



Northern Pacific Railway Company.
Engineering Department Records.

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N. P. 1757
6-24

OFFICE OF Chief Engineer

FILE NO. 8731-D

SUBJECT:

Grand Coulee

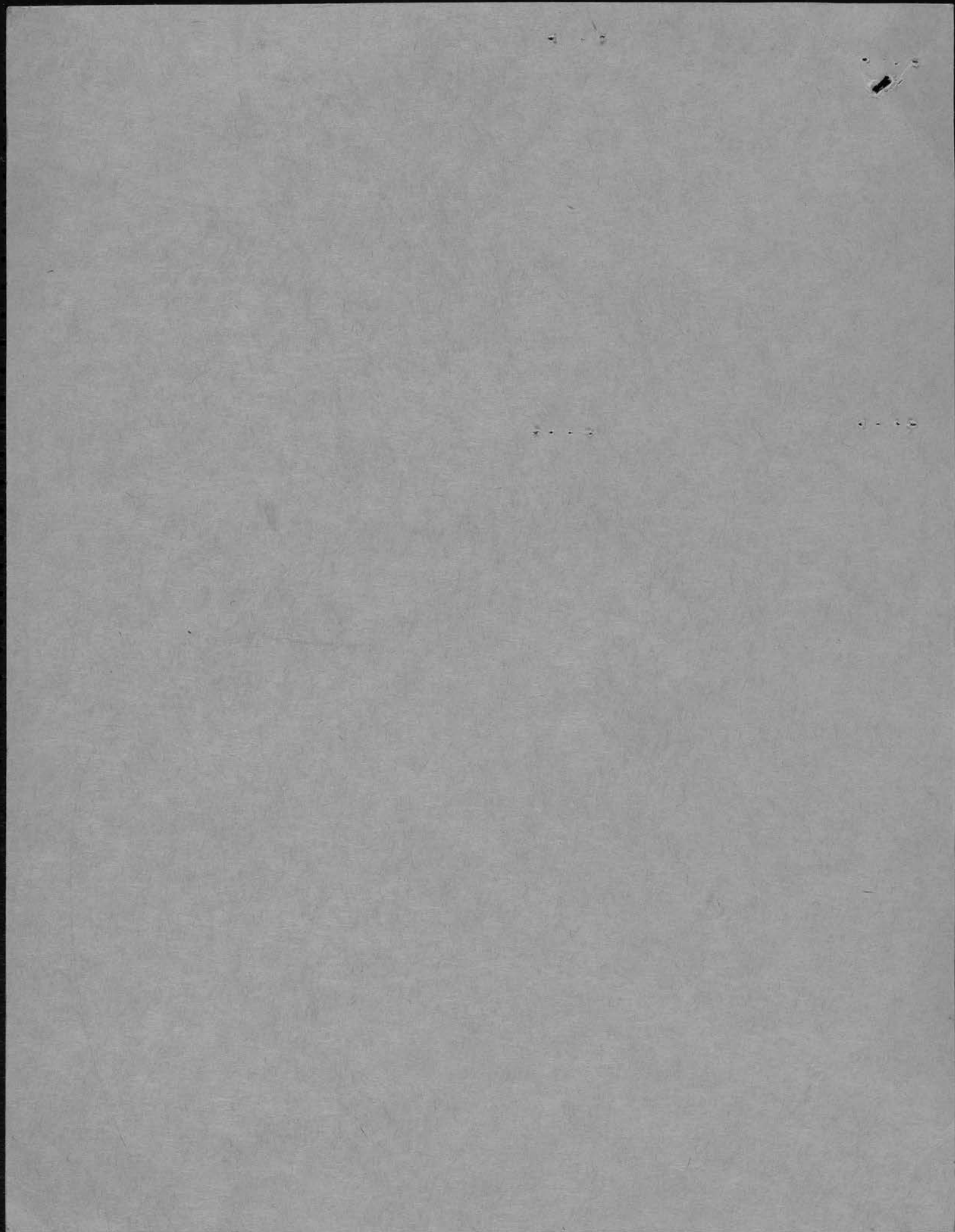
Dam line

Estimate for A.F.Z.

8731-D

87 31





NORTHERN PACIFIC RAILWAY COMPANY

IDAHO DIVISION

WASH CENTRAL BRANCH

STATE OF WASHINGTON

VAL SEC # 12

Estimated cost of proposed Grand Coulee Dam trackage Low Line Odair Jct to Dam Site, including 1 siding at Odair, 2 yard track and wye at dam site, as per profile (Low Line) dated Oct 2nd 1933 and sketch dated Oct 24th 1933.

Main track	28.5 miles
Other track	1.6
Total	30.1 miles

LABOR	MATERIAL	TOTAL
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ACCT # 1 Engineering 5% of \$707,910

35396

ACCT # 2 Land

370 acres of R/W (Inc severance etc)

50000

ACCT # 3 Grading

Sage brush clearing 155 acres @ 50	7750		
Exc comm (yard tracks) 80,000 cu yds @ 25¢	20000		
Exc Comm 335650 cu yd @ 25¢	83913		
Exc hard pan 16850 cu yd @ 55¢	9268		
Exc loose rock 29100 cu yd @ 65¢	18915		
Exc solid rock 51000 cu yd @ 1.15	58650		
Overhaul (Class A) 900,000 yd @ 1½¢	13500		
" on yard tracks 100,000 @ 1½¢	1500		
Riprap hand placed 1040 cu yds @ 2.50/2	2600	2080	
Transportation of men & supplies	25000		
	241096	2080	243176

ACCT # 6 Bridges, trestles & culverts
6 pile & frame trestles (25 spans or 369 ft)

Piling 5000 LFt @ 35¢/25¢	1750	1250	
Stringers 35000 FBM @ 20/24	700	840	
Other timber 20000 FBM @ 20/24	400	480	
Iron 4000# @ 7¢		280	
Galv iron 3500# @ 7¢		245	
Exc for end bents etc 150 cu yd @ 75¢	112		
Haul on piling 72100 LFt @ 1½¢	1082		
Haul on timber 686000 FBM Miles @ 75¢	515		
24" corr pipe 48 LFt @ 1/2.20	48	105	
36" corr pipe 1912 LFt @ 1.25/2.75	2390	5258	
48" do 1488 LFt @ 1.50/5.50	2232	8184	
Haul on pipe 4000 Ton Miles @ 80¢	3200		
Purchasing expense on culvert pipe 1%		124	
Transportation of men and supplies	800		
Frt on material		1050	
	13229	17816	31045

ACCT # 8 Ties

Cross ties Unt 7x8x8 86,400 pcs @ 75¢	64800		
Switch ties Unt 9 sets 27000 FBM @ 21	567		
Bridge ties Unt 20,000 @ 21	420		
Frt on material	11600		77387

ACCT # 9 Rail

90# 3rd Cl 30.2 miles 317,856 LFt 4257 T @ 20	85140		
Frt on rail 1000 miles @ .007 mills	29800		114940

ACCT # 10 Other Track Material

Angle bars 90# SH 9750 pr @ 1.54	15015		
Track bolts 90# 39000 pcs @ 10¢	3900		

ACCT # 10 Other Track Material Cont

Nut locks 90# 39000 pcs @ 3.3¢		1287	
Track spike 1110 kegs @ 6.36		7059	
<u>Tie plates for curves 3 1/2 miles</u>			
90# SH 20,160 pcs @ 11¢		2218	
Split switch complete 90# 10 @ 138.60		1386	
#9 Rigid frog 90# 10 @ 103.40		1034	
90# guard rail 10 sets @ 50.6		506	
Switch stand & connecting rods 10 @ 25.30		253	
Switch lamp & lock 5 @ 11		55	
Guard rail on bridges 3000 Lft 25 T @ 20		500	
Angle bars 100 pr SH @ 86¢		86	
Bolts 400 pcs @ 5¢		20	
Frt on material		3550	36869

ACCT # 11 Ballast

30 miles @ 1000 cu yd 30,000 cu yds @ 35¢	10500		
Transportation men and supplies	3000		
Rental of equipment	4000		
Work train	2000	2000	
	19500	2000	21500

ACCT # 12 Track laying & surfacing

Track laying & surfacing 30.3 Mi @ 800	24080		
Placing turnout 10 @ 125	1250		
Placing bridge ties 20,000 FBM @ 20	400		
Placing tie plates 20,160 pcs @ 3¢	605		
Placing ballast 30000 cu yds @ 45¢	13500		
Handling rail 4257 T @ .50	2128		
Place inner guard rail 0.6 Mi @ 700	420		
Transportation men and supplies	13800		
Rental of equipment	2800		
Work train	1800	1800	
	60783	1800	62583

ACCT # 13 Right of way fence

Standard stock fence 36 Mi @ 165/150	5940	5400	
Sheep tight fence 20 Mi @ 200/330	4000	6600	
16 gates 20 pcs @ 3/5.50	60	110	
Transportation of men and supplies	300		
Frt charges		900	
	10300	13010	23310

ACCT # 15 Crossings & signs

Exc comm 4000 cu yd @ 25¢	1000		
Exc hard pan 1000 cu yd @ 55¢	550		
Crossing plank 20,000 FBM @ 10/22	200	440	
Iron 100# @ 7¢		7	
24" Corr pipe 480 Lft @ 1/2.20	480	1056	
Crossing signs etc	200	400	
Haul on pipe 126 T Mi @ 80¢	101		
Crossing protection signals etc acct state			
Highway No 10 @ MP 1	1500	1600	
Transportation of men and supplies	400		
Frt charges		300	
	4431	3803	8234

ACCT # 16 Station & Office Bldgs

1 combination depot 20x48	1800	1540	
1 depot platform	200	220	
1 set furniture & fixtures	50	440	
1 loading platform	400	440	
1 depot privy	100	88	
1 coal shed	100	90	

ACCT # 16 Station & Office Bldgs

1 driven well	100	110	
Transportation of men and supplies	300		
Frt		900	
	3050	3628	6878

ACCT # 17 Roadway buildings

1 section house 22x36	1400	1200	
1 bunk house 11x24	250	220	
1 tool house 10x12	60	60	
1 Privy 6x7	55	50	
1 Driven well	100	110	
1 Sec ho 12x24	250	220	
Transportation of men and supplies	212		
Frt		600	
	2327	2460	4787

ACCT # 18 Water Station

1 water station complete	4500	6000	
Transportation of men and supplies	450		
Frt		550	
	4950	6550	11500

ACCT # 19 Fuel stations

1 coaling platform 16x80 Pla #197	400	330	
Transportation of men and supplies	50		
Frt		50	
	450	380	830

ACCT # 26 Telegraph & Tel lines

30 Mi of pole structure @ 120/165	3600	5000	
30 Mi of wire structure @ 40/85	1200	2500	
30 Mi of tel equipment @ 50¢/2	15	60	
Outfit car rental		225	
Work train service	300	300	
Frt		500	
Suptce and use of tools	511		
	5626	8585	14211

ACCT # 27 Signals & Interlockers

Train order signal	25	35	60
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ACCT # 37 Roadway machines

Section motor car		300	
Push car		75	
Frt		25	400

ACCT # 38 Roadway small tool

Section tools			200
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CONTINGENCIES & GENERAL EXPENSE

4% of 743,306 29732

ACCT # 76 Int during construction

6% of 773,038 for 9 months 34787
\$ 807,825

Note - Estimate predicated on using 90# 3rd Class rail SH tie plates on curves only,
1 siding at Odair 2 yard tracks and wye at end. Untreated ties in all tracks.
All frt @ 7 mills per Ton Mile. Joint facility prides as per letter FWS
11/3/33

ESTIMATE "B"

NORTHERN PACIFIC RAILWAY COMPANY

IDAHO DIVISION

WASH CENTRAL BRANCH

STATE OF WASHINGTON

VAL SEC # 12

Estimated cost of proposed Grand Coulee Dam trackage low line Odair Jct to Dam Site, including 1 - siding at Odair, 2 yard tracks and Wye Track at Dam Site, as per profile (Low Line) dated Oct 2, 1933 and sketch dated Oct 24th 1933.

	Main track	28.5 Mi		
	Other tracks	1.6 Mi		
	Total	30.1 Mi		
	LABOR	MATERIAL	TOTALS	
ACCT # 1	Engineering 5% of \$665,051			33252
ACCT # 2	Land			
	370 acres of R/W (Inc severance etc)			50000
ACCT #3	Grading			
	Sage brush clearing 155 acres @ 50	7750		
	Exc comm (yard tracks etc) 80,000 cy @ 25¢	20000		
	Exc comm 335650 cy @ 25¢	83913		
	Exc hard pan 16850 cy @ 55¢	9268		
	Exc loose rock 29100 cy @ 65¢	18915		
	Exc solid rock 51000 cy @ 1.15	58650		
	Overhaul (Class A) 900,000 @ 1 1/2¢	13500		
	" on yard tracks 100,000 @ 1 1/2¢	1500		
	Riprap - hand placed 1040 cy @ 2.50/2	2600	2080	
	Transportation of men and supplies 10%	21610		
		237706	2080	239,786
ACCT # 6	Bridges, Trestles & Culverts			
	6 pile & frame trestles (25 spans or 369 ft)			
	Piling 5000 Lft @ 35¢/25¢	1750	1250	
	Stringers 35000 FBM @ 20/20	700	700	
	Other timber 20,000 FBM 20/20	400	400	
	Iron 4000# @ 7¢		280	
	Gal iron 3500# @ 7¢		245	
	Exc for end bents etc 150 cy @ 75¢	112		
	Haul on piling 72100 LFT @ 1 1/2¢	1082		
	Haul on timber 686,000 FBM Miles @ 75¢	515		
	24" cor pipe 48 Lft @ 1/2	48	96	
	36" cor pipe 1912 Lft @ 1.25/2.50	2390	4780	
	48" cor pipe 1488 Lft @ 1.50/5	2232	7440	
	Haul on pipe 4000 ton miles @ 80¢	3200		
	Trans of men and supplies	680		
	Frt and on material		500	
		13109	15691	28,800
ACCT # 8	Ties			
	Cross ties unt 7x8 - 8 86400 pcs @ 65¢		56160	
	Switch ties unt 9 set 27000 FBM @ 17		459	
	Bridge ties unt 20,000 FBM @ 17		340	
	Frt on material		5000	61,959
ACCT # 9	Rail			
	90# 3rd Cl 30.1 Miles 317,856 Lft 4257 T @ 20		85140	
	Frt on rail from St Paul		17350	102,490

ACCT # 10 Other track material

Angle bars 90# SH 9750 pr @ 1.40	13650		
Track bolts 90# 39000 pcs @ 9¢	3510		
Nut locks 90# 39000 pcs @ 3¢	870		
Track spikes 1110 kegs @ 5.78	6415		
Tie plates for curves 3 1/2 miles 90# SH 20,160 pcs @ 10¢	2016		
Split switch complete 90# 10 @ 126	1260		
No 9 rigid frog 90# 10 @ 94	940		
90# guard rail 10 @ 46	460		
Switch stand & connecting rod 10 @ 23	230		
Switch lamps & locks 5 @ 10	50		
Guard rail on bridge 3000 Lft 25 T @ 20	500		
Angle bars 100 pr SH @ 78¢	78		
Bolts 400 pcs @ 4¢	16		
Frt on material for St Paul	2500		
			32495

ACCT # 11 Ballast

30 Miles @ 1000 cy - 30,000 cy @ 35¢	10500		
Trans men and supplies	3000		
Rental of equipment	4000		
Work train	2000	2000	
	19500	2000	21500

ACCT # 12 Tracklaying & surfacing

Tracklaying & surfacing 30.1 Mi @ 800	24080		
Placing turnout 10 @ 125	1250		
Placing bridge ties 20,000 FBM @ 20	400		
Placing tie plates 20,160 pcs @ 3¢	605		
Placing ballast 30,000 cy @ 45¢	13500		
Handling rail 4257 ton @ 50¢	2128		
Place inner guard rail 0.6 Mi @ 700	420		
Trans men and supplies	13800		
Rental of equipment	2800		
Work train	1800	1800	
	60783	1800	62583

ACCT # 13 Right of Way fence

Stand. stock fence 36 Mi @ 165/135	5940	4860	
Sheep tight fence 20 Mi @ 200/300	4000	6000	
16' gates 20 @ 3/5	60	100	
Transportation men and supplies	300		
Frt		900	
	10300	11860	22160

ACCT # 15 Crossings & Signs

Exc comm 4000 cy @ 25¢	1000		
Exc hard pan 1000 cy @ 55¢	550		
Crossing plank 20,000 FBM @ 10/18	200	360	
Iron 100# @ 7¢		7	
24" cor pipe 480 Lft @ 1/2	480	960	
Crossing signs etc	200	400	
Haul on pipe 126 T Mi @ 80¢	101		
Crossing protection Sig etc acct of state high-way #10 at MP 1	1500	1500	
Transportation of men and supplies	400		
Frt		200	
	4431	3427	7858

ACCT # 16 Station & office bldgs

1 combination depot 20x48	1800	1400	
1 depot platform	200	200	
1 furniture & fixture	50	400	
1 loading platform	400	400	
1 depot privy	100	78	
1 coal shed	100	80	
1 driven well	100	100	
Transportation of men and supplies	275		
Frt		300	
	3025	2958	5983

ACCT # 17 Roadway buildings

1 section house 22x36	1400	1100	
1 bunk house 11x24	250	200	
1 tool house 10x12	60	50	
1 privy 6x7	55	40	
1 driven well	100	100	
1 ice house 12x24	250	200	
Trans of men and supplies	212		
Frt		200	
	2327	1890	4217

ACCT # 18 Water station

1 water station complete	4500	5500	
Trans of men and supplies	450		
Frt		550	
	4950	6050	11000

ACCT # 19 Fuel stations

1 coaling platform 16x80 Plan #197	400	300	
Trans of men and supplies	50		
Frt		50	
	450	350	800

ACCT # 26 Telegraph to Tel lines

30 Mi of pole structure @ 120/150	3600	4500	
30 Mi of wire structure @ 40/76	1200	2280	
30 Mi of tel equip @ 50¢/2	15	60	
Outfit car rental		225	
Work train service	300	300	
Frt		500	
	5115	7865	12980

ACCT # 27 Signal and interlockers

Train order signal	25	35	60
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ACCT # 37 Roadway machines

Section motor car		300	
Push car		75	
Frt		25	400

ACCT # 38 Roadway small tool

Section tools		200	200
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CONTINGENCIES & GENERAL EXPENSE

4% of 698303			27932
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ACCT # 76 Int During construction

6% of 726235 for 9 months

32680

Total cost

\$ 759135

Office of Chief Engineer

Oct 31 1933

Note - Estimate predicated on using 90# 3rd Cl rail SH tie plates on curves only. 1 siding ~~and~~ at Odair, 2 yard tracks and wye at end. Untreated ties in all tracks. All Frt @ $2\frac{1}{2}$ mills per TM.

GRAND COULEE DAM TRACKAGE

TOTAL TRACKAGE 30.1 MILES

OUT OF POCKET COST

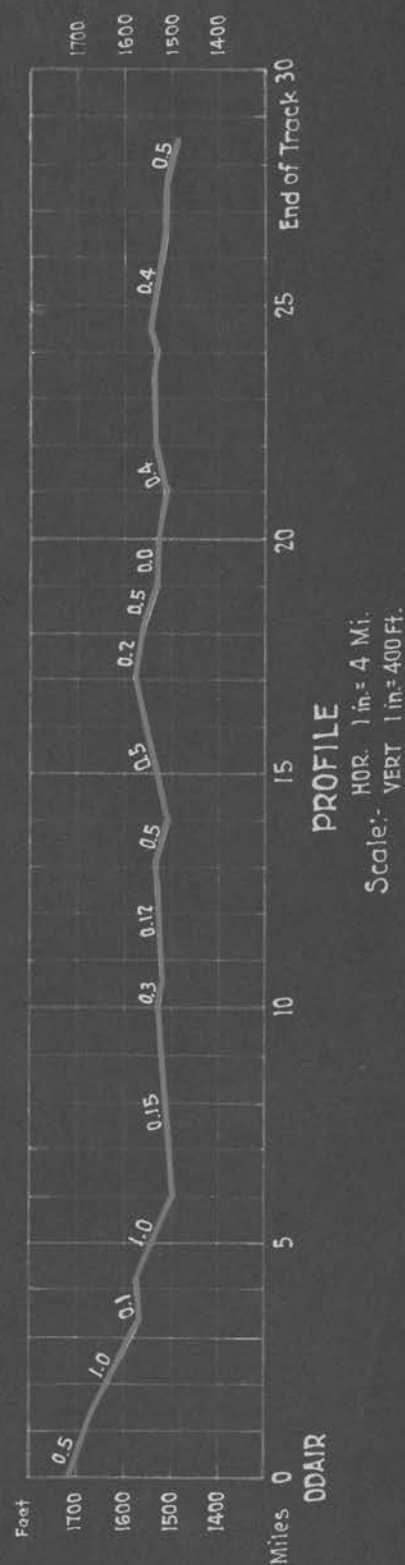
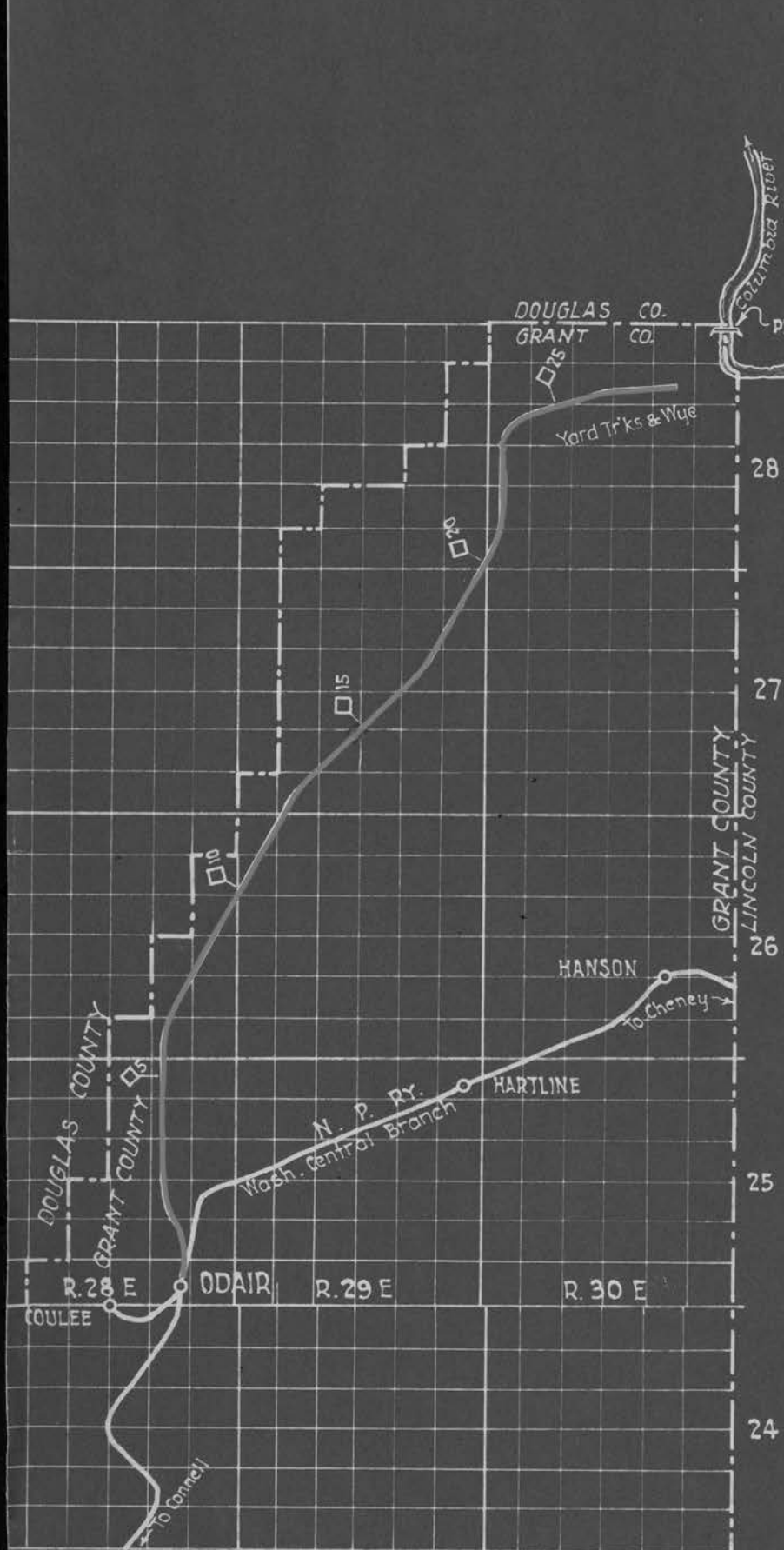
1 - Engineering	33252
2 - Land	50000
3 - Grading	218176
6 - Br Tr & Culverts	27620
8 - Ties	56959
9 - Rail	
10 - Other Track Material	13735
11 - Ballast	14500
12 - Tracklaying & surfacing	45983
13 - Right of way fence	20960
15 - Crossings & signs	7258
16 - Station & Office Bldgs	5408
17 - Roadway Bldgs	3805
18 - Water stations	10000
19 - Fuel stations	700
26 - Tel & Tel line	12255
27 - Sig & Interlockers	60
37 - Roadway machines	375
38 - Roadway small tool	
Contingencies & General Exp 3%	20949
76 - Interest during construction	

TOTAL OUT OF POCKET
EXPENSE

\$ 541995

Office of Chief Engineer

Oct 31 1933



N.P.R.Y.
IDAHO DIV. WASH. CENTRAL BR.
SKETCH SHOWING
PROPOSED TRACK
ODAIR TO GRAND COULEE DAM SITE
WASH.

Scale: as shown
Office of Chief Engr., St. Paul. Oct. 24 1933

NOTE:-
1 - 3000 ft. Siding at Odair
2 - 3000 ft. Yard Tracks " End
1 - 2500 ft. Wye " End
Main Track 28.5 Miles long.

NORTHERN PACIFIC RAILWAY CO
IDAHO DIVISION WASH CENTRAL BR

EST COST OF PROPOSED GRAND COULLEE DAM TRACKAGE - LOW LINE - ODAIR JCT TO DAM SITE
INCLUDING 3 ADDL YARD TRACKS AT ODAIR JCT - 1 PASSING TRACK AT MP 15 AND 4 YARD
TRACKS AT DAM SITE AS PER PROFILE (#5) DATED OCT 2 1933 AND SKETCH DATED OCT 24 1933

STATE OF WASHINGTON

VAL SEC # 12

MAIN TRACK 28.5 MI
OTHER TRACKS 4.0
Total 32.5 MI

LABOR MATERIAL TOTALS

ACCT # 1 ENGINEERING 5% of \$781,110

39056

ACCT # 2 LAND

370 Acres of R/W (incl Severance etc)

50000

ACCT # 3 GRADING

Sage brush clearing 155 Ac @ \$50	7750		
Exc. Comm. (Yd trks etc) 80000 cy @ 25¢	20000		
Exc. Comm. 335650 cy @ 25¢	83913		
Exc. Hard pan 16850 cy @ 55¢	9268		
Exc. Loose rock 29100 cy @ 65¢	18915		
Exc. Solid rock 51000 cy @ 1.15	58650		
Overhaul (Class A) 900,000 @ 0.015	13500		
do on yd trks 100,000 @ 0.015	1500		
Riprap - hand placed 1040 @ 2.50/2	2600	2080	
Transportation of men & supplies (10%)	21590		
	237486	2080	239,566

ACCT # 6 BRIDGES, TRETTLES & CULVERTS

6 pile and frame trestles (25 spans or 369 LFt)

Piling 5000 LFt @ .35/.25	1750	1250	
Stringers 35000 FBM @ 20/20	700	700	
Other timber 20000 FBM @ 20/20	400	400	
Iron 4000 lbs @ 7¢		280	
Galv iron 3500 lbs @ 7¢		245	
Exc for end bents etc 150 cy @ 75¢	112		
Haul on piling 72100 LFt Mi @ 0.015	1082		
Haul on timber 686,000 MFBM Mi @ 75¢	515		
24" corr pipe 48 LFt @ 1/2	48	96	
36" corr pipe 1912 LFt @ 1.25/2.50	2390	4780	
48" corr pipe 1488 LFt @ 1.50/5.00	2232	7440	
Haul on pipe 4000 T Mi @ 80¢	3200		
Trans of men and supplies	680		
Frt on material		1500	
	13109	16691	29800

ACCT # 8 TIES

Crossing ties untr 7x8x8 93600 pc @ 65¢	60840		
Sw ties untr 17 sets #9 50000 FBM @ 17	850		
Br ties untr 20000 FBM @ 17	550		
Frt on material	13000		75240

ACCT # 9 RAIL

100# 3rd (10 mi) 105600 LFt 1571.429 T @ 20	31430		
90# 3rd (22.5 Mi) 237600 LFt 3182.17 T @ 20	63643		
Frt on rail from St Paul	53235		148308

ACCT # 10 OTHER TRACK MATERIAL

Angle bars 100# SH 3300 pr @ 1.93	6369		
do 90# SH 7500 pr @ 1.40	10500		
Offset angle bars 90/100 20 pr @ 6.50	130		
Trk bolts 13240 pc 100# @ 9.7¢	1284		
do 30040 pc 90# @ .09	2704		
Nut locks 13240 pc 100# @ 3¢	397		
do 30040 pc 90# @ 3¢	901		
Track spikes 1300 kegs @ 5.78 ea	7514		
Tie plates for 90# 134,500 pc SH 90# 6x8½ @ 10¢	13450		
Split sw 90# 16.5 pts 17 @ 126.00	2142		
#9 "R" 90# frog 13.6 lg 17 @ 94	1598		
90# G R 8.3 lg 17 @ 46	782		
Sw Std to Conn rod "H" 17 @ 23	391		
Sw lamp & lock 5 # @ 10	50		
GR on Br 3000 Lft 56# - 25 T @ 20	500		
Angle bars 100 pr SH @ 78¢	78		
Bolts 400 pc 56# @ 4¢	16		
Frt on Material from St Paul	19000	67806	

ACCT # 11 BALLAST

32.5 Mi @ 1000 cy pit run - 32500 @ 35¢	11375		
Trans men and supplies	3000		
Rent of equipment	4000		
Work train	2000	2000	
	20375	2000	22375

ACCT # 12 TRACKLAYING & SURFACING

Tracklaying & surfacing 32.5 Mi @ 800	26000		
Placing turnouts 17 @ 125	2125		
Placing br ties 20000 FBM @ 20	400		
Placing tie plates 134500 pc @ 3¢	4035		
Placing ballast 50000 cy @ 45¢	22500		
Handling rail 4753 T @ 50¢	2377		
Place inner GR on Br 0.6 Mi @ 700	420		
Trans men and supplies	15000		
Rent of equipment	3000		
Work train	2000	2000	
	77857	2000	79857

ACCT # 13 RIGHT OF WAY FENCE

Stand stock fc 36 Mi @ 165/135	5940	4860	
Sheep tight fc 20 Mi 200/300	4000	6000	
16' gates 20 @ 3/5	60	100	
Trans men and supplies	300		
Frt		2600	
	10300	13560	23860

ACCT # 15 CROSSINGS AND SIGNS

Exc comm 4000 cy @ 25¢	1000		
Exc hard pan 1000 cy @ 55¢	550		
Crossing Plank 20,000 FBM @ 10/18	200	360	
Iron 100 lbs @ 7¢		7	
24" corr pipe 480 Lft @ 1/2	480	960	
Crossing signs etc	200	400	
Haul on pipe 126 T Mi @ 80¢	101		
Crossing protection Sig etc acct State Highway			
#10 Mile 1	1500	1500	
Trans of men and supplies	400		
Frt		200	
	4431	3427	7858

ACCT # 16 STATION AND OFFICE BLDGS

1 Combination depot 20x48 @ 1800/1400	1800	1400	
1 Depot platform @ 200/200	200	200	

ACCT # 16 STATION & OFFICE BLDGS CONT

1 Furniture & fixtures @ 50/400	50	400	
1 Loading platform @ 400/400	400	400	
1 Depot privy @ 100/78	100	78	
1 Coal shed @ 100/80	100	80	
1 Driven well @ 100/100	100	100	
Trans men and supplies	275		
Frt		600	
	3025	3258	6283

ACCT # 17 ROADWAY BLDGS

1 Section house 22x36 @ 1400/1100	1400	1100	
1 Bunk ho 11x24 @ 250/200	250	200	
1 Tool house 10/12 @ 60/50	60	50	
1 Privy 6x7 @ 55/40	55	40	
1 Driven well @ 100/100	100	100	
1 Ice house 12x24 @ 250/200	250	200	
Trans of men and supplies	212		
Frt		200	
	2327	1890	4217

ACCT # 18 WATER STATIONS

1 Water station complete @ 450/550	4500	5500	
Trans of men and supplies	450		
Frt		550	
	4950	6050	11000

ACCT # 19 FUEL STATIONS

1 coaling platform 16x80 Plan #197 @ 400/300	400	300	
Trans of men and supplies	50		
Frt		50	
	450	350	800

ACCT # 26 TELEGRAPH & TEL LINES

30 Mi of pole structure @ 120/150	3600	4500	
30 Mi of wire structure @ 40/76	1200	2280	
30 Mi of tel equip @ 50%/2	15	60	
Outfit car rental		225	
Work train service	300	300	
Frt		1000	
	5115	8365	13480

ACCT # 27 SIG & INTERLOCKERS

Train order signal @ 25/35	25	35	60
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ACCT # 37 ROADWAY MACHINES

Section car 1 @ 300		300	
Push car 1 @ 75		75	
Frt		25	
		400	400

ACCT # 38 ROADWAY SMALL TOOLS

Section tools		200	200
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CONTINGENCIES AND GENERAL EXPENSE

5% of \$820,166			41008
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ACCT # 76 INT DURING CONSTRUCTION

6% of \$861,174 for 9 Mo			\$38753
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(FOR OUT OF POCKET COST SEE PAGE 4)

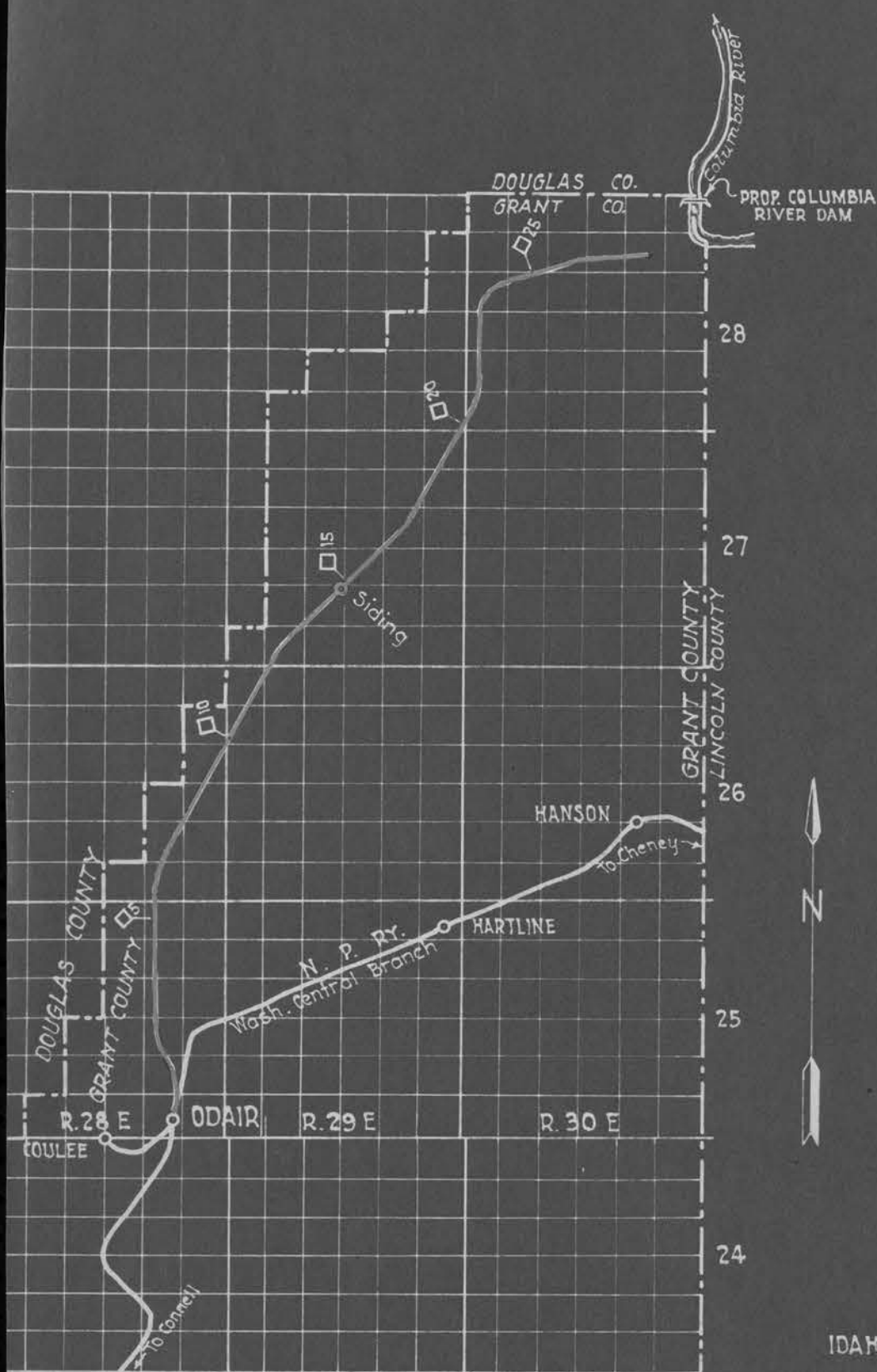
- 3 -

TOTAL COST \$ 899,927.00

GRAND COULEE DAM TRACKAGE

OUT OF POCKET COST

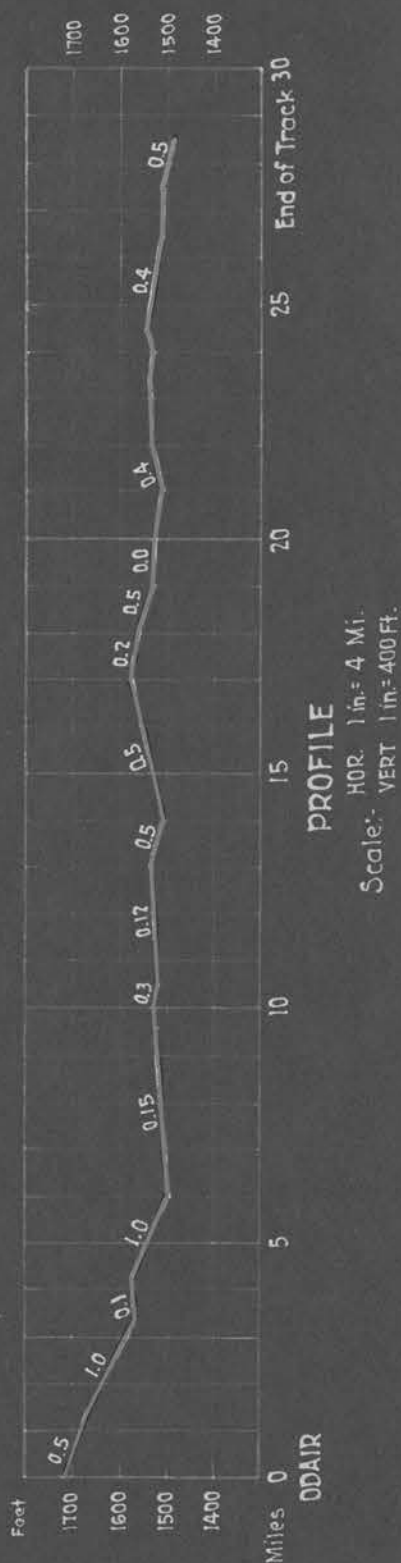
1	Engineering	39056
2	Land	50000
3	Grading	217976
6	Br Tr & Culverts	27620
8	Ties	62240
9	Rail	
10	Other track material	17909
11	Ballast	15375
12	Tracklaying & surfacing	61857
13	Right of way fence	20960
15	Crossings & signs	7258
16	Sta & Office bldgs	5408
17	Roadway Bldgs	3805
18	Water stations	10000
19	Fuel Stations	700
26	Tel & Tel lines	12255
27	Sig & interlockers	60
37	Roadway Mach	375
38	Roadway small tools	
	Contingencies & Gen Exp (3%)	24606
76	Int during const	
	Total Out of Pocket Expense	<u>\$577,460</u>



Scale: 1 in. = 4 Miles.

NOTE:-

- 2 - 3000 ft. Yard Tracks at Odair
- 1 - 3000 ft. Siding " M.P. 15
- 4 - 3000 ft. Yard Tracks " End
- Main Track 28.5 Miles long.



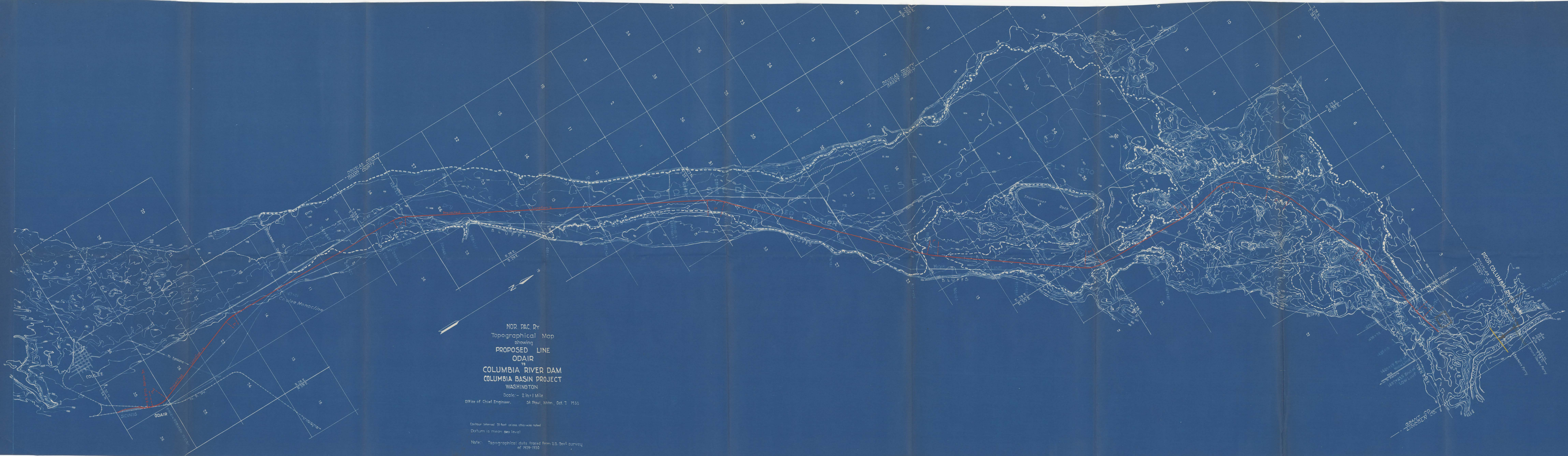
PROFILE

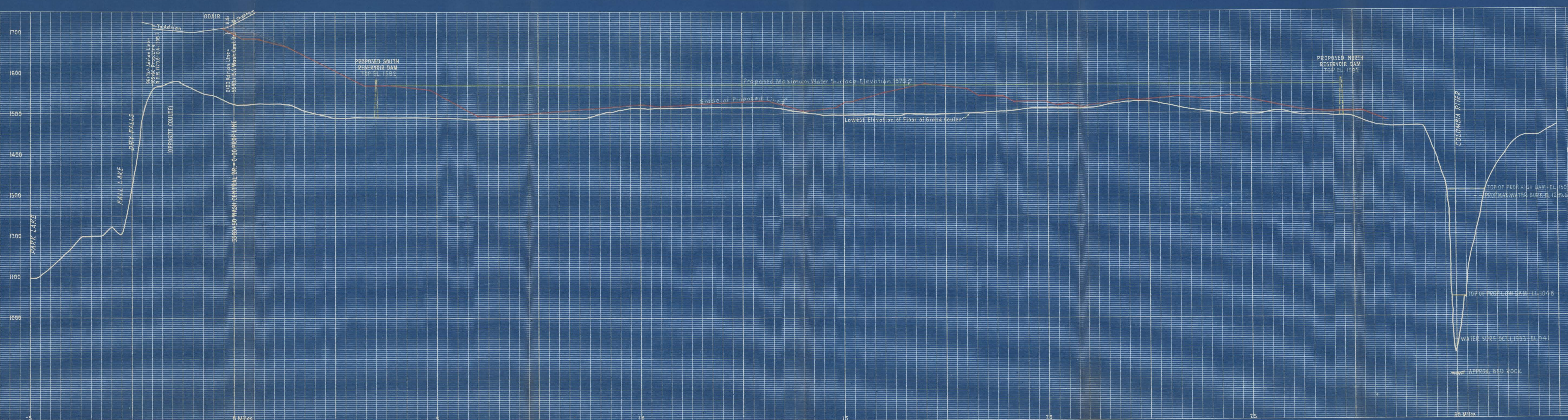
HOR. 1 in. = 4 Mi.
Scale: VERT 1 in. = 400 Ft.

N.P.RY.
IDAHO DIV. WASH. CENTRAL BR.
SKETCH SHOWING

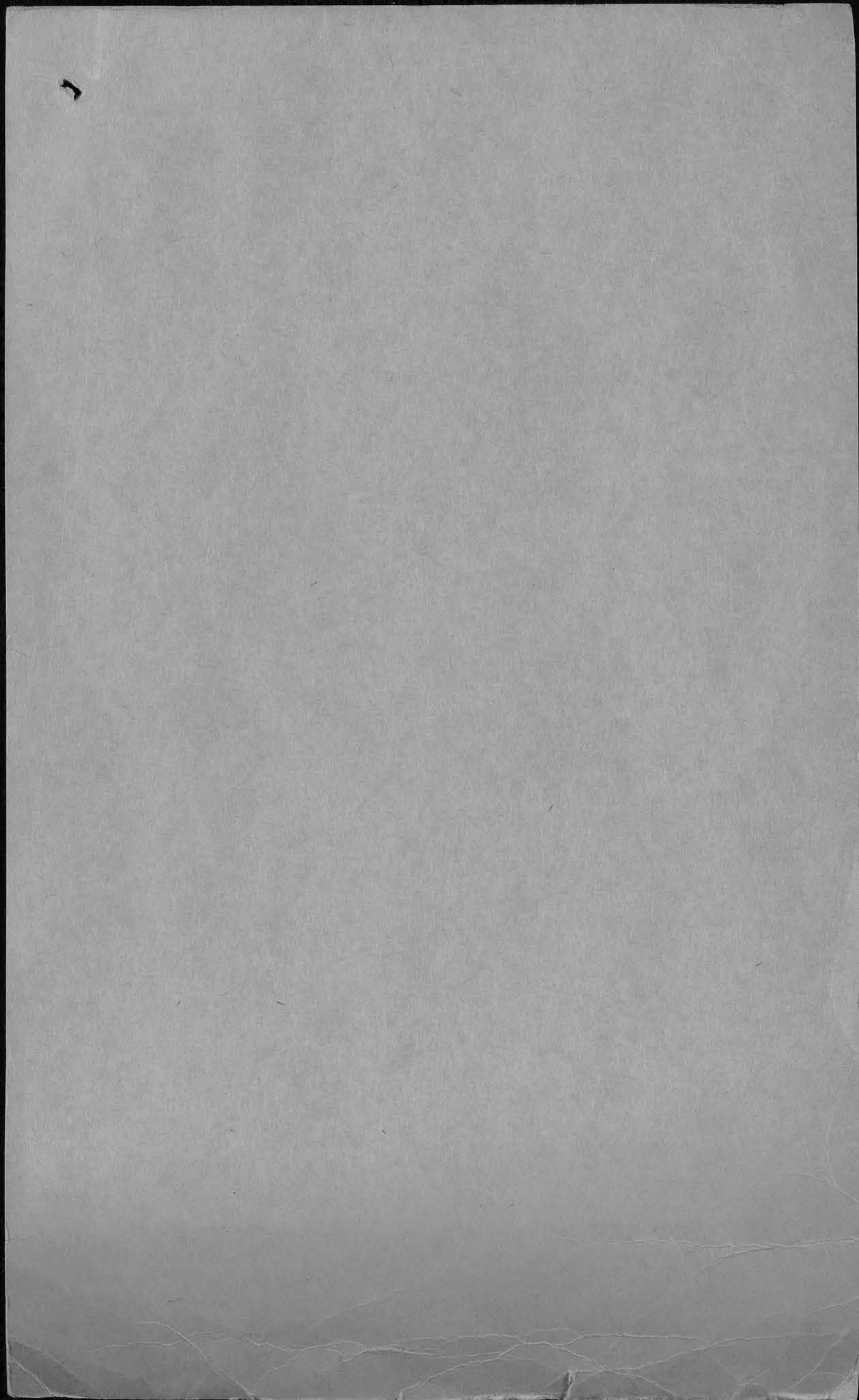
PROPOSED TRACK
ODAIR TO GRAND COULEE DAM SITE
WASH.

Scale: as shown
Office of Chief Engr. St. Paul. Oct. 24 1933





N.P.R.
 PROFILE
 OF
 PROPOSED LINE
 AND
 PROPOSED COLUMBIA RIVER
 AND
 GRAND COULEE DAMS
 WASHINGTON
 SCALE: HOR. 1 IN. = 1 MILE
 VER. 1 IN. = 100 FT.
 Office of Chief Eng., St. Paul, Minn. Oct. 25, 1933
 Datum = U.S. Gov.
 Add 10.8' for N.P.R.



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