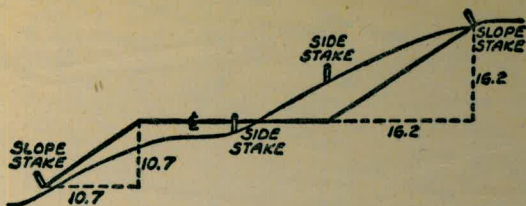


838-C



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

MICROFILMED

JAN 10 1965

SUTHERLAND - SAN VIC

ENTE CONDUIT

ROLL #	PICTURE #	DATE	DESCRIPTION	PHOTOGRAPHED BY
S-SVC # 1	S-SVC # 1	7/20/53	BLANK DOUBLE EXPOSURE VIEW SUTHERLAND-SAN	JOHN J. McDERMOTT
	2	"	VICENTE CONDUIT FROM COUNTY ROAD AT TOP OF TUNNEL ENTRANCE-LOOKING SOUTH TOWARD STA. 181+00	"
	3	"	REINFORCED CONCRETE	"
	4	"	PIER AT STAS. 202+13 VIEW OF REINFORCED PIER AND FORM IN PLACE AT STA. 198+86	"
	5	"	REINFORCED CONCRETE PIERS AT STA. 195+74	"
	6	"	VIEW OF TRENCH EXCAVATION LOOKING SOUTH TAKEN AT STA. 266+21	"
2	7	"	VIEW OF TRENCH EXCAVATION LOOKING NORTH FROM MONTECITO RD.	"
	8	"	PARTIALLY BACK FILLED TRENCH LOADING SOUTH FROM STA. 610+00 OR COUNTY ROAD.	"
	9	"	CONDUIT IN PLACE-VIEWED FROM STA. 610+00 NORTH	"
	10	"	VIEW OF CONDUIT WITH WORKERS WRAPPING JOINTS PRIOR TO POURING SAME	"
	12	"	SECTION OF CONDUIT BEING LAID	"
#2	11	"	VIEW OF CONDUIT THROUGH LOW POINT AT STA. 593+41	"
#3	13	"	VIEW LOOKING SOUTH FROM STA. 100+59 CLEARED R/W SECTION I OF CONDUIT	"
	14	"	GRANITE ROCK BEING DRILLED ALONG CENTER LINE OF STA. 80+00	"

ROLL #	PICTURE #	DATE	DESCRIPTION	PHOTOGRAPHED BY
3	S-SVC-15	7/20/53	REMAINS OF LARGE GUNITE ROCK THAT WAS BLASTED BEFORE R/W WAS CLEARED	J.J. McDERMOTT
	-16	"	VIEW OF CENTER LINE BEFORE CLEANING HAS TAKEN PLACE ALONG SECTION I, APPROX. STA. 72+50	"
	-17	"	VIEW OF COUNTY RD. TO LEFT & UPPER + LOWER BENCH OF LINE EQUIPMENT - STA. 60+25	"
	-18	"	VIEW OF R/W NEAR COUNTY ROAD - STA. 35+00 LOOKING TOWARDS DAM	"
4	-19	7/30/53	VIEW OF RE-INFORCING STEEL IN PIER AT STA. 251+66.	"
	-20	"	VIEW OF WELDED JOINT AT STA 506+67 [±] CENTER OF HIGHWAY 67 AT RAMONA AVE. BEFORE CONCRETE HAS BEEN POURED AROUND JOINT.	"
	21	"	BACKFILLED SECTION OF PIPE LINE FROM STA. 552+00 TOWARD STA. 548+00.	"
	22	"	PARTIAL JOINT (VIEW OF CEMENT GROUT JOINT - 24 HOURS AFTER POURING) TYPICAL.	"
	23	"	TOP & SIDE VIEW CEMENT GROUTED JOINT STA. 493+33.01	"
	24	"	TRENCH EXCAVATION THRU SAND DEPOSIT STA. 401+75 [±] .	"

Roll #

PICTURE #

DATE

DESCRIPTION

Photo by

5

5-SVC 25

8-14-53

SECTION OF Pipeline
VICINITY of AIR VENT STA 630+00

J.J.M. DeMott

~~25~~

26

VIEW FROM STA 633+00 to

END OF CONDUIT

27

SECTION FROM AIR VENT BACK

TOWARDS COUNTY RD & STA 610+00

28

VIEW OF R/W FROM STA 610+00
TOWARDS STA 590+00

29

VIEW FROM STA 444+00 TOWARD
WYOMING IRRIGATION DISTRICT STORAGE AREA

30

VIEW OF R/W TAKEN AT STA 383+25
LOOKING TOWARDS STA 365+00 ON
TOP OF HILL

6

SVC 31

8-14-53

VIEW OF R/W FROM STA 383+50
TO STA 405+00

32

VIEW FROM STA 398+80 TOWARDS
STA 420+00

33

VIEW OF R/W & TRENCH FROM
STA 365+00 TOWARDS 350+00

34

VIEW OF R/W & TRENCH FROM
STA ~~308+55~~ TOWARDS PILE ST.

35

VIEW OF R/W & TRENCH FROM STA
308+25 TOWARDS PILE ST.

36

R/W & TRENCH FROM 266+55
TOWARDS STA 275+00

Roll #

Picture #

DATE

DESCRIPTION

Photo by

7

SUC 37

8-14-53

P/W TRENCH from STA
266+50 to Sta 253+00

J. J. Johnson

38

P/W TRENCH from Sta 245+00
towards Sta 235+00

39

P/W TRENCH from Sta 223+35
towards Sta 230+00

40

P/W TRENCH From Sta 218+80
towards Sta 223+00

41

P/W TRENCH from Sta 193+75
to Sta 201+00

42

P/W TRENCH from Sta 193+00
towards Sta 181+00

8

43

8-19-53

VIEW OF BRIDGE 1/2 mile NORTH
OF HIGHWAY ON MAGNOLIA Rd. (BACKHOE WENT THRU 9/14/53)

44

VIEW OF EAST SIDE OF BRIDGE

45

NORTHWEST CORNER OF BRIDGE

46

CONCRETE BASE FOR BLOWOFF & MH CHAMBER

47

AT STA. 538+30

CONDUIT ACROSS PIER AT

48

STA 274+87 before final Pour.

VIEW OF PIPE LINE looking

North from Sta 274+00

Roll #	Picture #	DATE	DESCRIPTION	Photo by
9	49	8-21-53	VIEW of Butt strap at Sta 262152	J.J. McDonald
	50		Piece cutoff section in order to maintain Sta at 262152	
	51		Section of TRENCH looking North from Sta 344150	
	52		Section of CONDUIT between Sta 262152 to Sta 261100	
	53	8-24-53	WAGON Drills, in operation at Sta 43100 - Section I	J.J. McDonald
	54		Cement joints at Station 453100	
	54	8-25-53	CEMENT GROUTED joints of Sta. 261100 I	
I	55	8-28-53	View of Insulating section at Sta 495100 I	
	56	8-31-53	Man hole cover "Belled-down" and covered with compound L	
	57		VIEW OF ELBOW & INSULATOR at Sta 495100 I	
	58	9-1-53	SECTION of Pipe Laid For Ramsey Trk. District by A.L. Foster, Castenoe	
	59		VIEW of Anchor Block at Sta 495100 I AND FLANGE Covered with Compound L	
	60		SAME AS "59"	

Roll #

11

Picture #

61

DATE

9-15-53

DESCRIPTION

VIEW of A.V.A. ACCESS
CHAMBER AT Sta 534+40

Photo by
J. J. McHERMOTT

62

BLOW OFF VALVED MANHOLE
ACCESS CHAMBER - Sta 538+30

63

REINFORCING STEEL & AIR VENT
BARS IN PLACE - M.H. & Blowoff
ACCESS CHAMBER - Sta 494+85

64

REINFORCING STEEL & MANHOLE
RING IN PLACE - COVER SLAB -
A.V.A. CHAMBER Sta 484+00

65

VIEW of QUINCEY PROPERTY
LOOKING WEST FROM 11th ST.
AFTER REMOVAL of EXCESS Spoil

66

FINAL CONDITION of R/W
FROM 10th ST to KEARNY
PROPERTY.

Roll #	Picture #	DATE	DESCRIPTION	PHOTO BY
12	67	9-15-53	VIEW of R/W from STA 80+00 TOWARD N. Portal of TUNNEL	J. J. McFERRON
	68		SECTION from STA 79+00 TOWARDS STA 74+00	
	69		SECTION of R/W from STA 66+00 to STA 74+00 - ACCESS ROAD to RIGHT	
	70		R/W & ACCESS ROAD from 66+00 to STA 62+00 ±	
	71		SECTION of County ROAD AND City R/W vicinity of STA 36+25 ±	
	72		SECTION of R/W AT STA 34+00 ±	

Roll #

Picture #

DATE

DESCRIPTION

Photo by

13

73

9-25-53

SECTION of OPEN TRENCH
VIEWED from STA 304+80
TOWARDS STA 306+00

John J. McDonald

74

VIEW FROM STA 307+00
TOWARD DISCHARGE END of
CONDUIT

75

VIEW FROM STA 308+00
TOWARDS STA 307+00

76.

VIEW FROM 309+26 \leftarrow
TOWARDS STA 307+00

77

VIEW of WELL & WIND
MILL ON Williams Property.

78

MANHOLE & BLOWOFF
ACCESS CHAMBER AT
STA 494+85



Roll #

14

Picture #

79

DATE

9-25-53

DESCRIPTION

REINFORCING STEEL, MANHOLE
RING & VALVE COVERS IN PLACE.
BLOWOFF CHAMBER AT
STA. 527+95

Photo by

John J. McDemara

80

SECTION OF CONDUIT ACROSS
PIERS BETWEEN STA 234+00
AND STA 232+50±

81

SECTION OF 28" CULVERT
AS IT CROSSES UNDER PIPE
LINE AT STA 219+51

82

9-28-53

SECTION OF S.V. CONDUIT
FROM STA 220+00 TO STA.
221+50.

J. J. McDemara

83.

NORTH PORTAL OF BLACK
CANYON TUNNEL.

84

VIEW OF R/W FROM STA 143+00
TO STA 138+00

Roll #	Picture #	DATE	DESCRIPTION	Photo by
15	85	10-13-53	spillway Apron & Wall at Sta 637+96	John J. McDevine
	86		Access Manhole & Blowoff Chamber - Sta 593+35	
	87		LAURENCE HARRY Property RAMONA ACRES	
	88		LAURENCE HARRY Property	
	89		AREA AROUND DRIVEWAY & WELL - LAURENCE HARRY PROPERTY	
	90		INSULATING FLANGE AT Sta 337+90 COVERED WITH COMPOUND "L"	

Roll #	Picture #	DATE	DESCRIPTION	Photo by
16	91	10-14-53	Reinforcing steel. Blowoff chamber - STA 189+80	John J. McDemara
	92		12" FLANGED OUTLET AT STA 420+00.2 ON RAMONA IRRIGATION DISTRICT PROPERTY	
	93		POURING OUTSIDE CEMENT GROUT JOINTS	
	94		VIEW OF OPEN TRENCH & WELL ON WILLIAMSON PROPERTY	
	95		PIPE LINE VIEWED FROM STA 338+00 NORTH	
	96		ANCHOR CONCRETE FOR AIR VALVE & MANHOLE ACCESS CHAMBER A STA 762+62	

35 mm - Color Film

Roll #	PICTURE #	DATE	DESCRIPTION	Photo by
18	+	10-16-53	VIEW of CONDUIT & DRAINAGE CULVERT TAKEN FROM NAKONEY'S RESERVOIR	John J. McDonald <u>VOID</u>
	103 2		Silt in Bottom of NAKONEY'S RESERVOIR	
	104 3		SAME AS #2	
	105 4		VIEW of RESERVOIR from top of EARTH DAM	
	106 5		WEST slope of RESERVOIR FROM TOP of EARTH DAM	
	107 6		RAVINE LEADING INTO RESERVOIR (Higher than Bottom of Ditch)	
	108 7		SMALL RAVINE LEADING to RESERVOIR Ditch on Westside	
	109 8		Bottom of Ditch to RESERVOIR	
	110 9		SAME AS #8. Different section	
	111 10		Bottom of Ditch	

35 mm Color Film

Roll #	Picture #	DATE	DESCRIPTION	Photo by
18	112	10-16-53	Ditch to Reservoir	John J. McDonald
	113		LEADING STA 189400Z CANYON WEST OF CONDUIT STA 184400 - Runoff from here will enter Reservoir	
	114		AREA vicinity of Shea Co. Well.	
	115		Bottom of Ditch leading away from TUNNEL (maybe Double Exposure)	
	116		Bottom of Ditch LEADING FROM TUNNEL - TAKEN facing TOWARD TUNNEL	
	117		Spoil Pile from TUNNEL TAKEN from Bottom of Ditch	
	118		TUNNEL PARKING AREA	
	119		AREA AROUND Southern END of TUNNEL	
	120		PARKING AREA & slope BACK of South ENTRANCE TO TUNNEL	
	121-122-123		VIEWS of Sutherland DAM	

Roll #

17

Picture #

97

DATE

10-26-53

DESCRIPTION

Blowoff Chamber &
DRAINAGE Culvert Pipe at
Sta 182+80

Photo by

John J. McDemmond

98

AREA AROUND Williamson's
well after Backing

99

Blowoff Chamber & Outlet
Pipe at Sta 538+30

100

VENTURI METER - Sta -0+182⁷±

101

Air Valve Assembly Sta 0+00±

102

Laying Section of Pipe
at Sta 105+00

← Roll # 18 - TURN BACK

Roll #
19

Picture #
124

DATE
Nov. 2, 1953

DESCRIPTION
Laying 42 in. pipe
SECTION I with BACKHOE

Photo by
John J. McDonald

125

CHECKING INVERT ELEVATION
of pipe DURING LAYING
OPERATIONS - SECTION I

126

BACKFILLING AROUND Pipe
after laying at STA 2+00±

127

TRENCH EXCAVATION -
STA 2+15 - SECTION I

128

WRAPPING JOINTS PRIOR
to filling with Cement
GROUT - SECTION I

129

MANUEVERING Pipe INTO
Position for Laying.

Roll #

Picture #

DATE

DESCRIPTION

Photo by

20

130

3 Nov. 1953

VIEW OF FENCE AT
DISCHARGE END OF CONDUIT

John J. McDonald

131

VIEW OF FENCE FROM EAST
SIDE OF PIPE LINE

132

Type B-1 Blowoff
ASSEMBLY STA 240+15

133

B-1 Blowoff Assembly,
MANHOLE & FINISHED
PICN AT 240+15 ±

134

SECTION OF CONDUIT
that will be exposed
Sta 235+00 ±

135

EXPOSED JOINT AT
STA 234+60 ±

Roll #	Picture #	DATE	DESCRIPTION	Photo by
21	136	11-12-53	Guy Mayer - Project Mgr. - H.L. Foster Co.	John J. McDonald
	137		"PETE" RICHERZHAGEN STRUCTURE FOREMAN - H.L. FOSTER Co.	
	138		LEFT TO RIGHT GEO. JENNINGS, COMPRESSOR OPERATOR & "SARGE" POSADA, PIPELAYING FOREMAN - H.L. FOSTER Co.	
	139		Guy Winton, Shop Supt. H.L. FOSTER Co.	
	140		Mrs. Lois CAREY - Office Mgr. H.L. FOSTER Co.	
	141		GEO. WEITZEL, UNIVERSAL EQUIPMENT OPERATOR - H.L. FOSTER Co.	

Roll #
22

PICTURE
142

DATE
11-16-53

DESCRIPTION
VIEW of P/W - LOOKING
SOUTH from 181+00

Photo by
John J. McDonald

143

P/W SECTION III - looking
NORTH from 188+80

144

SECTION of P/W - South
of 189+80

145

SECTION of P/W between
192+00 & 189+00

146

SECTION of P/W on Nakonec
PROPERTY Looking South
from 192+00

147

AREA AROUND Blowoff
at Sta 195+90

Roll #

23

PICTURE #

148

DATE

11-16-53

DESCRIPTION

R/W along Nakoney Property
looking North from 200+12

Photo by

John J. McDonald

149

R/W along NAKONEY PROPERTY
LOOKING South from 200+12

150

R/W LOOKING NORTH from
sta 221+46

151

AREA AT ENTRANCE TO
NAKONEY PROPERTY

152

R/W NORTH from 229+00

153

R/W NORTH from 237+65

Roll #

24

Picture #

154

DATE

11-16-53

DESCRIPTION

R/W South from 237+65

Photo by

John J. McFlund

155

R/W NORTH from 252+00?

ON SHANKE PROPERTY

156

R/W South from 252+00?

ON SHANKE PROPERTY

157

R/W Looking South from
272+00

158

R/W Looking from
Pile St towards
310+00

159

R/W from Pile St.
to 250+00

Roll #	Picture #	DATE	DESCRIPTION	Photo by
25	160	11-16-53	HARRY L. FOSTER, CONTRACTOR - SECTION III SAN VICENTE CONDUIT	John J. McDemas
	161		SECTION of R/W vicinity AIR VALVE Chamber - 397453	
	162		SECTION of R/W NORTH from sta 396+00	
	163		SECTION of R/W thru SPALDING PROPERTY LOOKING NORTH from sta 377+00 ±	
	164		R/W Looking South from 377+00 ±	
	165		Final SECTION of R/W VIEWED from 309+78 South	

Roll #	Picture #	DATE	DESCRIPTION	Photo by
26	166	12-16-53	Luna 802 - Backhoe being held in place by D-8 Digger at 64+00	John J. McDonald
	167		Laying section 42 inch pipe at 64+00	
	168		Backhoe on slope near 64+00 preparing to lay pipe	
	169		Laying section 42" pipe with hole at 64+00	
	170		French excavation near 64+00 Section I	
	171		Drilling of French at 64+30.	

Roll	PICTURE	DATE	DESCRIPTION	Photo by
# 27	172 172	12-8-53	Drainage ditch from County Road to Shanks Reservoir	John J. McDermott
Color Film	173 172		Same as # 172 - same location	
	174/173		Small Catch Basin at entrance to Shanks Reservoir	
	174		Small Ravine leading into Shanks Reservoir Northwest side.	
	175		Slope on Northwest side of Shanks Reservoir	
	176	Northwest slope viewed from bottom of Reservoir		

Roll
27

Picture

DATE

DESCRIPTION

Photo by
John J. McDonald

~~177~~ 177 12-9-53

Entrance of drainage ditch
from County Road inside
Reservoir

178

Silt in bottom of
Shank Reservoir

~~180~~ 179

Bottom of Shank
Reservoir.

180

Northwest side of
Reservoir viewed from
top of Dam

181

North Slope of Reservoir
viewed from top of
Dam

182
~~182~~

Bottom of Shank
Reservoir from top
of Dam

Roll
#27

Picture

DATE

DESCRIPTION

Photo by

~~184~~ 183

12-8-53

Section of R/W taken from

John J. McDonald

County Road Sta 245+00±

185 184

Section of R/W through Alaska

Property & Cleveland National Forest.

186 185

Bottom of Nahoney's Reservoir
from top of Dam

187 186

Section of R/W viewed from
top of Nahoney's Dam

188 187

Bottom of Nahoney's Reservoir

189 188

R/W viewed from Entrance
to Nahoney Property near
Sta 221+46±

189
~~190~~

Section of Nahoney's Property

work done at Request of owner

190

view of Nahoney Property from County Road.

191

Views of Sutherland Dam

Thru

193

Roll
28

Picture
194

DATE
12-18-53

DESCRIPTION
Laying 42" pipe with
D-8 Dozer at Sta 86+35

Photo by
John J. McDonald

195

PIPE LINE - SECTION I
between 88+18 & 86+98

196

lining & leveling section
of pipe containing 20"
Access Manhole - 86+35

197

MANUVERING SECTION OF
42 in. Pipe into PLACE
Sta 86+03

198

Drilling in ROCK AT $\frac{1}{2}$ of
TRENCH - STA 68+40E

199

BACKfilling NEAR STA
64+00 - SECTION I.

Roll	Picture	DATE	DESCRIPTION	Photo by
29	200	12-31-53	Trench excavation with Dredgers at Sta 105+15	John J. McDonald ↓
	201	12-31-53	NORTH PORTAL of TUNNEL	
	202	1-4-54	PIPE Laying OPERATION AT STA 107+00 VIEWED FROM STA 103+11	
	203	1-4-54	SECTION of CONDUIT from ^{of TRENCH} STA 107+00 to STA 100+00	
	204	1-4-54	ROCK in TRENCH to be DRILLED & SHOT prior to laying SECTION of CONDUIT AT STA 107+60	
	205	1-4-54	Pier AT STA <u>54+06</u> & CEMENT grout JOINT AT STA <u>53+98</u> .	

Roll	Picture	DATE	DESCRIPTION	Photo by
30	206	1-6-54	SECTION of CONDUIT in place from 108+80 to 109+89?	John J. McDonald
	207		Holding DRAGLINE in POSITION ON 50% plus GRADE	
	208		LAYING SECTION OF CONDUIT at STA 110+19 with DRAGLINE	
	209		EXCAVATING TRENCH at STA 110+25 (2 1/2 yd drag bucket)	
	210		Section of Conduit & R/W VIEWED FROM STA 112+00	
	211		View of Construction Operation SECTION I From County Road.	

Roll	Picture	DATE	DESCRIPTION	Photo by
31	212	1-29-54	SECTION of R/W VIEWED from Sta 96+00 to 88+00	John J. McDevitt
	213		LAYING SECTION of CONDUIT at Sta 94+28	
	214	2-2-54	Left to Right: - Dick Griffith - Supt. SEC. I - ENGINEERING CONST. Tom Wilcox - GEN. Supt. E.C.I. RAY MATHER - OFFICE MGR. E.C.I.	
	215		Al FERGUSON - STRUCTURE FOREMAN - E.C.I.	
	216		LAYING CLOSURE SECTION at Sta 100+70	
	217		GLENN TATE - PIPE LAYING FORMAN E.C.I.	

Roll

PICTURE

DATE

DESCRIPTION

Photo by

32

218

2-11-54

Pipe between STA
178+77 & STA 179+66

John J. McDermott

219

SECTION OF CONDUIT &
12" AIR JENT AT NORTH
PORTAL OF TUNNEL

220

42"x72" ENLARGER & 12"
FLANGED ADAPTER SECTION
AT NORTH PORTAL.

221

SECTION OF CONDUIT
Between STA 143+69 & STA 126+35

222

SECTION OF CONDUIT between
STA 74+28 & 73+00

223

SECTION OF CONDUIT
between STA 78+71 & STA
76+80

Roll
33

Picture

DATE

DESCRIPTION

Photo by

224

2-23-54

Backfilling CONDUIT AT
North Portal of Tunnel

John J. McDermid

225

Moving LARGE ROCKS AWAY
from Pipe during Back-
fill OPERATIONS.

226

11 ft - 28" Riser AROUND
4" Blowoff Valve at
Sta 119+00±

227

2-24-54

Reinforcing Steel & Forms
for Air Valve Chamber - Sta 99+91±

228

OSCAR BENSON, Supt. for the
Shea Co. - Black Canyon
TUNNEL CONTRACTOR.

229

RAY MATHER - OFFICE MGR
ENGINEERING CONSTRUCTORS, INC.

Roll
34

PICTURE
230

DATE
16 MAR 1954

DESCRIPTION
View of 36" CONDUIT
STA 177+80

Photo by
John J. McDonald

231

GRADING Final 100ft of
TRENCH of SAN VICENTE
CONDUIT - STA 180+00 to
STA 181+00

232

Initial flow of WATER
Through CONDUIT

233

234

235

Flow of WATER
Through CONDUIT
during Flushing of
TUNNEL.

Roll	PICTURE	DATE	DESCRIPTION	Photo by
35	236	16 MAR 1954	Messrs. FRANK JENKINS - Vice Pres. Amer. Pipe & Const Co & Al. Denton Vice Pres. Engineering Constructors viewing final Pipe Laying Operations.	John J. McBlennan
	237		Mr. Al Denton - U-P Engineering Constructors viewing final laying Operations to Sta 180+30+	
	238		Al. Denton & Tom Wilcox Checking final MEASUREMENTS for last section of Pipe to be Laid on SAN VICENTE CONDUIT.	
	239 & 240	23 MAR 1954	VIEWS of NAKONEY'S PROPERTY & RIGHT of WAY from Sta 22+46.	
	241	23 MARCH 1954	View of South Portal Tunnel AREA from County Road.	

Roll
36

PICTURE
242

DATE
MAR. 24, 1959

DESCRIPTION
SECTION of R/W between
Sta 31+00 & 27+65 viewed
from Roadway

Photo by
John J. McQuinn

243

SECTION of R/W at Sta 64+00

244

SECTION of R/W from Sta
71+00 to Sta 73+00 viewed
from County Road

245

SECTION R/W from Sta
80+00 to Sta 76+00

246

View of R/W from Sta
81+00 to Sta 99+00

247

View of R/W from Sta
100+00 to Sta 111+00

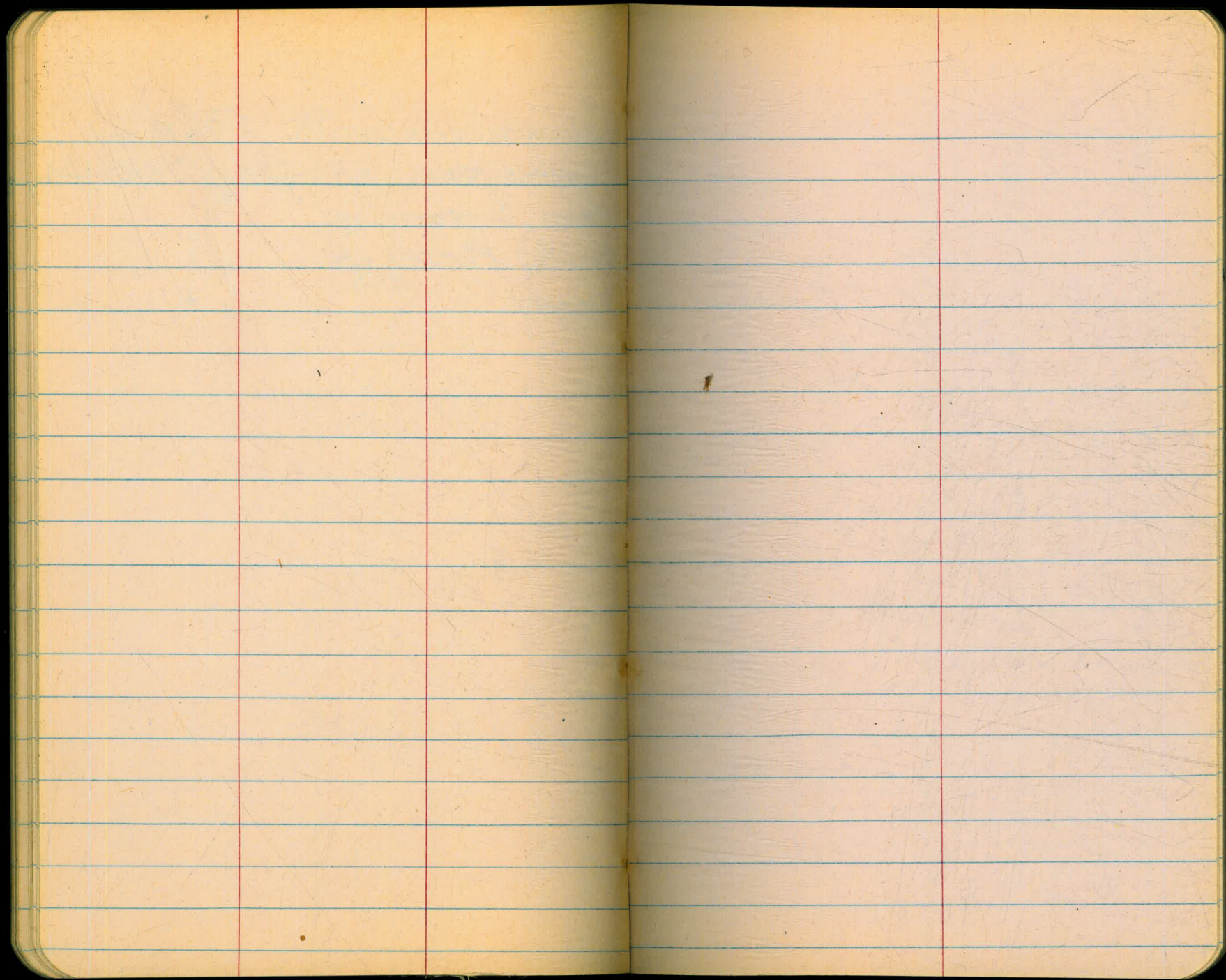
Roll
37

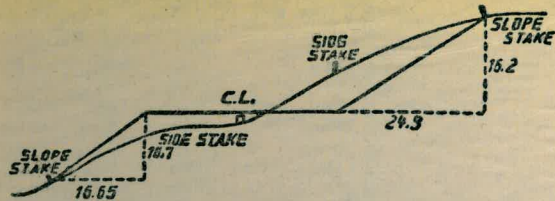
Picture
#248
to
#253

DATE
24 MAR. 1954

DESCRIPTION
VARIOUS VIEWS OF
AREA SURROUNDING
SOUTH PORTAL OF
TUNNEL

Photo by
John J. McDonald





DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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