=11°40'
D=8°00'
Tc=73.17'
Lc=145.83'
R=716.20'
Ts=276.87'
HSD=350'
Θs=8°00'
Ls=200.00'
U=133.47'
V=66.79'
P.I.S. 39+76.6
P.I. 41+56.0
P.I.S. 43+27.1
P.I.S. 51+16.4
P.I. 54+82.5
57+78 ~ Remove 1.5'x3'x30' W.B.C., Req'd 24"x 44' Cross Culvert.
CLEARING & GRUBBING
Sta. 36+00 to 41+00 - Light Willows Lt.
Sta. 56+00 to 58+00 - Light Willows Lt.
Sta. 30+00 to 60+00 - Old Railroad Cross ties
NE 1/4 Sec. 24. T. 41N., R. 10W.
NW 1/4 Sec. 24. T. 41N., R. 10W.
93.67
FL=86±
FL=76±
FL=74±
FL=66±
FL=62±
-1.8483%
FL=49±
FL=39±
38.22
10,200
10,190
10,180
10,170
10,160
10,150
10,140
10,130
Factor
Excav.
Exc. x Fac.
Embank.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Bor. Source
7332
6232
23
20
18
14
.85
10,707
26,772
1
1
432
368
368
F.H.
10,672 ÷ .85 = 12,555
Widen Cuts Rt. & Lt. Sta. 31 to Sta. 35
135
114
1104
F.H.
990 ÷ .85 = 1165
Widen Cuts Rt. & Lt. Sta. 45 to Sta. 50
2654
3122
2654
5190
30
35
40
45
50
55
60

PLATE 1 - PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	17	

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19377	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19381	STRUCTURE NOTAT'NS CH'KD.		

NW¼ Sec. 24
T.41N., R.10W.
SW¼ Sec. 24
T.41N., R.10W.
N
60
100'
100'
S. 6°40' W.
P.O.T. 61+51.0
64+22 ~ Remove 2'x 2.5'x 40' W.B.C., Req'd 24"x 72' Cross Culvert, Outlet Ditch.
2'x2.5'x40' W.B.C.
P.I.S. 64+40.3
65
P.I. 66+22.0
P.I.S. 67+95.3
70
73+25 ~ Req'd 24"x 48' Cross Culvert, Inlet Bowl, (W-10')
CREEK
S. 32°46' W.
T.S. 62+80.1
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
S.C. 65+20.1
Δ=26°06' R.
Δc=11°42'
D=6°00'
Tc=97.84'
Lc=195.00'
R=954.93'
Ts=341.87'
HSD=430'
C.S. 67+15.1
Θs=7°12'
Ls=240.00'
U=160.13'
V=80.12'
S.T. 69+55.1
CLEARING AND GRUBBING
69+50 TO 73+00 ~ Light Willows, Lt. & Rt.
60+00 TO 90+00 ~ Old Railroad Ties
T.S. 72+96.8
Θs=6°15'
Ls=250.00'
U=166.77'
V=83.43'
S.C. 75+46.8
Δ=16°46' R.
Δc=4°16'
D=5°00'
Tc=42.69'
Lc=85.33'
R=1145.92'
Ts=294.16'
HSD=470'
C.S. 76+32.2
Θs=6°15'
Ls=250.00'
U=166.77'
V=83.43'
S.T. 78+82.2
P.I.S. 74+63.6
75
P.I. 75+91.0
P.I.S. 77+15.6
78+23 ~ Remove 1'x 1.5'x 14' W.B.C., Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10')
1'x1.5'x14' W.B.C.
80
S. 49°32' W.
MEADOW
P.I.S. 82+48.3
83+30 ~ Remove 1'x 1.5'x 10' W.B.C.
1'x1.5'x10' W.B.C.
P.I. 83+75.0
83+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10')
84+ to 89+ ~ Req'd Channel Change, Lt. (W=12')
P.I.S. 85+01.0
86+35 ~ Remove 1'x 1.5'x 13' W.B.C.
86+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10')
P.C. 86+33.8
88+20 ~ Remove 1'x 1.5'x 14' W.B.C.
Δ=11°34' L.
D=2°00'
T=290.20'
L=578.30'
R=2865.00'
HSD > 1,300'
88+50 ~ Req'd 24"x 46' Cross Culvert, Inlet Bowl (W=10')
CREEK
S. 58°37' W.
1'x1.5'x13' W.B.C.
1'x1.5'x14' W.B.C.
90
T.S. 81+48.3
Θs=2°15'
Ls=150.00'
U=100.01'
V=50.01'
S.C. 82+98.3
Δ=9°05'
Δc=4°35'
D=3°00'
Tc=76.42'
Lc=152.78'
R=1909.86'
Ts=226.75'
HSD=600'
C.S. 84+51.0
Θs=2°15'
Ls=150.00'
U=100.01'
V=50.01'
S.T. 86+01.0
P.I. 89+24.0
10,140
10,130
10,120
10,110
10,100
10,090
10,080
10,138.22
FL=20'
FL=10⁰
1.8483%
FL=01⁶
FL=90³
FL=84⁵
FL=81⁴
10,082.77
Factor
Excav.
Excav.x Fac.
Embank't
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
134
114
1304
1109
.85
7922
36407
224
7882
6699
2558
2174
2297
F.H.
145
123
60
65
70
75
80
85
90
PLATE 1 — PLAN-PROFILE C.P.R.A. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

LIZARD HEAD SUMMIT—SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	18	

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 1937Z	RT. OF WAY CHECKED		

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
NO. 19 37Z	STRUCTURE NOTAT'NS CH'KD.		

Δ=11°34' L.
D=2°00'
T=290.2'
L=578.3'
R=2865.00'
HSD>1,300'
P.T. 92+12.1
P.I.S. 93+26.0
95
P.I. 96+82.5
90
CREEK
45°
100'
S.47°03' W.
T.S. 92+26.0
S.C. 93+76.0
θs=4°30'
Ls=150.00'
U=100.03'
V=50.03'
Δ=43°31' R.
Δ=34°31'
D=6°00'
Tc=296.7'
Lc=575.3'
R=954.93'
Ts=456.51'
HSD=470'
96+85 ~ Req'd 72" x 100' Cross Culvert.
C.S. 99+51.3
θs=4°30'
Ls=150.00'
U=100.03'
V=50.03'
S.T. 101+01.3
P.I.S. 100+01.3
N. 89°26' W.
T.S. 104+18.4
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
102+50 ~ Req'd 24" x 50' Cross Culvert, Inlet Bowl (W=10')
P.I.S. 103+18.7
S.C. 104+18.4
105
Δ=44°29' L.
Δc=26°29'
D=6°00'
Tc=224.71'
Lc=441.39'
R=954.93'
Ts=541.99'
HSD=450'
P.I. 106+60.4
107+50 ~ Req'd 18" x 32' Side Drain Lt., Road Approach, Rt. & Lt.
C.S. 108+59.8
109+00 ~ Req'd 24" x 52' Cross Culvert, Inlet Bowl (W=10')
109+10 ~ Remove 1.5' x 2' x 15' W.B.C.
P.I.S. 109+60.0
110
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
S.T. 111+59.8
112+00 ~ Remove 1' x 2.5' x 16' W.B.C. Req'd 24" x 44' Cross Culvert, Ditches
1' x 2' x 16' W.B.C.
1' x 2' x 15' W.B.C.
115
N
120
S. 46°05' W.
CREEK
MEADOW
1' x 1.5' x 14' W.B.C.
117+00 ~ Req'd 24" x 54' Cross Culvert.
100'
SW 1/4 Sec. 24, T.41N., R.10W.
SE 1/4 Sec. 25, T.41N., R.10W.
CLEARING AND GRUBBING
89+00 TO 95+00 ~ Light Willows and Brush
90+00 TO 120+00 ~ Old Railroad Ties
10,090
10,080
10,070
10,060
10,050
10,040
10,030
10,020
10,010
-1.8483%
10,082.77
79.08
10,077.22
77.00
74.45
200' V.C.
N.P.S.D.-910'
FL 55
FL 46
-2.7779%
FL 29
FL 13
FL 03
10,002.23
Factor
Excav.
Exc. x Fac.
Emb'k't
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
203
174
174
F.H.
9
6060
5150
1345
5141
1181
1389
1181
139
85
7088
6023
8374
33,352
50
2766
2351
90
95
100
105
110
115
120
PLATE 11 - PLAN - PROFILE 10 P.P. & R.E. STANDARD
KEUFFEL & ESSER CO. NEW YORK

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

PLAN		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO. 19377	RT. OF WAY CHECKED		

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	19	

NE 1/4 Sec. 26.
T. 41N., R. 10W.
120
100'
100'
124+00 ~ Req'd 24"x 92' Cross Culvert.
125
127+00 ~ Req'd 24"x 92' Cross Culvert.
T.S. 126+64.8
S. 46°05' W.
Θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
S.C. 129+14.8
130
Δ = 23°44' L.
Δc = 11°14'
D = 5°00'
Tc = 112.69'
Lc = 224.67'
R = 1145.92'
Ts = 366.22'
HSD = 490'
C.S. 131+39.5
Θs = 6°15'
Ls = 250.00'
U = 166.77'
V = 83.43'
S.T. 133+89.5 Bk. = 134+20.0 Ah.
135
Creek
Meadow
Present Road
Channel Change
S. 22°21' W.
140
T.S. 143+86.9
145
Θs = 20°00'
Ls = 400.00'
U = 268.39'
V = 134.90'
HSD = 340'
Δ = 44°58' L.
Δc = 4°58'
D = 10°00'
Tc = 24.85'
Lc = 49.67'
R = 573.00'
Ts = 441.12'
S.C. 147+86.9
C.S. 148+36.6
Θs = 20°00'
Ls = 400.00'
U = 268.39'
V = 134.90'
150
100'
100'
P.I.S. 149+71.5
P.I.S. 128+31.6
P.I. 130+31.0
132+00 ~ Req'd 24"x 72' Cross Culvert.
P.I.S. 132+22.9
EQUATION
139+50 ~ Req'd 36"x 60' Cross Culvert.
132+ to 150+ ~ Req'd Channel Change, Rt. (W=20').
146+00 ~ Req'd 24"x 52' Cross Culvert, Inlet Bowl (W=10').
P.I.S. 146+55.3
P.I. 148+28.0

CLEARING & GRUBBING
Sta. 121+50 to 132+00 - Heavy Buck Brush, Rt. & Lt.
Sta. 138+50 to 139+50 - Heavy Willows & Brush, Rt. & Lt.
Sta. 140+00 to 146+00 - Light Willows & Brush, Rt. & Lt.
Sta. 120+00 to 122+00 - Old Railroad Cross Ties.

PROFILE		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M.S NOTED		
NO. 19381	STRUCTURE NOTAT'NS CH'KD.		

PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

COLORADO DEPARTMENT OF HIGHWAYS
Form C.D.H. 134
April 1952

LIZARD HEAD SUMMIT-SOUTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153 (7)	20	

PLAN	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
RT. OF WAY CHECKED	
NOTE BOOK NO. 19277	

PROFILE	
SURVEYED	
PLOTTED	
GRADES CHECKED	
B. M.'s NOTED	
STRUCTURE NOTAT'NS CH'KD.	
NOTE BOOK NO. 19281	

150
155
160
165
170
175
180
S.T. 152+36.6
153+ to 156+ ~ Req'd Channel Change, Lt. (W=20').
P.I.S. 155+90.8
P.I. 157+10.0
P.I.S. 158+24.1
18"x24' C.M.P. Cross Culvert
P.I.S. 166+22.1
P.I. 167+47.0
P.I.S. 168+69.7
170+00 ~ Req'd 24"x 50' Cross Culvert, Inlet Bowl (W=10').
P.I.S. 171+59.1
P.I. 173+56.4
P.I.S. 175+20.1
Channel Change
CREEK
S. 22°37' E.
18"x 42' C.M.P.
S. 1°23' W.
Present Road
S. 17°06' W.
45°
S. 68°25' W.
100'
TO RICO
Z
175+00 ~ Req'd 24"x 48' Cross Culvert, Ditches.
176+53.1 ~ Req'd Approach to Project.
176+53.1 ~ Req'd Project Marker, Rt. (State Forces)
T.S. 154+57.3
S.C. 156+57.3
C.S. 157+57.3
S.T. 159+57.3
T.S. 164+88.7
S.C. 166+88.7
C.S. 168+03.0
S.T. 170+03.0
T.S. 170+25.5
S.C. 172+25.5
C.S. 174+53.1
S.T. 176+53.1
18"x 30' C.M.P. Cross Culvert
Θs = 8°00'
Ls = 200.00'
U = 133.47'
V = 66.79'
Δ = 24°00' R.
Δc = 8°00'
D = 8°00'
Tc = 50.08'
Lc = 100.00'
R = 716.20'
Ts = 252.67'
HSD = 320'
Θs = 8°00'
Ls = 200.00'
U = 133.47'
V = 66.79'
Θs = 5°00'
Ls = 200.00'
U = 133.39'
V = 66.72'
Δ = 15°43' R.
Δc = 5°43'
D = 5°00'
Tc = 57.21'
Lc = 114.3'
R = 1145.92'
Ts = 258.33'
HSD = 400'
Θs = 5°00'
Ls = 200.00'
U = 133.39'
V = 66.72'
Θs = 12°00'
Ls = 200.0
U = 133.64
V = 66.95
Δ = 51°19' R
Δc = 27°19'
D = 12°00'
Tc = 116.03'
Lc = 227.64'
R = 477.46'
Ts = 330.9'
HSD = 310'
Θs = 12°00'
Ls = 200.00'
U = 133.64'
V = 66.95'
150+50 ~ Req'd 24"x 62' Cross Culvert, Inlet Bowl (W=10').
150+ to 153+ ~ Req'd Channel Change, Rt. (W=20').
153+50 ~ Req'd Double 84"x 92' Cross Culvert (Structure No. M-5-b)
155+70 ~ Remove 18"x 42' C.M.P.
156+00 ~ Req'd 24"x 52' Cross Culvert, Inlet Bowl (W=10').
157+50 ~ Remove 18"x 24' C.M.P.
161+00 ~ Req'd 24"x 92' Cross Culvert.
165+00 ~ Req'd 24"x 52' Cross Culvert, Inlet Bowl (W=10').
S 0153 (7)
SW 1/4 Sec. 26, T. 41 N., R. 10 W.
CLEARING AND GRUBBING
149+00 to 156+50 ~ Light Willows, Scattered Spruce
160+50 to 166+00 ~ Light Willows, Scattered Spruce
STA. 176+53.1 END S 0153 (7) =
STA. 0+00 AH. BEGIN C 58-0145-02
9820
9810
9800
9790
9780
9770
9760
9750
9750
9740
9730
9770
9760
9750
9680
9670
9660
9700
9690
9680
36.50
FL=24.2
FL=03.0
7.0%
FL=89.3
66.50
FL=40.6
FL=20.7
7.0%
96.50
FL=89.6
700' V.C.
75.06
59.75
70.25
FL=64.4
3.5%
9672.00
Factor
Excav.
Exc. X Fac.
Emb'k't
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
1.00
23118
23118
8769
44,042
14,348
14,500
10,564
14,500
Wid. Cut Rt. 156+50 to 159+50
5555
5555
5555
F.H.
31
31
6201
F.H.
61707
Wid. Cut Rt. Sta 165~167+50
7521
7521
7521
252
302
302
302
F.H.

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

COLORADO
Department of
Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.

r500001051

Description:
ROW Plans 24X36

Route # and Mile Points:
SH 145

Originating Office:
ROW/Survey

File Name:
S 0153(7)_ROW(.PDF)

Box Location:
20 (TUBE-22)of 38

For assistance, or to request changes to this form,
please email helpdesk@msimaging.com.

MOUNTAIN STATES
IMAGING

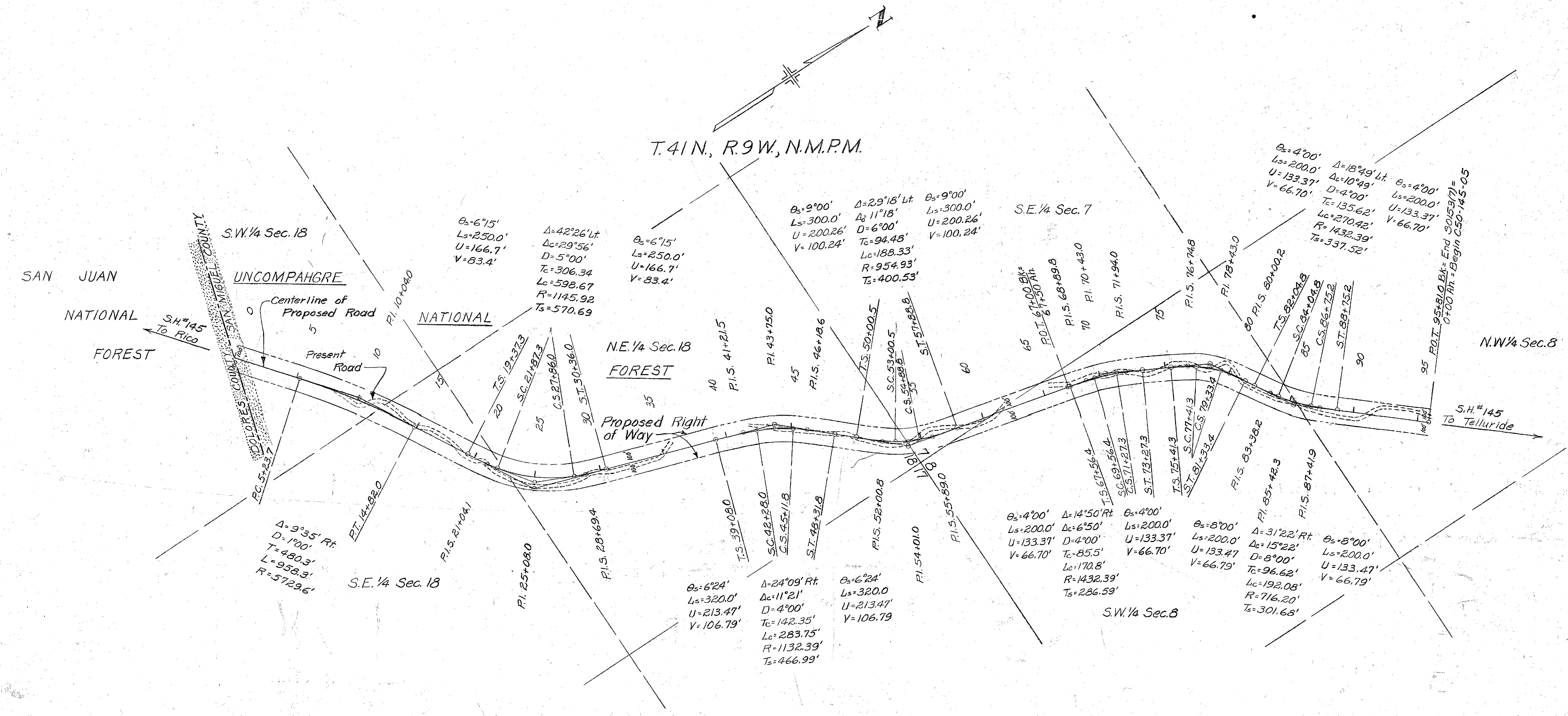
S0153(7)

COLORADO DEPARTMENT OF HIGHWAYS

PLAT SHOWING RIGHT OF WAY TO BE ACQUIRED FOR PROJECT S0153(7) LIZARD HEAD- NORTH PORTION

Scale: 1"=400'

Note: Land Lines are Projected.


N
T.41 N., R.9 W., N.M.P.M.
SAN JUAN NATIONAL FOREST
UNCOMPAHGRE NATIONAL FOREST
DOLORES COUNTY
SAN MIGUEL COUNTY
S.W.¼ Sec. 18
S.E.¼ Sec. 18
N.E.¼ Sec. 18
S.E.¼ Sec. 7
S.W.¼ Sec. 8
N.W.¼ Sec. 8
S.H.#145 To Rico
S.H.#145 To Telluride
Centerline of Proposed Road
Present Road
Proposed Right of Way
0
5
10
15
20
25
30
35
40
45
55
60
65
70
75
80
85
90
95
100'
7 8
18 17
P.C. 5+23.7
Δ=9°35' Rt.
D=1°00'
T=480.3'
L=958.3'
R=5729.6'
P.I. 10+04.0
P.T. 14+82.0
T.S. 19+37.3
S.C. 21+87.3
P.I.S. 21+04.1
P.I. 25+08.0
C.S. 27+86.0
S.T. 30+36.0
P.I.S. 28+69.4
θs=6°15'
Ls=250.0'
U=166.7'
V=83.4'
Δ=42°26' Lt.
Δc=29°56'
D=5°00'
Tc=306.34
Lc=598.67
R=1145.92
Ts=570.69
θs=6°15'
Ls=250.0'
U=166.7'
V=83.4'
P.I.S. 41+21.5
P.I. 43+75.0
P.I.S. 46+18.6
T.S. 39+08.0
S.C. 42+28.0
C.S. 45+11.8
S.T. 48+31.8
θs=6°24'
Ls=320.0'
U=213.47'
V=106.79'
Δ=24°09' Rt.
Δc=11°21'
D=4°00'
Tc=142.35'
Lc=283.75'
R=1132.39'
Ts=466.99'
θs=6°24'
Ls=320.0
U=213.47'
V=106.79
θs=9°00'
Ls=300.0'
U=200.26'
V=100.24'
Δ=29°18' Lt.
Δc 11°18'
D=6°00'
Tc=94.48'
Lc=188.33'
R=954.93'
Ts=400.53'
θs=9°00'
Ls=300.0'
U=200.26'
V=100.24'
T.S. 50+00.5
S.C. 53+00.5
C.S. 54+88.8
S.T. 57+88.8
P.I.S. 52+00.8
P.I. 54+01.0
P.I.S. 55+89.0
P.O.T. 67+00 Bk= 67+50 Ah.
P.I.S. 68+89.8
P.I. 70+43.0
P.I.S. 71+94.0
P.I.S. 76+74.8
P.I. 78+43.0
P.I.S. 80+00.2
T.S. 67+56.4
S.C. 69+56.4
C.S. 71+27.3
S.T. 73+27.3
T.S. 75+41.3
S.C. 77+41.3
C.S. 79+33.4
S.T. 81+33.4
θs=4°00'
Ls=200.0'
U=133.37'
V=66.70'
Δ=14°50' Rt.
Δc=6°50'
D=4°00'
Tc=85.5'
Lc=170.8'
R=1432.39'
Ts=286.59'
θs=4°00'
Ls=200.0'
U=133.37'
V=66.70'
θs=8°00'
Ls=200.0'
U=133.47
V=66.79'
Δ=31°22' Rt.
Δc=15°22'
D=8°00'
Tc=96.62'
Lc=192.08'
R=716.20'
Ts=301.68'
θs=8°00'
Ls=200.0'
U=133.47'
V=66.79'
P.I.S. 83+38.2
P.I. 85+42.3
P.I.S. 87+41.9
θs=4°00'
Ls=200.0'
U=133.37'
V=66.70'
Δ=18°49' Lt.
Δc=10°49'
D=4°00'
Tc=135.62'
Lc=270.42'
R=1432.39'
Ts=337.52'
θs=4°00'
Ls=200.0'
U=133.37'
V=66.70'
T.S. 82+04.8
S.C. 84+04.8
C.S. 86+75.2
S.T. 88+75.2
P.O.T. 95+81.0 Bk= End S0153(7)= 0+00 Ah.=Begin C50-145-05

1955

RIGHT OF WAY
TO BE ACQUIRED FROM

PARCEL NO. 1

A. W. CAMPBELL,
J. J. CAMPBELL,
R. G. CAMPBELL,
Redvale, Colorado

IN
SAN MIGUEL COUNTY
FOR

Project C 50-0145-05
Trout Lake-Matterhorn

STATE HIGHWAY NO. 145

DESCRIPTION

A tract or parcel of land of Colorado Department of Highway's Project C 50-0145-05 containing 5.077 acres, more or less, in the East One-Half of the Southwest Quarter of Section 5 and the West One-Half of the Southeast Quarter of Section 5, all in Township 41 North, Range 9 West of the New Mexico Principal Meridian, in San Miguel County, Colorado, said tract or parcel being 80 feet wide, 40 feet on the Easterly side and 40 feet on the Westerly side of the centerline of highway, said centerline being described as follows:

Beginning at a point on the South line of the SW¼ of Sec. 5, T. 41 N., R. 9 W., from which point the N¼ corner of Sec. 5 bears N. 4° 49' E. a distance of 5442.4 feet.

1. Thence N. 5° 14' W. along said centerline of highway a distance of 161.6 feet;
2. Thence along said centerline of highway along the arc of a curve to the right with a radius of 1432.5 feet a distance of 472.5 feet;
3. Thence N. 13° 40' E. along said centerline of highway a distance of 139.5 feet;
4. Thence along said centerline of highway along the arc of a curve to the left with a radius of 955.0 feet a distance of 240.6 feet;
5. Thence N. 0° 46' W. along said centerline of highway a distance of 32.1 feet;
6. Thence along said centerline of highway along the arc of a curve to the right with a radius of 716.25 feet a distance of 428.1 feet;
7. Thence N. 33° 29' E. along said centerline of highway a distance of 1290.2 feet to a point on the North line of the SE¼ of Sec. 5, said point being S. 8° 52' E. a distance of 2941.5 feet from the N¼ corner of Sec. 5.

The above-described parcel contains 5.077 acres, more or less. (There are 2.575 acres of cultivated land in the above parcel).

1955

RIGHT OF WAY
TO BE ACQUIRED FROM

PARCEL NO. 1

A. W. CAMPBELL,
J. J. CAMPBELL,
R. G. CAMPBELL,
Redvale, Colorado

IN
SAN MIGUEL COUNTY
FOR

Project C 50-0145-05
Trout Lake-Matterhorn

STATE HIGHWAY NO. 145

DESCRIPTION

A tract or parcel of land of Colorado Department of Highway's Project C 50-0145-05 containing 5.077 acres, more or less, in the East One-Half of the Southwest Quarter of Section 5 and the West One-Half of the Southeast Quarter of Section 5, all in Township 41 North, Range 9 West of the New Mexico Principal Meridian, in San Miguel County, Colorado, said tract or parcel being 80 feet wide, 40 feet on the Easterly side and 40 feet on the Westerly side of the centerline of highway, said centerline being described as follows:

Beginning at a point on the South line of the SW¼ of Sec. 5, T. 41 N., R. 9 W., from which point the N¼ corner of Sec. 5 bears N. 4° 49' E. a distance of 5442.4 feet.

1. Thence N. 5° 14' W. along said centerline of highway a distance of 161.6 feet;
2. Thence along said centerline of highway along the arc of a curve to the right with a radius of 1432.5 feet a distance of 472.5 feet;
3. Thence N. 13° 40' E. along said centerline of highway a distance of 139.5 feet;
4. Thence along said centerline of highway along the arc of a curve to the left with a radius of 955.0 feet a distance of 240.6 feet;
5. Thence N. 0° 46' W. along said centerline of highway a distance of 32.1 feet;
6. Thence along said centerline of highway along the arc of a curve to the right with a radius of 716.25 feet a distance of 428.1 feet;
7. Thence N. 33° 29' E. along said centerline of highway a distance of 1290.2 feet to a point on the North line of the SE¼ of Sec. 5, said point being S. 8° 52' E. a distance of 2941.5 feet from the N¼ corner of Sec. 5.

The above-described parcel contains 5.077 acres, more or less. (There are 2.575 acres of cultivated land in the above parcel).

COLORADO
Department of
Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.

r500001705

Description:
ROW Plans 11X17

Route # and Mile Points:
SH 145

Originating Office:
ROW/Survey

File Name:
S 0153(7)_ROW(.PDF)

Box Location:
27 of 38

For assistance, or to request changes to this form,
please email helpdesk@msimaging.com.

MOUNTAIN STATES
IMAGING

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S 0153 (7)	1	

COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. S 0153 (7)
STATE HIGHWAY NO. 145
SAN MIGUEL & DOLORES COUNTIES

INDEX OF SHEETS

ET NO.		
1	TITLE PAGE, SKETCH MAP AND TABULATION OF LENGTH & DESIGN DATA	
2	TYPICAL SECTION, GENERAL NOTES, SUMMARY OF APPROXIMATE QUANTITIES, SUB-BASE PLAN AND PIT INFORMATION	
3- 4	LIST OF STRUCTURES	
5	STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES	M-1-C
6	STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & AT CREST OF GRADES	M-2-EM
7	STANDARD MARKER POSTS AND BENCH MARKS	M-7-C
8- 9	STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS	M-29-B
10	STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS	M-107-C
11- 20	ALIGNMENT PLAN AND PROFILE	
21- 22	SUMMARY OF EARTHWORK QUANTITIES	
23-221	CROSS SECTIONS	
7a	STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS	M-10-B

SCALES OF ORIGINAL DRAWINGS

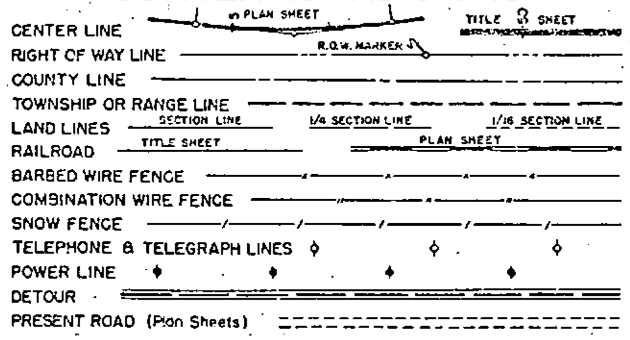
ON PLAN, 1 IN. - 100 FT.

ON PROFILE) 1 IN. - 100 FT. HORIZONTAL
) 1 IN. - 10 FT. VERTICAL

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

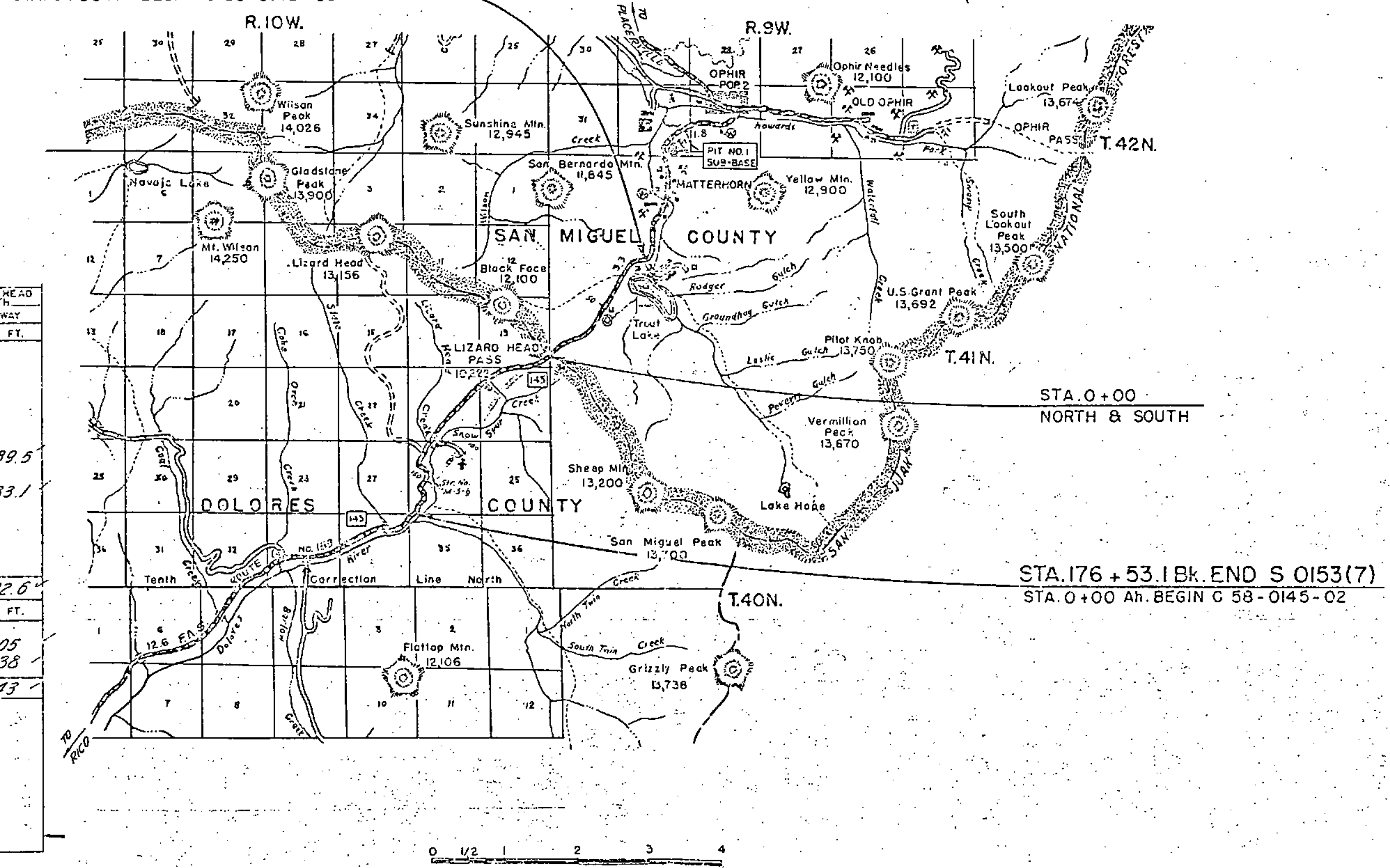
GROSS LENGTH OF PROJECT } 27,153.6 FT. = 5.143 MI.
NET LENGTH OF PROJECT }

CONVENTIONAL SIGNS



CENTER LINE
PLAN SHEET
TITLE SHEET
RIGHT OF WAY LINE
R.O.W. MARKER
COUNTY LINE
TOWNSHIP OR RANGE LINE
LAND LINES
SECTION LINE
1/4 SECTION LINE
1/16 SECTION LINE
RAILROAD
TITLE SHEET
PLAN SHEET
BARBED WIRE FENCE
COMBINATION WIRE FENCE
SNOW FENCE
TELEPHONE & TELEGRAPH LINES
POWER LINE
DETOUR
PRESENT ROAD (Plan Sheets)

STA. 95 + 81.0 Bk. BEGIN S 0153 (7) =
STA. 0 + 00 Ah. BEGIN C 50-0145-05



R.10W.
R.9W.
TO PLACERVILLE
OPHIR POP. 2
Ophir Needles 12,100
OLD OPHIR
Lookout Peak 13,674
OPHIR PASS
T.42N.
Wilson Peak 14,026
Sunshine Mtn. 12,945
Navajo Lake
Gladstone Peak 13,900
San Bernardo Mtn. 11,845
MATTERHORN
PIT NO. 1 SUB-BASE
Yellow Mtn. 12,900
Mt. Wilson 14,250
Lizard Head 13,156
SAN MIGUEL COUNTY
Black Face 12,100
South Lookout Peak 13,500
U.S. Grant Peak 13,692
Trout Lake
Pilot Knob 13,750
T.41N.
LIZARD HEAD PASS 10,222
145
STA. 0 + 00 NORTH & SOUTH
Vermillion Peak 13,670
Sheep Mtn. 13,200
Lake Hope
DOLORES COUNTY
San Miguel Peak 13,700
STA. 176 + 53.1 Bk. END S 0153 (7)
STA. 0 + 00 Ah. BEGIN C 58-0145-02
T.40N.
Tenth Correction Line North
Flattop Mtn. 12,106
Grizzly Peak 13,738
TO RICO
SAN JUAN NATIONAL FOREST
0 1/2 1 2 3 4
SCALE OF MILES

TABULATION OF LENGTH & DESIGN DATA

STATION	LIZARD HEAD NORTH ROADWAY LIN. FT.	LIZARD HEAD SOUTH ROADWAY LIN. FT.
95 + 81.0 Bk. Begin S 0153 (7) = 0 + 00 Ah. Begin C 50-0145-05		
	2,831.0	
57 + 50 Ah. = 67 + 00 Bk.		
	6,700.0	
0 + 00 San Miguel Co. - Dolores Co. Line		
		13,389.5
133 + 89.5 Bk. = 134 + 20.0 Ah.		
		4,233.1
176 + 53.1 Bk. End S 0153 (7) = 0 + 00 Ah. Begin C 58-0145-02		
TOTALS	9,531.0	17,522.6
SUMMARY	**LIN. FT.**	**LIN. FT.**
adway - Lizard Head - North	9,531.0	1.805
adway - Lizard Head - South	17,622.6	3.338
TOTALS	27,153.6	5.143

DESIGN DATA

Maximum Degree of Curve	12° 00'
Maximum Grade	7.0 %
Minimum N.P.S.D. (Horizontal)	310'
Minimum N.P.S.D. (Vertical)	440'
Maximum Design Speed	40 M.P.H.

NOTICE TO BIDDERS

IT IS RECOMMENDED THAT BIDDERS ON THIS PROJECT GO OVER THE PLAN DETAILS WITH ONE OF THE FOLLOWING FIELD REPRESENTATIVES OF THIS DEPARTMENT:

B. C. BRIGHT, PROJECT ENG. DURANGO
HOME PHONE: 1385-R

G. F. MC. NICHOLAS, CONST. ENG. DURANGO
HOME PHONE: 1558-W
OFFICE PHONE: 29

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED: Mark F. Watrous 8-17-56
CHIEF ENGINEER DATE

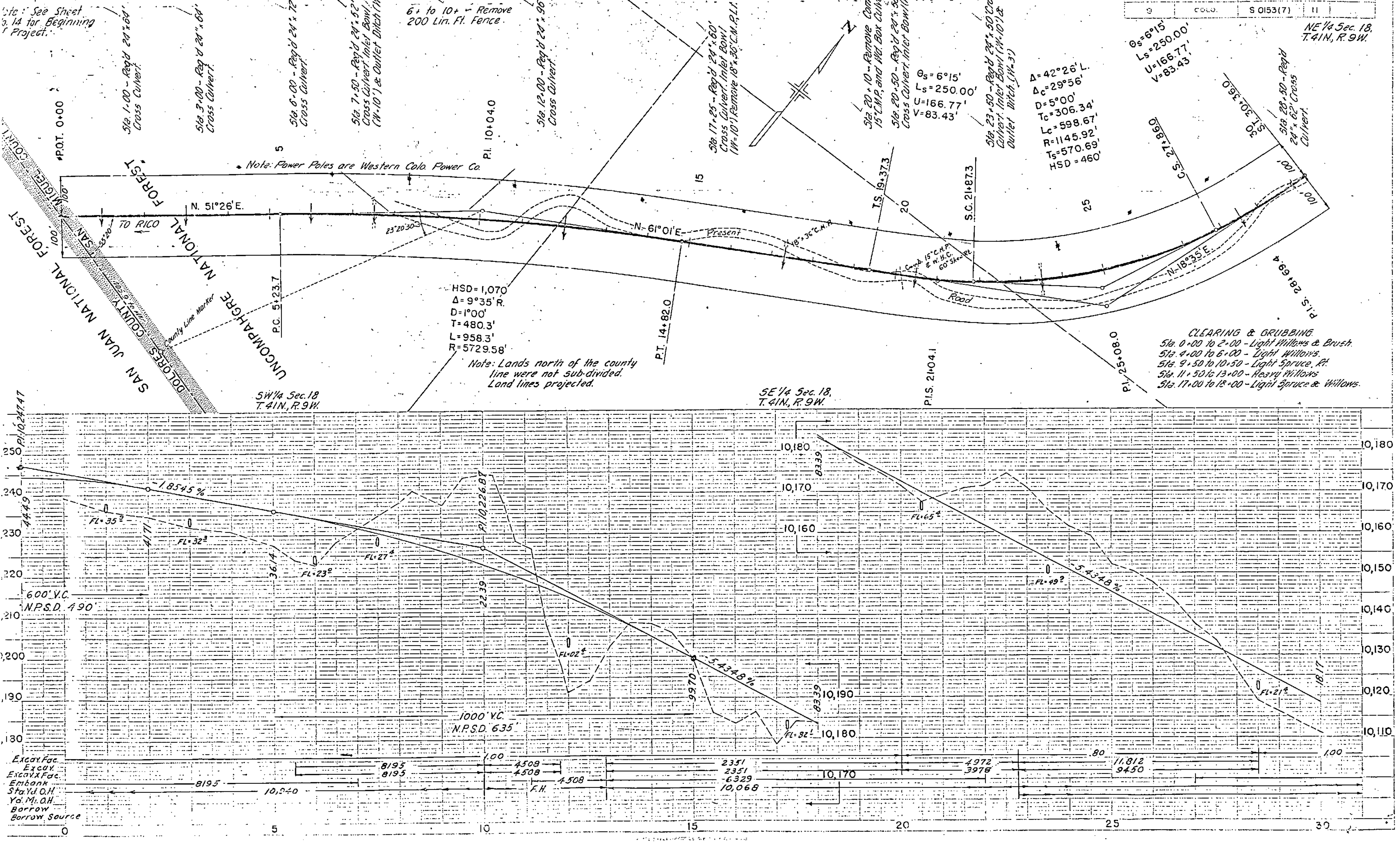
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: ______ DATE

DISTRICT ENGINEER

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0153(7)	11	



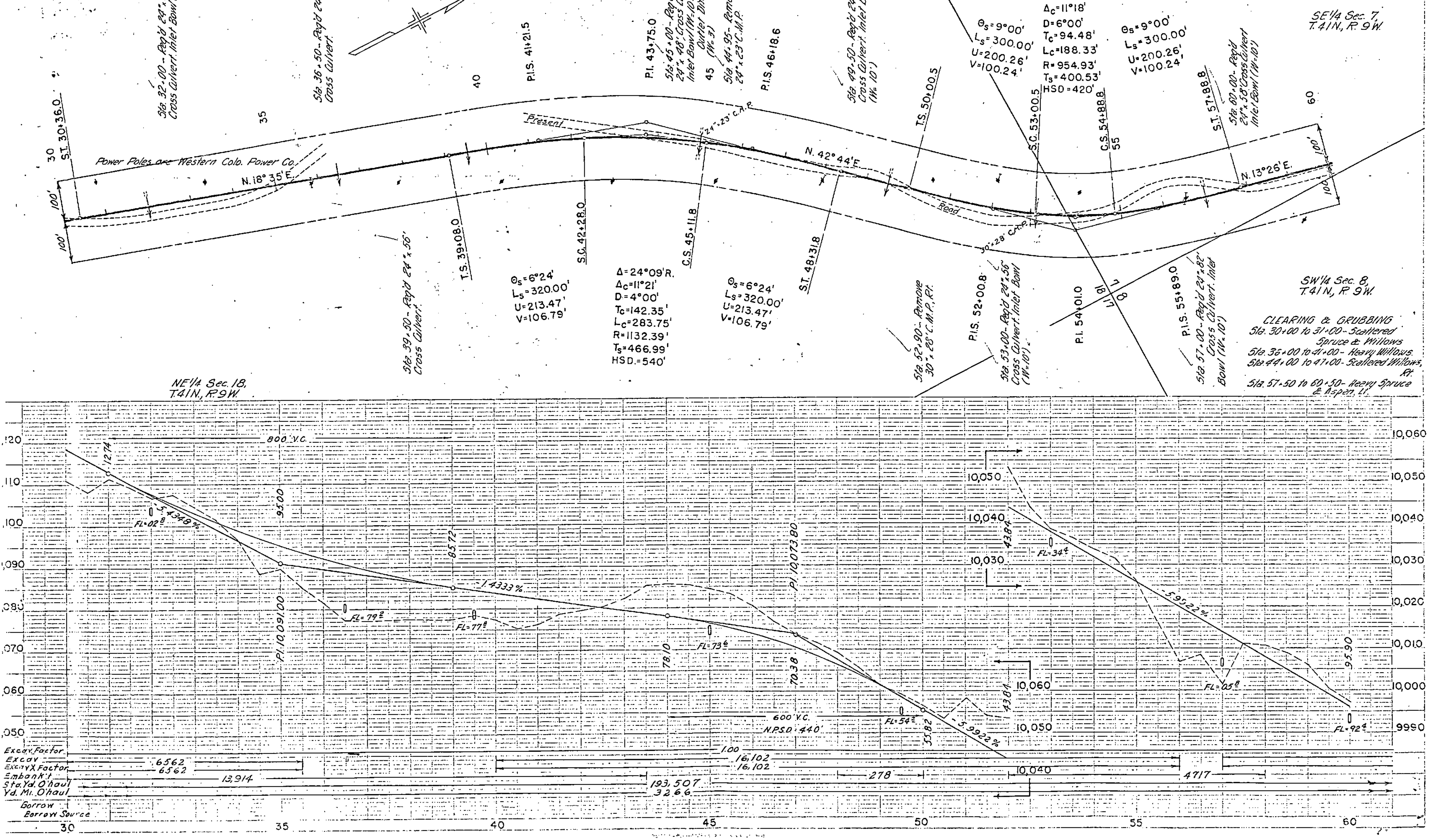
ote: See Sheet
o. 14 for Beginning
f Project.
Sta. 1+00 - Req'd 24"x 64' Cross Culvert.
Sta. 3+00 - Req'd 24"x 64' Cross Culvert.
Sta. 6+00 - Req'd 24"x 72' Cross Culvert.
Sta. 7+50 - Req'd 24"x 52' Cross Culvert Inlet Bowl (W-10') & Outlet Ditch (W-3')
6+ to 10+ - Remove 200 Lin. Ft. Fence.
Sta. 12+00 - Req'd 24"x 96' Cross Culvert.
Sta. 17+25 - Req'd 24"x 60' Cross Culvert Inlet Bowl (W=10') Remove 18"x 30' C.M.P.L.I.
Sta. 20+10 - Remove Comb. 15" C.M.P. and Wd. Box Culvert.
Sta. 20+50 - Req'd 24"x 58' Cross Culvert Inlet Bowl (W=10')
Sta. 23+50 - Req'd 24"x 50' Cross Culvert Inlet Bowl (W=10') & Outlet Ditch (W=3')
Sta. 28+50 - Req'd 24"x 62' Cross Culvert.
N
NE 1/4 Sec. 18, T.41N., R.9W.
Θs=6°15'
Ls=250.00'
U=166.77'
V=83.43'
Δ=42°26' L.
Δc=29°56'
D=5°00'
Tc=306.34'
Lc=598.67'
R=1145.92'
Ts=570.69'
HSD=460'
P.O.T. 0+00
P.I. 10+04.0
P.C. 5+23.7
P.T. 14+82.0
T.S. 19+37.3
S.C. 21+87.3
P.I.S. 21+04.1
C.S. 27+86.0
S.T. 30+36.0
P.I. 25+08.0
P.I.S. 28+69.4
Note: Power Poles are Western Colo. Power Co.
N. 51°26' E.
N-61°01'E.
N-18°35'E.
TO RICO
Present
Road
23°20'30"
18"x 36" C.M.P.
Comb. 15" C.M.P. & W.B.C. 60° Skew Rt.
100'
HSD=1,070'
Δ=9°35' R.
D=1°00'
T=480.3'
L=958.3'
R=5729.58'
Note: Lands north of the county line were not sub-divided. Land lines projected.
SAN JUAN NATIONAL FOREST
UNCOMPAHGRE NATIONAL FOREST
SAN MIGUEL COUNTY
DOLORES COUNTY
County Line Marker
SW 1/4 Sec. 18 T.41N., R.9W.
SE 1/4 Sec. 18, T.41N., R.9W.
5
15
20
25
P.I. 10247.47
P.I. 10226.87
-1.8545 %
-5.4348 %
FL=35.9
FL=32.3
FL=27.4
FL=23.0
FL=02.4
FL=32.1
FL=65.4
FL=49.9
FL=21.4
44.49
41.71
36.14
22.39
99.70
83.39
83.39
18.17
600' V.C.
N.P.S.D. 490'
1000' V.C.
N.P.S.D. 635'
250
240
230
220
210
200
190
130
10,180
10,170
10,160
10,150
10,140
10,130
10,120
10,110
10,190
10,180
10,170
Excav. Fac.
Excav.
Excav. x Fac.
Embank.
Sta. Yd. O.H.
Yd. Mi. O.H.
Borrow
Borrow Source
1.00
.80
1.00
8195
8195
8195
10,940
4508
4508
4508
F.H.
2351
2351
-6329
10,068
4972
3978
11,812
9450
0
5
10
15
20
25
30

CLEARING & GRUBBING.

Sta. 0+00 to 2+00 - Light Willows & Brush.
Sta. 4+00 to 6+00 - Light Willows.
Sta. 9+50 to 10+50 - Light Spruce, Rt.
Sta. 11+50 to 13+00 - Heavy Willows
Sta. 17+00 to 18+00 - Light Spruce & Willows.

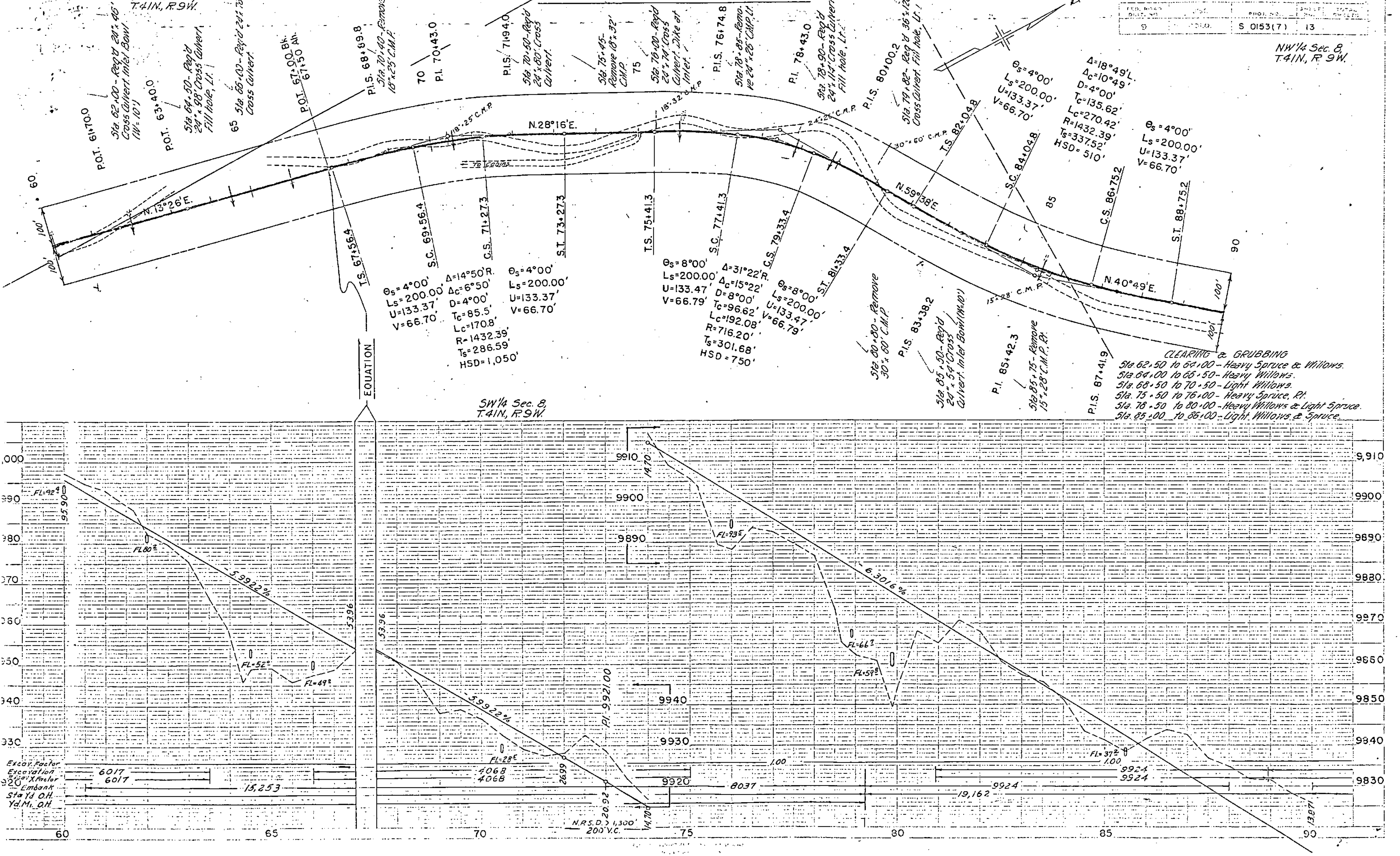
LIZARD HEAD SUMMIT-NORTH

9	COLO.	S 0153(7)	12	


SE¼ Sec. 7, T.41N., R. 9W.
SW¼ Sec. 8, T.41N., R. 9W.
NE¼ Sec. 18, T.41N., R.9W.
N
Sta. 32+00 - Req'd 24" x 56' Cross Culvert. Inlet Bowl (W=10')
Sta. 36+50 - Req'd 24" x 72' Cross Culvert.
40
P.I.S. 41+21.5
P.I. 43+75.0
Sta. 45+00 - Req'd 24" x 48' Cross Culv. Inlet Bowl (W=10') & Outlet Ditch (W=3)
45
Sta. 44+95 - Remove 24" x 23' C.M.P.
P.I.S. 46+18.6
Sta. 49+50 - Req'd 24" x 52' Cross Culvert. Inlet Bowl (W=10')
T.S. 50+00.5
S.C. 53+00.5
C.S. 54+88.8
55
S.T. 57+88.8
Sta. 60+00 - Req'd 24" x 58' Cross Culvert Inlet Bowl (W=10')
60
30
35
S.T. 30+36.0
Power Poles are Western Colo. Power Co.
N. 18° 35' E.
Present
24" x 23' C.M.P.
N. 42° 44' E.
Road
30" x 28' C.M.P.
N. 13° 26' E.
100'
Δ=29°18' L.
Δc=11°18'
D=6°00'
Tc=94.48'
Lc=188.33'
R=954.93'
Ts=400.53'
HSD=420'
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
θs=9°00'
Ls=300.00'
U=200.26'
V=100.24'
Sta. 39+50 - Req'd 24" x 56' Cross Culvert.
T.S. 39+08.0
S.C. 42+28.0
C.S. 45+11.8
S.T. 48+31.8
θs=6°24'
Ls=320.00'
U=213.47'
V=106.79'
Δ=24°09' R.
Δc=11°21'
D=4°00'
Tc=142.35'
Lc=283.75'
R=1132.39'
Ts=466.99'
HSD.=540'
θs=6°24'
Ls=320.00'
U=213.47'
V=106.79'
Sta. 52+90 - Remove 30" x 28' C.M.P., Rt.
P.I.S. 52+00.8
Sta. 53+00 - Req'd 24" x 56' Cross Culvert. Inlet Bowl (W=10')
P.I. 54+01.0
18 | 17
7 | 8
P.I.S. 55+89.0
Sta. 57+00 - Req'd 24" x 82' Cross Culvert. Inlet Bowl (W=10')
CLEARING & GRUBBING
Sta. 30+00 to 31+00 - Scattered Spruce & Willows
Sta. 36+00 to 41+00 - Heavy Willows.
Sta. 44+00 to 47+00 - Scattered Willows, Rt.
Sta. 57+50 to 60+50 - Heavy Spruce & Aspen, Lt.
,120
,110
,100
,090
,080
,070
,060
,050
10,060
10,050
10,040
10,030
10,020
10,010
10,000
9990
800' V.C.
12.74
FL=02.8
-5.4348%
95.00
P.I. 10,091.00
FL=79.2
85.72
-1.4333%
FL=77.8
78.10
FL=73.6
P.I. 10073.80
70.38
600' V.C.
N.P.S.D.=440'
FL=54.2
55.82
-5.9922%
10,050
10,040
10,030
FL=34.4
43.84
-5.9922%
10,060
10,050
43.84
FL=05.8
95.90
FL=92.4
Excav. Factor
Excav.
Excav. X Factor
Embank't
Sta. Yd. O'haul
Yd. Mi. O'haul
Borrow
Borrow Source
1.00
6562
6562
16,102
16,102
13,914
193,507
3266
278
10,040
4717
30
35
40
45
50
55
60

LIZARD HEAD SUMMIT—NORTH

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	COLO.	S 0153(7)	13	

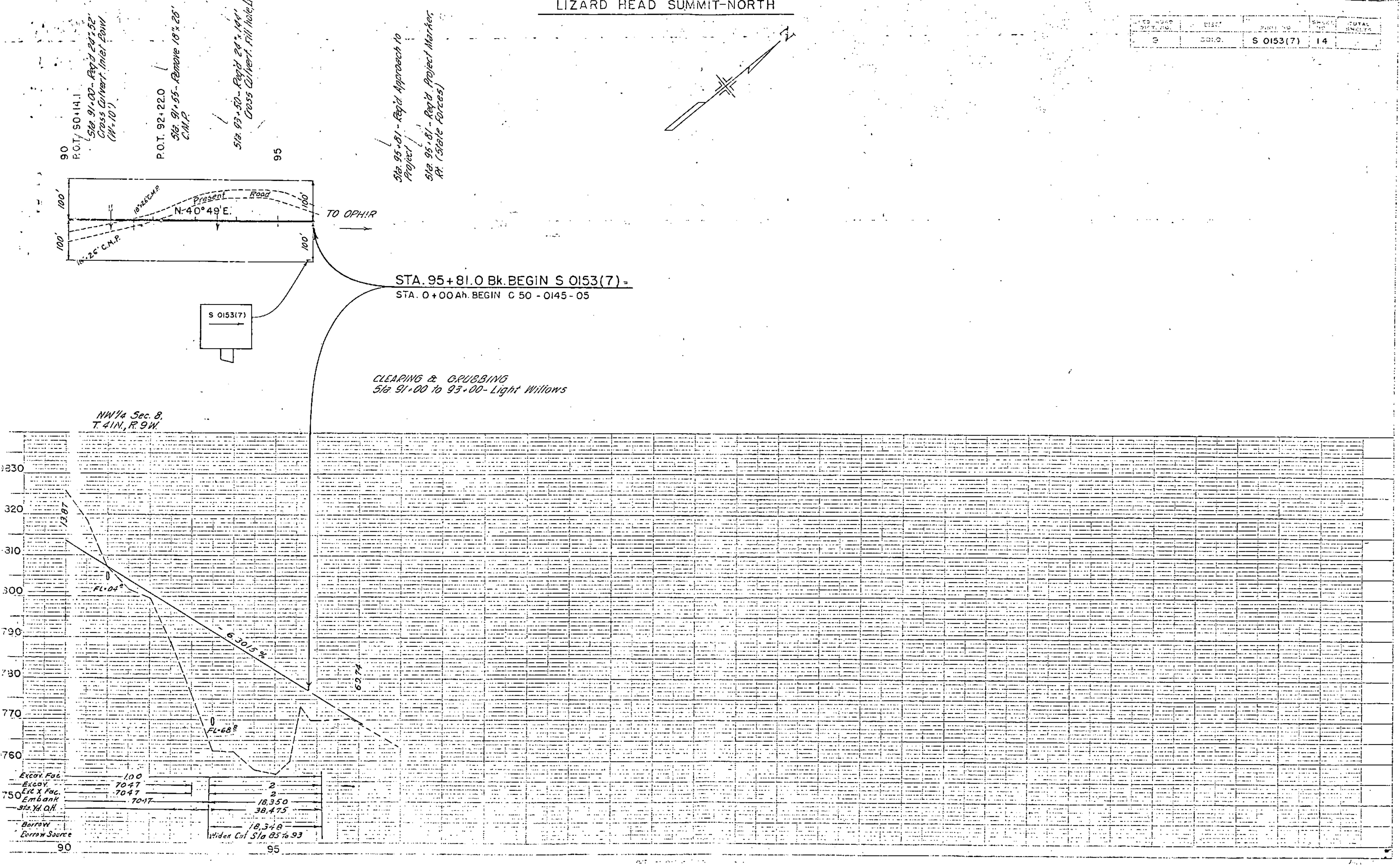


SE¼ Sec. 7, T.41N., R.9W.
NW¼ Sec. 8, T.41N., R.9W.
SW¼ Sec. 8, T.41N., R.9W.
N
P.O.T. 61+70.0
Sta. 62+00 - Req'd 24"x 46' Cross Culvert. Inlet Bowl (W=10')
P.O.T. 63+40.0
Sta. 64+50 - Req'd 24"x 98' Cross Culvert Fill hole, Lt.
65
Sta. 66+00 - Req'd 24"x 76' Cross Culvert
P.O.T. 67+00 Bk. 67+50 Ah.
P.I.S. 68+89.8
Sta. 70+40 - Remove 18"x 25' C.M.P.
70
P.I. 70+43.0
P.I.S. 71+94.0
Sta. 70+50 - Req'd 24"x 80' Cross Culvert
Sta. 75+45 - Remove 18"x 32' C.M.P.
75
Sta. 76+00 - Req'd 24"x 74' Cross Culvert. Dike at Inlet.
P.I.S. 76+74.8
Sta. 78+85 - Remove 24"x 26' C.M.P. Lt.
P.I. 78+43.0
Sta. 78+90 - Req'd 24"x 114' Cross Culvert Fill hole, Lt.
P.I.S. 80+00.2
Sta. 79+82 - Req'd 36"x 128' Cross Culvert. Fill hole, Lt.
18"x 25' C.M.P.
18"x 32' C.M.P.
24"x 26' C.M.P.
30"x 60' C.M.P.
15"x 28' C.M.P.
To Cabins
N.13°26'E.
N.28°16'E.
N.59°38'E.
N.40°49'E.
60
100'
100'
T.S. 67+56.4
S.C. 69+56.4
C.S. 71+27.3
S.T. 73+27.3
T.S. 75+41.3
S.C. 77+41.3
C.S. 79+33.4
S.T. 81+33.4
T.S. 82+04.8
S.C. 84+04.8
85
C.S. 86+75.2
S.T. 88+75.2
90
Θs=4°00' Ls=200.00' U=133.37' V=66.70'
Δ=14°50'R. Δc=6°50' D=4°00' Tc=85.5' Lc=170.8' R=1432.39' Ts=286.59' HSD=1,050'
Θs=4°00' Ls=200.00' U=133.37' V=66.70'
Θs=8°00' Ls=200.00' U=133.47' V=66.79'
Δ=31°22'R. Δc=15°22' D=8°00' Tc=96.62' Lc=192.08' R=716.20' Ts=301.68' HSD=750'
Θs=8°00' Ls=200.00' U=133.47' V=66.79'
Θs=4°00' Ls=200.00' U=133.37' V=66.70'
Δ=18°49'L. Δc=10°49' D=4°00' Tc=135.62' Lc=270.42' R=1432.39' Ts=337.52' HSD=510'
Θs=4°00' Ls=200.00' U=133.37' V=66.70'
Sta. 80+80 - Remove 30"x 60' C.M.P.
P.I.S. 83+38.2
Sta. 85+50 - Req'd 24"x 54' Cross Culvert. Inlet Bowl (W=10')
P.I. 85+42.3
Sta. 85+75 - Remove 15"x 28' C.M.P., Rt.
P.I.S. 87+41.9
EQUATION
9,910
9900
9890
9880
9870
9860
9850
9840
9830
9910
9900
9890
9940
9930
9920
FL=92.4
95.90
FL 80.2
5.9922%
FL-52.0
FL=49.0
53.96
53.96
5.9922%
FL=28.5
26.99
P.I. 9921.00
20.92
14.70
14.70
N.R.S.D.>1,300'
200' V.C.
FL=93.5
6.3016%
FL=66.7
FL=59.0
FL=37.2
1.00
1.00
13.87
Excav. Factor
Excavation
Excav. X Factor
Embank
Sta Yd O.H.
Yd.Mi. O.H.
6017
6017
15,253
4068
4068
8037
9924
9924
9924
19,162
60
65
70
75
80
85
90

CLEARING & GRUBBING
Sta. 62+50 to 64+00 - Heavy Spruce & Willows.
Sta. 64+00 to 66+50 - Heavy Willows.
Sta. 68+50 to 70+50 - Light Willows.
Sta. 75+50 to 76+00 - Heavy Spruce, Rt.
Sta. 78+50 to 80+00 - Heavy Willows & Light Spruce.
Sta. 85+00 to 86+00 - Light Willows & Spruce.

LIZARD HEAD SUMMIT-NORTH

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0153(7)	14	


90
P.O.T. 90+14.1
Sta. 91+00 - Req'd 24"x52' Cross Culvert Inlet Bowl (W=10')
P.O.T. 92+22.0
Sta. 91+55 - Remove 18"x26' C.M.P.
Sta. 93+50 - Req'd 24"x144' Cross Culvert. Fill hole, Lt.
95
Sta. 95+81 - Req'd Approach to Project
Sta. 95+81 - Req'd. Project Marker, Rt. (State Forces)
100'
18"x26' C.M.P.
Present Road
N-40°49'E.
TO OPHIR
18"-26' C.M.P.
STA. 95+81.0 Bk. BEGIN S 0153(7) =
STA. 0+00 Ah. BEGIN C 50 - 0145 - 05
S 0153(7)
CLEARING & GRUBBING
Sta. 91+00 to 93+00 - Light Willows
NW1/4 Sec. 8, T. 41N., R. 9W.
830
820
810
800
790
780
770
760
750
13.87
0
FL-04²
6.3015 %
6974
0
FL-68⁸
Excav. Fac. — 1.00
Excav. — 7047 — 2
Exc X Fac. — 7047 — 2
Embank — 7047 — 18,350
Sta. Yd. O.H. — 38,475
Borrow — 18,348
Borrow Source — Widen Cut Sta 85 to 93
90
95