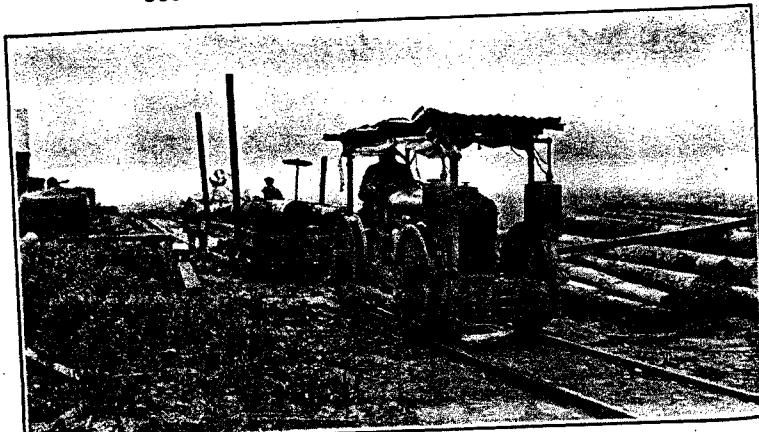


SUSPENSION FOOTBRIDGE AND BULKHEAD, INDIAN RIVER,  
SITKA NATIONAL MONUMENT



305-FOOT SUSPENSION BRIDGE, CHULITNA RIVER



ANNUAL REPORT OF THE CHIEF OF ENGINEERS, 1929

EXTRACT

REPORT UPON THE CONSTRUCTION AND  
MAINTENANCE OF ROADS, BRIDGES,  
AND TRAILS, ALASKA

BOARD OF ROAD COMMISSIONERS  
FOR ALASKA



UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON: 1930

90D—Shelter Cabins, 2nd Division.—The following work was accomplished:

No. Route	Location	Work Done	Cost
18	Topkok, 48 miles from Nome	Furnishing wood and repairs	\$ 43.11
18	Walla Walla, 96 miles from Nome	Stove pipe and damper	2.45
18	Moses, 115 miles from Nome	Stove pipe and damper	2.45
21	Golsovia, 31 miles from Unalakleet	Rebuilding dog barn	50.00
28	Garfield, 24 miles from Shelton	Combination cabin and dog barn built	690.39
28A	Shelton, 74 miles from Nome	Furnishing broom and axe	2.15
28A	Windy, 96 miles from Nome	Furnishing broom and axe	2.15
28A	106 miles from Nome	Shelter tent and stove placed	45.35
41B	Corwin, 230 miles from Kotzebue	Remaining bills for erection of dog barn	307.50
41B	Tulukuk, 261 miles from Kotzebue	Remaining bills for erection of combination cabin and dog barn	480.50
42	Kotlik, 63 miles from St. Michael	Dog barn built	130.35
62A	Peace River, 13 miles from Haycock	Log cabin and log dog barn built	500.00
67	Woolley, 44 miles from Nome	General repair and wood	93.85
67	Tissue, 51 miles from Nome	Combination cabin and dog barn built	719.06
67	Douglas, 60 miles from Nome	General repairs	63.85
67A	Lopp Lagoon, 93 miles from Teller	Combination cabin and dog barn built	719.06
67A	Sinrazat, 123 miles from Teller	Combination cabin and dog barn built	718.96
67C	Agiapuk, 21 miles from Teller	Combination cabin and dog barn built	778.96
67C	New Igloo, 40 miles from Teller	Combination cabin and dog barn built	713.86
Total			\$6,064.00

DISTRIBUTION OF EXPENDITURES.

Type	Miles	Expenditure	Unit Cost Dollars per Mile
Road	169½	\$ 76,090.21	\$ 448.91
Tramway	74	12,680.14	171.35
Sled Road	18	1,851.35	102.85
Permanent Trails	2,216	10,535.15	4.75
Temporary Trails	314	2,210.20	7.04
Totals	2,791½	\$103,367.05	\$ 37.03

STATEMENT OF RECEIPTS AND DISBURSEMENTS.

This report covers vouchers received and placed in the account including June 30, 1929.

RECEIPTS.

Balance on hand July 1, 1928	\$ 107,188.02
Received since from:	1,564,882.60
Transfers from Officers	0.00
War Warrants	4,322.03
Sales, Refunds, etc.	1,983.68
Reimbursements	24,866.68
Contributions	50.00
<b>TOTAL</b>	<b>\$1,703,243.01</b>

DISBURSEMENTS.

Disbursed as per tabulated statement below	\$1,444,757.10*
Deposited to credit of Treasurer, United States, balance on hand at close of fiscal year 1928	107,188.02
Deposit of collections	31,172.39
Balance on hand June 30, 1929 in Army Account of Advances	120,125.50

TOTAL \$1,703,243.01

\*Does not include \$3,572.89 charged against available appropriations by direct U. S. Treasury settlements.

EXPENDITURES IN DETAIL.

Federal Appropriations, Alaska Fund and Funds Contributed by the Territory of Alaska and Others.

Acct. No.	Name of Sub-Project	Construction	Maintenance and Improvement	Total
2E	Gastineau Channel Dredging	\$	\$ 200.00	\$ 200.00
2H	Juneau Wharf	8,245.08		8,245.08
3A	Haines-Wells		6,387.76	6,387.76
3B	Pleasant Camp Extension	3,000.00	2,978.81	5,978.81
3C	Porcupine Extension		69.04	69.04
3D	Haines-Mud Bay		750.00	750.00
4AA	Richardson-Democrat Creek	1,820.59		1,820.59
4BA	Valdez-Ptarmigan Drop, 1st. Sec.		19,995.20	19,995.20
	Valdez-Ptarmigan Drop, 2nd. Sec.		19,998.10	19,998.10
	Valdez-Ptarmigan Drop, 3rd. Sec.		19,998.50	19,998.50
	Valdez-Ptarmigan Drop, 4th. Sec.		19,992.40	19,992.40
4BB	Ptarmigan Drop-Ernestine, 1st. Sec.		18,732.50	18,732.50
	Ptarmigan Drop-Ernestine, 2nd. Sec.		16,606.42	16,606.42
4C	Ernestine-Willow Creek		8,643.87	8,643.87
4D	Willow Creek-Gulkana, 1st. Sec.		17,120.50	17,120.50
	Willow Creek-Gulkana, 2nd. Sec.		15,184.28	15,184.28
4E	Gulkana-Sourdough, 1st. Sec.		12,220.00	12,220.00
	Gulkana-Sourdough, 2nd. Sec.		11,420.52	11,420.52
4F	Sourdough-Mile 163, 1st. Sec.		12,420.00	12,420.00
	Sourdough-Mile 163, 2nd. Sec.		12,326.75	12,326.75
4G	Mile 163-Delta River, 1st. Sec.		19,820.00	19,820.00
	Mile 163-Delta River, 2nd. Sec.		19,710.43	19,710.43
	Mile 163-Delta River, 3rd. Sec.		19,637.40	19,637.40
4H1	Delta River-Rapids, 1st. Sec.		18,227.00	18,227.00
	Delta River-Rapids, 2nd. Sec.		14,475.00	14,475.00
	Delta River-Rapids, 3rd. Sec.		14,820.00	14,820.00
	Delta River-Rapids, 4th. Sec.		13,947.07	13,947.07
4H2	Rapids-Grundler		15,530.09	15,530.09
4I	Grundler-Richardson, 1st. Sec.		18,641.40	18,641.40
	Grundler-Richardson, 2nd. Sec.		16,090.42	16,090.42
4J	Richardson-Salchaket		8,007.94	8,007.94
4JA	Lake Harding Road	500.00	639.93	1,139.93
4K	Salchaket-Fairbanks		11,814.05	11,814.05
4KA	Salcha Bridge		2,942.32	2,942.32
4A	Dunbar-Ft. Gibbon		1,887.45	1,887.45
4B	Nenana-Campbell's		28.60	28.60
4C	Fish Lake-American Creek		784.90	784.90
4E	Tanana Aviation Field	912.63		912.63
4F	Illinois Creek-Moran Creek	1,023.25		1,023.25
4A	Willow Creek-Tonsina		2,658.20	2,658.20
4B	Tonsina-Chitina, 1st. Sec.		14,145.20	14,145.20
4C	Tonsina-Chitina, 2nd. Sec.		10,244.35	10,244.35
4D	Chitina-Depot	4,708.63		4,708.63
4E	Chitina-Native School		50.00	50.00
4F	Lower Tonsina Aviation Field	654.74		654.74

Acct. No.	Name of Sub-Project	Construction	Maintenance and Improvement	Total
6G	Copper Center Aviation Field...	160.50		160.50
7A	Summit-Chatanika		3,381.31	3,381.31
7AA	Cleary Creek	600.00	406.72	1,006.72
7BA	Dome-Spaulding Mine	2,839.37		2,839.37
7C	Summit-Fairbanks Creek		3,887.81	3,887.81
7CA	Summit-Fish Creek	10,004.66	1,005.00	11,009.66
7D	Ester Creek		5,572.93	5,572.93
7DA	College Spur		62.09	62.09
7DB	Ester Dome		60.21	60.21
7DC	St. Patrick's-Happy		66.24	66.24
7G	Fairbanks-Gilmore		7,980.47	7,980.47
7GA	Lazelle Road		97.76	97.76
7H	Little Eldorado Creek		230.74	230.74
7I	Gilmore-Summit		3,689.60	3,689.60
7J	Fairbanks-Chena Hot Springs...		594.52	594.52
7JA	Chena River Branch		472.55	472.55
7JC	Colorado Creek-South Fork...	600.00		600.00
7K	Olnes-Livengood		363.60	363.60
7N	Farmer's-Birch Hill		1,190.17	1,190.17
7NA	Isabelle Creek		17.75	17.75
7NB	Ballaine-Rickert		13.37	13.37
7S	Graehl Bridge		43.84	43.84
7T	Farmer's-Chena Slough	2,420.00		2,420.00
7X	Chena Hot Springs Aviation Field		876.71	3,296.71
7Y	Fairbanks Aviation Field	7,417.42	50.00	7,467.42
8	Nome-Council		18,111.53	18,111.53
8D	Council-Ophir Creek		1,128.98	1,128.98
8H	Casa de Paga		3,641.75	3,641.75
8L	Port Safety Aids		120.00	120.00
9	Rampart-Eureka		286.45	286.45
10B	Seward-Nash		755.25	755.25
10C	Lowell Creek Flood Control...	112,133.25		112,133.25
10D	Seward Aviation Field		185.75	185.75
11A	Eagle-Liberty		2,742.54	2,742.54
11AA	American Summit-King Solomon		412.50	412.50
11B	Liberty-Forty Mile		1,235.80	1,235.80
11C	Steel Creek-Jack Wade		196.00	196.00
11CC	Steel Creek-Jack Wade (Summer)		155.00	155.00
11D	Steel Creek-Walker's Fork		705.50	705.50
11E	Eagle-Seventy Mile		1,505.04	1,505.04
11F	Jack Wade-Chicken		527.60	527.60
11H	Liberty Cabin-Dome		817.48	817.48
11I	Dome-Steel Creek		817.48	817.48
11L	Franklin-Chicken Creek		331.50	331.50
11MM	Jack Wade-Walker's Fork		476.00	476.00
11P	Chicken Aviation Field	501.00		501.00
11Q	Eagle Aviation Field	165.39		165.39
13A	Nome-Bessie		2,316.33	2,316.33
13B	Bessie-Snake River		3,370.19	3,370.19
13C	Bessie-Little Creek		273.81	273.81
13F	Nome-Osborne	8,140.00	6,809.62	14,949.62
13K	Bessie-Buster		3,984.34	3,984.34
13L	Nome Buoys		585.00	585.00
14	Sitka-Indian River	800.00	822.49	1,622.49
14A	Sitka National Monument		575.48	575.48
14B	Sitka Military Cemetery	1,000.00	505.55	1,505.55
14C	Sitka-Pioneer Cemetery Road		180.76	180.76
14D	National Cemetery Road		142.50	142.50
15	Circle-Miller House, 1st. Sec.	15,740.00	4,220.00	19,960.00
	Circle-Miller House, 2nd. Sec.		5,425.00	19,985.00
	Circle-Miller House, 3rd. Sec.	15,580.00	4,370.00	19,950.00
	Circle-Miller House, 4th. Sec.		5,616.39	19,979.39
	Circle-Miller House, 5th. Sec.		17,620.00	19,985.00
	Circle-Miller House, 6th. Sec.		18,340.00	19,975.00
	Circle-Miller House, 7th. Sec.		19,932.00	19,932.00
	Circle-Miller House, 8th. Sec.		19,910.00	19,910.00
	Circle-Miller House, 9th. Sec.		19,196.50	19,196.50
15A	Central House-Circle Hot Springs	3,464.97	750.00	4,214.97

Acct. No.	Name of Sub-Project	Construction	Maintenance and Improvement	Total
15C	Circle Hot Springs Aviation Field		50.00	50.00
15E	Miller House Spur	310.98		310.98
16	Chatanika-Miller House, 1st. Sec.	7,195.00	11,243.00	18,438.00
	Chatanika-Miller House, 2nd. Sec.	8,240.00	10,721.00	18,961.00
	Chatanika-Miller House, 3rd. Sec.	7,462.00	11,140.00	18,602.00
	Chatanika-Miller House, 4th. Sec.	7,467.73	10,106.00	17,573.73
16B	Eagle Creek Spur		54.29	54.29
17	Ft. Gibbon-Kaltag		805.56	805.56
17D	Tanana-Koyukuk Telephone Line		955.77	955.77
18	Kaltag-Nome		1,688.33	1,688.33
18A	Bonanza-Kotzebue		313.12	313.12
18D	Unalakleet Aviation Field		24.00	24.00
18F	Golovin Aviation Field		5.10	5.10
18G	Moses Aviation Field		7.00	7.00
18H	Koyukuk St.-Unalakleet Tel. Line		95.25	95.25
20DA	Takotna-Ophir		25.20	25.20
20H	Nancy-Susitna		277.97	277.97
20J	Susitna-Tyonek	711.95		711.95
20K	Susitna Sta. Aviation Field	409.50		409.50
21	Unalakleet-St. Michael		70.63	70.63
22	Hot Springs-Sullivan Creek		428.45	428.45
23B	Beaver-Caro		1,140.50	1,140.50
23D	Caro-Flat Creek	2,720.00	3,159.44	5,879.44
23F	Chandalar Aviation Field	2,921.24		2,921.24
25C	Nome Wireless		68.88	68.88
25D	Mouth of Center Creek	3,520.00	4,055.45	7,575.45
25E	Submarine-Paystreak		1,652.60	1,652.60
25L	Nome Aviation Field		70.80	70.80
25M	Telephone Lines Seward Pen.		1,203.03	1,203.03
25P	Nome Harbor Lights		120.00	120.00
26	Candle-Candle Creek		7,348.66	7,348.66
26B	Bear Creek Trail		100.00	100.00
26E	Candle Aviation Field	350.00		350.00
27	Deering-Inmachuk		9,357.50	9,357.50
27A	Deering Aviation Field	445.50		445.50
28	Shelton-Candle		489.96	489.96
28A	Nome-Serpentine Hot Springs	1,134.00	1,734.47	2,868.47
28E	Bettles River Aviation Field	250.00		250.00
30	Hot Springs Landing-Eureka		394.20	394.20
30B	Manley Hot Springs Aviation Field		25.00	25.00
32B	Iditarod-Flat	12,024.22	5,235.00	17,259.22
32C	Ophir-Iditarod		276.24	276.24
32D	Flat-Crooked Creek		266.40	266.40
32E	Takotna Aviation Field		27.00	27.00
32F	Takotna Depot		245.60	245.60
33C	Flat City-Flat Creek		1,432.47	1,432.47
33D	Head Flat Creek-Willow Creek	1,243.00	1,435.59	2,678.59
33F	Flat City-Otter Discovery		1,258.85	1,258.85
33H	Flat Aviation Field	200.00		200.00
34A	Flat-Holy Cross-Anvik		362.64	362.64
35A	Archangel Extension		321.82	321.82
35AA	Sherry Branch		235.11	235.11
35B	Palmer-Fishhook		2,757.32	2,757.32
35C	Palmer-Matanuska River		106.66	106.66
35D	Willow Creek Extension	2,320.00	5,277.82	7,597.82
35E	Wasilla-Fishhook		7,691.19	7,691.19
35F	Wasilla-Knik		380.87	380.87
35G	Palmer-Springer		21.15	21.15
35H	Wasilla-Finger Lake-Palmer		2,290.30	2,290.30
35I	Moose-Palmer		17.66	17.66
35J	Wasilla-Matanuska		1,418.49	1,418.49
35K	Matanuska Trunk Road	1,720.00	4,040.63	5,760.63
35L	Palmer-Matanuska		1,329.81	1,329.81
35O	Fishhook-Goldmint	14,636.83		14,636.83
35Q	Eldrod Road		11.25	11.25

Acct. No.	Name of Sub-Project	Construction	Maintenance and Improvement	Total
35R	Bogard Road		200.64	200.64
35T	Werner Connection		151.25	151.25
35U	Moose Creek Aviation Field		20.25	20.25
35V	Fishhook Aviation Field		68.75	68.75
35X	Wasilla Aviation Field Road	1,135.94		1,135.94
36	Mineral Creek		3,798.02	3,798.02
36CA	Cordova Aviation Field	926.15		926.15
37A	Bluff-White Mountain	977.55		977.55
38A	Ruby-Long Creek		6,637.29	6,637.29
38C	Ophir-Cripple		76.20	76.20
38D	Ophir-Takotna		7,998.89	7,998.89
38DA	Little Creek Road	2,342.00		2,342.00
38E	Long-Poorman, 1st. Sec.	8,571.00		8,571.00
	Long-Poorman, 2nd. Sec.	5,431.23		5,431.23
38H	Ganes Creek Road		448.74	448.74
38K	Ruby Aviation Field		432.50	432.50
40	Douglas-Gastineau Channel		91.00	91.00
41A	Kotzebue-Shungnak		662.05	662.05
41B	Kotzebue-Pt. Barrow	553.35		553.35
41D	Kotzebue Aviation Field	650.00		650.00
42	St. Michael-Kotlik		12.94	12.94
44A	Skagway Trails		365.63	365.63
46C	Nenana-Knight's Roadhouse		92.78	92.78
46D	McKinley Park Road, 1st. Sec.	8,490.00	5,321.00	13,811.00
	McKinley Park Road, 2nd. Sec.	15,723.00	3,117.20	18,840.20
	McKinley Park Road, 3rd. Sec.	19,427.19		19,427.19
	McKinley Park Road, 4th. Sec.	19,273.00		19,273.00
46E	Diamond-Telida		189.00	189.00
46H	Lake Minchumina Aviation Field		100.00	100.00
46J	Kantishna Aviation Field		100.00	100.00
46K	Telida Aviation Field		250.00	250.00
46M	Nenana Aviation Field		262.00	262.00
47	Coldfoot-Wiseman		124.59	124.59
47A	Wiseman Aviation Field		360.47	360.47
47B	Nolan Branch		7,423.00	7,423.00
47C	Wiseman-Hammond		1,660.63	1,660.63
48	Iliamna Bay-Iliamna Lake	4,015.40		4,015.40
51	Talkeetna-Cache Creek		8,928.62	8,928.62
51A	Cache Creek Trail		119.75	119.75
51B	Peters Creek Trail		151.81	151.81
51C	Yentna-Mills Creek		44.36	44.36
51E	Mills Creek-Cache Creek		412.13	412.13
53	Eagle-Circle		207.14	207.14
53A	Circle-Ft. Yukon		1,064.84	1,064.84
53B	Ft. Yukon Aviation Field		230.00	230.00
54	Nizina-Chisana		495.56	495.56
55	Kenai-Russian River		307.01	307.01
57	McCarthy-Dan Creek	7,210.00		7,210.00
57A	Nizina River Bridge		7,073.47	7,073.47
57B	Nizina-Chitina River		7,617.84	7,617.84
57C	McCarthy-Kennecott River	2,689.30		2,689.30
57D	Chititu Branch		101.04	101.04
57E	McCarthy-Green Butte	1,873.63		1,873.63
57F	McCarthy Aviation Field	1,780.88		1,780.88
59	Fairbanks Bridge		605.58	605.58
59A	Fairbanks Depot	1,740.00		1,740.00
60	Valdez Dyke		2,229.22	2,229.22
60A	Valdez Aviation Field	1,592.28		1,592.28
61A	Kotsina Trail		3,366.44	3,366.44
61E	Farnan Trail		597.55	597.55
61F	Bremner Trail	926.16		926.16
62	Dime Creek	1,141.19		1,141.19
63	Dunbar-Brooks		1,835.48	1,835.48
63B	Brooks-Livengood Creek		175.80	175.80
63C	Brooks Tram		370.71	370.71
63E	Livengood Aviation Field		9,256.12	9,256.12
64AA	Cripple-Cripple Mountain		171.25	171.25
65A	Gulkana-Chistochina, 1st. Sec.	8,540.00		8,540.00
	Gulkana-Chistochina, 2nd. Sec.	7,327.00		7,327.00
	Gulkana-Chistochina, 3d. Sec.	17,475.00		17,475.00
	Gulkana-Chistochina, 4th. Sec.	19,888.00		19,888.00
65F	Grundler-Tanana Crossing		785.03	785.03

Acct. No.	Name of Sub-Project	Construction	Maintenance and Improvement	Total
67	Nome-Teller		1,406.74	1,406.74
67A	Teller-Cape Prince of Wales		272.92	272.92
67B	Teller-Bluestone	937.00		937.00
67C	Teller-Mary's Igloo		81.44	81.44
67D	Teller-American River		56.67	56.67
67E	Teller Aviation Field	299.50		299.50
67F	Tin City-Goodwin	675.09		675.09
68	Flagging Trails		2,210.20	2,210.20
68A	Kotlik-Marshall		280.84	280.84
73C	Old Hamilton-Scammon Bay		250.00	250.00
75	Anchorage Loop		6,637.97	6,637.97
75A	Anchorage-Lake Spenard		2,394.60	2,394.60
75C	Chester Creek Boat Landing		107.00	107.00
75D	Anchorage Depot		554.00	554.00
75E	McDonald Road		181.12	181.12
75I	Oilwell Road	4,589.99		4,589.99
76	Cantwell-Valdez Creek		151.77	151.77
79	Seward Depot		122.53	122.53
80A	McGrath-Takotna		62.40	62.40
80AA	McGrath-Takotna		84.50	84.50
80B	McGrath-Telida		345.65	345.65
80C	McGrath-Candle Creek		30.00	30.00
80F	Medfra-Nixon Mine	1,800.00		1,800.00
80H	McGrath Landing Field	4,016.92		4,016.92
80J	Medfra Aviation Field		60.00	60.00
81	Good Creek-Salmon River		1,369.62	1,369.62
81A	Rink River	1,550.00		1,550.00
85	Ferry-Eva Creek		231.00	231.00
89A	Seward Peninsula Railroad		12,680.14	12,680.14
89C	Iron Creek-American Creek	250.14		250.14
90E	Shelter Cabins, 2nd. Division	5,758.64	305.36	6,064.00
90C	Shelter Cabins, 3rd. Division	2,339.96	902.25	3,242.21
90D	Shelter Cabins, 4th. Division	5,337.81	153.05	5,490.86
92B	Bethel-Tuluksak		221.00	221.00
92E	Yukon-Kuskokwim Portage	7,706.14		7,706.14
92H	Togiak-Nushagak		1,271.38	1,271.38
92J	Naknek-Egegik		100.00	100.00
92K	Egegik-Kanatak		554.50	554.50
92L	Crooked Creek-Aniak		70.00	70.00
92M	Aniak-Tuluksak		489.00	489.00
92P	Holy Cross-Kaltshak		170.00	170.00
92Q	Upper Landing-Bear Creek	1,000.00		1,000.00
93	Chulitna Trail		96.05	96.05
93B	Indian River		4.53	4.53
93C	Curry Aviation Field		243.00	243.00
94	Kodiak-Abbotts	3,337.95		3,337.95
92B	Larsen Bay-Karluk River	962.05	4,266.54	7,604.49
96	Chickaloon-King River		219.38	219.38
96A	Chickaloon Cable		102.22	102.22
96B	Chickaloon-Nelchina	4,351.56		4,351.56
97A	Healy Aviation Field		491.79	491.79
98	Homer Spit	3,211.00	1,281.68	4,492.68
98B	Ninilchick Aviation Field		384.13	384.13
98C	Kaslof Aviation Field		674.52	674.52
100	Juneau Office and General overhead	11,330.50	14,537.10	25,867.60
	Totals	\$630,546.95	\$816,616.96	*\$1,447,163.91

\*Includes \$3,572.80 charged against available appropriation by direct U. S. Treasury Settlement. Does not include \$1,165.99 reimbursements.

-----	\$30,000.00
-----	50,000.00
-----	16,000.00
-----	60,000.00
-----	65,000.00

\$273

----- 14,022

----- FUNDS

----- e 30, 1921, Alaska special fund]

-----	\$115,517.94
-----	113,746.61
-----	54,737.28
-----	112,012.88
-----	106,325.35
-----	78,978.45
-----	133,499.10
-----	88,015.76
-----	191,363.59
-----	189,982.45

----- \$1,184

-----	1,683.77
-----	1,379.54
-----	4,540.00
-----	883.12
-----	2,819.01
-----	5,756.63
-----	19,489.15
-----	23,430.32

----- Lowell Creek, Alaska

----- 1,269

----- 15,291.62

----- EDGAR JADWIN,  
Major General, Chief of Engineers

ANNUAL REPORT OF THE ALASKA ROAD COMMISSION  
FISCAL YEAR 1929

REPORT UPON THE CONSTRUCTION AND  
MAINTENANCE OF MILITARY AND POST  
ROADS, BRIDGES AND TRAILS; AND OF  
OTHER ROADS, TRAMWAYS, FERRIES,  
BRIDGES, TRAILS, AND RELATED WORKS  
IN THE TERRITORY OF ALASKA

TWENTY-FIFTH ANNUAL  
REPORT

1929

PART II

OPERATIONS

BOARD OF ROAD COMMISSIONERS  
FOR ALASKA

JUNEAU, ALASKA

1929

- 1 Locomotive, Fordson.
- 3 Machines, mowing, horse drawn.
- 4 Machines, mowing, tractor attachment.
- 8 Maintainers, tractor drawn.
- 5 Piledrivers, complete.
- 66 Plows,
  - 1 Plow, snow, lateral rotary type.
  - 8 Rollers, road.
  - 3 Saws, power driven.
  - 1 Sawmill, portable.
  - 1 Scarifier.
- 81 Scrapers, slip.
- 10 Scrapers, wheel.
  - 1 Scraper, selfloading, tractor drawn.
- 21 Scrapers, Fresno.
  - 8 Scrapers, automatic, tractor drawn.
  - 1 Shovel,  $\frac{3}{4}$ -yd., steam.
  - 6 Shovels,  $\frac{1}{2}$ -yd., gasoline.
- 46 Sleds, bob.
- 21 Tractors, Best 30.
  - 2 Tractors, Best 60.
  - 5 Tractors, Holt.
  - 1 Tractor, Case.
  - 6 Tractors, Fordson, crawler track.
- 11 Tractors, Fordson.
- 33 Trailers, Highway.
  - 7 Transits, surveying.
- 83 Wagons.
  - 2 Welding Outfits.
  - 5 Winches, hand.

### PROGRESS OF THE WORK.

The high scale of wages and supplies in the Territory is a large element in the cost of this work. The rate paid for labor varies from \$3.50 to \$6 per day with board for common labor. The cost of subsistence and forage is also correspondingly high. Besides these high costs, the nature of the work in Alaska adds to the cost in a way to make comparisons with road work in the United States difficult. In the roads built here the cruising, clearing, grubbing and construction of the road includes all work done upon the roads in the settled parts of the United States from pioneer days. Even with this the mileage cost of our roads can be looked upon with a great deal of gratification.

In the classification of the Commission, wagon roads are any roads cleared, grubbed, ditched, graded, and drained sufficiently to accommodate wagon traffic. Light motor vehicles are now using

these roads in increasing numbers. This requires a gravel surface at an increased first cost, but with an eventual saving in annual maintenance charges.

Sled roads are cleared and grubbed like wagon roads, but not graded. They are drained only sufficiently to prevent their destruction by the summer rains. Their wearing surface is of snow. Double bob-sleds, drawn by two, four or more horses haul heavy loads over these roads as well as over the wagon roads in winter time. During the past few seasons, caterpillar tractors have been successfully used during the winter time, and such traffic is expected to increase.

Trails include any construction less than the above, suitable for dog-sleds or single horse-drawn double-ender in winter and pack trains in summer. Except where frozen river surfaces are used some work is always necessary to permit the use of dog teams.

Flagged Trails represent cut-offs across frozen lakes, arms of the sea, etc. The marks are necessary to prevent travelers from getting lost in bad weather.

The growth of the road system is shown in the diagram facing page 42 of this report. Only net increases are shown as the short sections abandoned from time to time because of disuse are not included. The following table summarizes the status of the work to date:

STATUS	MILEAGE					
	Road	Sled Road	Trail	Total	Flagged	Grand Total
1920 Report .....	1,031	636	3,223	4,890	712	5,602
ADDITIONS:						
New Mileage .....	733 $\frac{1}{2}$ *	820 $\frac{1}{2}$	5,099	6,653	.....	6,653
Reclassified .....	161	256 $\frac{1}{2}$	80	497 $\frac{1}{2}$	.....	497 $\frac{1}{2}$
GRAND TOTAL .....	1,925 $\frac{1}{2}$	1,712 $\frac{1}{2}$	8,402	12,040 $\frac{1}{2}$	712	12,752 $\frac{1}{2}$
DEDUCTIONS:						
Transferred to other						
Bureaus .....	116 $\frac{1}{2}$	9	45 $\frac{1}{2}$	171 $\frac{1}{2}$	.....	171 $\frac{1}{2}$
Reclassified .....	33 $\frac{1}{2}$	173 $\frac{1}{2}$	290 $\frac{1}{2}$	497 $\frac{1}{2}$	.....	497 $\frac{1}{2}$
Abandoned or dropped account duplica- tion of routes .....	99	125 $\frac{1}{2}$	918	1,142 $\frac{1}{2}$	.....	1,142 $\frac{1}{2}$
NET TOTAL .....	1,676 $\frac{1}{2}$ *	1,404 $\frac{1}{2}$	7,148	10,229 $\frac{1}{2}$	712	10,941 $\frac{1}{2}$
*Includes 87 miles tramroads.						
No work 1929 .....	110 $\frac{1}{2}$	613 $\frac{1}{2}$	2,654 $\frac{1}{2}$	3,379	398	3,777
Work 1929 .....	1,566	791	4,493 $\frac{1}{2}$	6,850 $\frac{1}{2}$	314	7,164 $\frac{1}{2}$

From the above table it will be noted that the present system aggregates 10,941 $\frac{1}{2}$  miles, consisting of 1,589 $\frac{1}{2}$  miles of road, 87 miles of tramroad, 1,404 $\frac{1}{2}$  miles of sled road, 7,148 miles of trail and 712 miles of temporary flagged trail. The net gain in mileage for the seven year period has been 5,339 $\frac{1}{2}$  miles, including 558 $\frac{1}{2}$  miles of road, 87 miles of tramroad, 768 $\frac{1}{2}$  miles of sled road, and 3,925 miles of trail.

During the past fiscal year the expenditures were distributed over the following mileage:

DISTRICT	Road	Sled Road	Trail	Flagged Trail	Total
Southeastern Alaska	63	.....	23	.....	86
Eagle	24	110	269	.....	403
Bethel	.....	26	480	.....	506
Valdez	100	.....	.....	.....	100
Chitina	244½	.....	172	.....	416½
Fairbanks	464¾	181½	215	.....	851¾
Nenana	134½	236	415	.....	785½
Southwestern Alaska	230¼	151½	326¼	.....	708
Kuskokwim	71½	68	377	.....	516½
Nome	243½	18	2,216	314	2,791½
<b>TOTALS</b>	<b>1,566</b>	<b>791</b>	<b>4,493¼</b>	<b>314</b>	<b>7,164¼</b>

The Commission has expended the following funds since the beginning of road and trail development in the Territory:

F. Y.	W. D. Acts	Alaska Fund	Other Funds*	Total
1905	\$	\$ 28,000.00	\$	\$ 28,000.00 (a)
1906	118,172.09	57,420.77	.....	175,592.86 (a)
1907	197,930.91	148,814.79	.....	346,745.70 (b)
1908	244,857.18	120,772.72	.....	365,629.90 (b)
1909	236,674.97	146,971.92	.....	383,646.89 (b)
1910	237,498.50	102,898.29	.....	340,396.79 (b)
1911	100,000.00	166,777.95	.....	266,777.95
1912	150,103.58	167,302.49	.....	317,406.07
1913	.....	17,052.23 (c)	.....	17,052.23
1914	125,010.91	228,117.56	.....	353,128.47
1915	153,174.43	170,688.37	.....	323,862.80
1916	126,852.28	157,915.84	.....	284,768.12
1917	165,011.73	135,708.89	.....	300,720.62
1918	500,031.75	76,716.15	.....	576,747.90
1919	325,000.00	272,020.18	145.20	597,165.38
1920	246,651.95	52,372.31	.....	299,024.26
1921	132,426.73	124,992.96	101,184.56	358,604.25
1922	350,000.00	218,247.21	98,551.98	666,799.19
1923	426,807.34	173,029.19	83,411.15	683,247.68
1924	555,613.67	34,398.23	150,070.59	740,082.49
1925	730,423.17	67,683.67	139,000.81	936,107.65
1926	775,665.02	168,518.01	194,164.61	1,138,347.64
1927	1,013,577.53	115,035.11	132,705.05	1,311,317.69
1928	889,443.65	207,909.20	119,814.04	1,217,166.89
1929	860,192.90	134,593.11	253,882.17	1,253,668.18
1929	997,297.64	134,371.66	315,494.61	1,447,163.91
<b>TOTALS</b>	<b>\$9,658,417.93†</b>	<b>\$3,428,328.81‡</b>	<b>\$1,642,424.77</b>	<b>\$14,729,171.51</b>

- (a)—To October 31st.
- (b)—To September 30th.
- (c)—U. S. Treasury Adjustment.

\*—Other Funds—Includes the following expenditures from other appropriations:

F. Y.	Increase of Compensation	Quartermaster General	Funds Contributed	National Park Service
1918	\$ 145.20	\$	\$	\$
1920	.....	.....	101,184.56	.....
1921	940.00	.....	97,611.98	.....
1922	4,322.09	.....	79,089.06	.....
1923	28,857.72	.....	121,212.87	.....
1924	45,675.36	.....	92,325.45	.....
1925	15,136.08	300.00	98,708.53	80,020.00
1926	.....	290.17	132,414.88	50,000.00
1927	.....	812.00	103,001.10	16,000.94
1928	.....	792.83	198,089.34	60,000.00
1929	.....	1,000.00	249,494.61	65,000.00
<b>TOTALS</b>	<b>\$95,076.45</b>	<b>\$3,195.00</b>	<b>\$1,273,132.38</b>	<b>\$271,020.94</b>

†Total War Department appropriations .....\$10,273,100.00

Balance unexpended July 1, 1929	637,927.70	
Amount expended	.....	\$9,635,172.30
Add Navy Department reimbursement	\$ 3,976.19	
Add Repayments and voucher corrections 1920	420.82	
Add Repayments and voucher corrections 1921-1929	18,848.62	\$ 23,245.63
<b>Total Expenditures</b>	.....	<b>\$9,658,417.93</b>
†Total Alaska Fund	\$ 3,380,112.84	
Balance unexpended July 1, 1929	81,966.32	
Amount expended	.....	\$3,298,146.52
Add Receipts from sales, 1905-20	\$ 49,448.09	
Add Voucher Corrections, 1905-20	1,462.68	
Add Sales, refunds, etc., 1921-29	79,271.52	130,182.29
<b>Total Expenditures</b>	.....	<b>\$3,428,328.81</b>

These expenditures are summarized as follows:

**FEDERAL APPROPRIATIONS:**

Alaska Fund, 1905-1920	\$ 2,157,491.19
War Dept. Acts, 1905-1920	3,059,397.01
Increase of Compensation, 1918-1920	145.20
U. S. Treasury Adjustment, 1912	17,052.23
Alaska Fund, 1921-1929	1,253,785.39
War Dept. Acts, 1921-1929	6,512,022.61
Increase of Compensation, 1921-1925	94,931.25
Quartermaster General, 1925-1929	3,195.00
National Park Service, 1925-1929	271,020.94
Lowell Creek	86,998.31
<b>Total</b>	<b>\$13,456,039.13</b>

**CONTRIBUTED FUNDS:**

Territory of Alaska, 1920	\$ 101,184.56
Territory of Alaska, 1921-1929	1,098,966.28
Miscellaneous, 1922-1929	72,981.54
<b>Total</b>	<b>\$ 1,273,132.38</b>
<b>Grand Total</b>	<b>\$14,729,171.51</b>

In addition to the above funds, disbursed through the U. S. Treasury, the Commission has supervised the expenditure of the following funds disbursed by other agencies for road and trail development:

Road tax, labor, and miscellaneous contributions, 1905-1920	\$ 200,000.00
Department of Agriculture, 1920	202,702.67
Quartermaster General, 1901-1902	100,000.00*
Chief of Engineers, 1904-1905	34,631.78*
Territorial Funds and Forest Revenues Prior to 1921	684,239.64**
Territorial Divisional Commissioners, 1921-1928	192,985.70
Territorial Divisional Commissioners, 1929	1,953.90
Seward Peninsula Tramway, 1923	24,014.00
Tolovana Tramway, 1924	6,425.00
Kaltag Portage Survey, 1925	312.72
Miscellaneous, 1926-1928	15,989.50
Miscellaneous, 1929	3,860.00
<b>Total</b>	<b>\$1,467,114.91</b>

- \*Expended prior to organization of the Alaska Road Commission.
- \*\*Expended prior to supervision by the Alaska Road Commission.

The following table gives the total amount expended on the various subprojects up to June 30, 1929 from all sources. It does not include the first four items in the above table under "Supervised Funds:"

No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
1*	Prince of Wales Island	\$ 55,854.28	\$ 7,995.98	\$	\$ 63,850.26	\$ 42,811.86	\$ 21,038.40
2A*	Auk Bay Extension	44,286.13	14,870.66	1,247.64	60,404.43	48,104.13	12,300.30
2B*	Mendenhall Glacier Extension	15,150.21			15,150.21	7,505.64	7,644.57
2C*	Eagle River Extension	16,056.57		2,305.75	18,362.32	15,002.32	3,360.00
4D*	Juneau-Duck Creek	99,731.04		9,927.23	109,658.27	78,407.72	31,250.55
2E	Gastineau Channel Bar		565.00	28,621.83	29,186.83	28,621.83	565.00
2F	Gold Creek Bridge, Juneau			2,156.75	2,156.75	2,156.75	
2G	Alaska Juneau Mine Trail			831.66	831.66	831.66	
2H	Juneau Wharf	23,166.31	7,050.00		30,216.31	30,216.31	
3A	Haines-Wells	187,083.21	40,711.56		227,794.77	123,629.99	104,164.78
3B	Pleasant Camp Extension	89,927.35	71,369.80		161,297.15	142,194.20	19,102.95
3C	Porcupine Extension	46,559.63	975.00		47,534.63	38,354.90	9,179.73
3D	Haines-Mud Bay	2,787.27	10,450.00	16,268.16	29,505.43	18,807.46	10,697.97
3E	Haines-Chilkoot		264.50	5,962.74	6,227.24	5,357.74	869.50
3F	Haines-Jones Point		225.00	2,093.45	2,318.45	1,553.45	765.00
4A**	Donnelly-Washburn	33,460.06			33,460.06	18,865.40	14,594.66
4AA	Richardson-Democrat Creek		1,820.59	500.00	2,320.59	2,320.59	
4BA	Valdez-Ptarmigan Drop	925,415.15			925,415.15	470,556.55	454,858.60
4BB	Ptarmigan Drop-Ernestine	415,195.75			415,195.75	171,227.56	243,968.19
4C	Ernestine-Willow Creek	347,484.75			347,484.75	177,499.85	169,984.90
4D	Willow Creek-Gulkana	552,600.77			552,600.77	246,394.58	306,206.19
4E	Gulkana-Sourdough	362,245.23			362,245.23	144,173.70	218,071.53
4F	Sourdough-Mile 168	292,485.51			292,485.51	136,258.29	156,227.22
4G	Mile 168-Delta River	399,124.00			399,124.00	158,615.89	240,508.11
4H1	Delta River-Rapids	621,904.81			621,904.81	259,965.60	361,939.21
4H2	Rapids-Grundler	336,130.12			336,130.12	120,386.12	215,744.00
4I	Grundler-Richardson	342,420.07			342,420.07	121,294.00	221,126.07
4J	Richardson-Salchaket	438,668.55			438,668.55	215,518.01	223,150.54
4JA	Lake Harding Road	4,240.68			4,240.68	3,100.75	1,139.93
4K	Salchaket-Fairbanks	509,948.88			509,948.88	254,962.87	254,986.01
4KA	Salcha Bridge	68,816.35			68,816.35	50,370.67	18,445.68
5**	Ester-Dunbar	19,405.18			19,405.18	12,624.18	6,781.00
5A	Dunbar-Ft. Gibbon	86,544.96			86,544.96	50,269.69	36,275.27
5B	Nenana-Campbells	1,545.61	480.00		2,025.61	1,919.01	106.60
5C	Fishlake-American Creek		7,501.43		7,501.43	5,766.53	1,734.90
5D	American Creek Aviation Field		550.00	390.00	940.00	940.00	
5E	Tanana Aviation Field		2,401.62		2,401.62	2,401.62	
5F	Illinois Creek-Moran Creek	1,023.25			1,023.25	1,023.25	
6A	Willow Creek-Tonsina	215,248.71			215,248.71	109,660.78	105,587.93

6B	Tonsina-Chitina	320,949.66			320,949.66	145,362.69	175,586.97
6D	Chitina Depot	12,397.16			12,397.16	11,438.66	958.50
6E	Chitina-Native School		545.06		545.06	495.06	50.00
6F	Lower Tonsina Aviation Field		654.74		654.74	654.74	
6G	Copper Center Aviation Field		160.50		160.50	160.50	
7A	Summit-Chatanika	68,025.78	305.00	4,252.03	72,582.81	40,762.71	31,820.10
7AA	Cleary Creek	2,344.40	1,061.72	3,206.54	6,612.66	4,317.81	2,294.85
7B	Fox-Olnes	27,096.85	431.50	6,805.81	34,334.16	28,091.65	6,242.51
7BA	Dome-Spaulding Mine		2,839.37		2,839.37	2,839.37	
7BB*	Fox-Steel Creek			855.75	855.75	855.75	
7C	Summit-Fairbanks Creek	15,945.14	3,937.81	26,521.85	46,404.80	24,902.61	21,502.19
7CA	Summit-Fish Creek		11,009.66	2,776.16	13,785.82	12,780.82	1,005.00
7D	Ester Creek	39,506.69	11,977.72	26,405.43	77,889.84	38,656.93	39,232.91
7DA	College Spur		62.09	845.12	907.21	530.00	377.21
7DB	Ester Dome		60.21	4,596.58	4,656.79	4,192.73	464.06
7DC	St. Patricks-Happy		566.24	6,069.47	6,635.71	6,069.47	566.24
7DD	Ester-Beegler			1,000.00	1,000.00	1,000.00	
7E**	Vault Creek	4,496.20		379.00	4,875.20	4,702.83	172.37
7F**	Vault Creek-Treasure Creek	1,379.09			1,379.09	1,350.00	29.09
7G	Fairbanks-Gilmore	101,591.68		24,356.19	125,947.87	70,402.75	55,545.12
7GA	Lazelle Road		97.76	5,199.84	5,297.60	4,113.51	1,184.09
7H	Little Eldorado Creek	3,890.83	230.74	6,775.87	10,897.44	8,578.31	2,319.13
7I	Gilmore-Summit	31,789.04		11,334.93	43,123.97	19,163.32	23,960.65
7IA**	Gilmore Creek			1,562.00	1,562.00	1,562.00	
7J	Fairbanks-Chena Hot Springs	11,862.14	790.00	2,587.10	15,239.24	8,032.59	7,206.65
7JA	Chena River Branch	736.56	350.00		1,086.56	614.01	472.55
7JB	Palmer Creek Aviation Field		575.00		575.00	575.00	
7JC	Colorado Creek-South Fork		600.00		600.00	600.00	
7K	Olnes-Livengood	13,152.82	240.00	1,274.93	14,667.75	12,820.48	1,847.27
7N	Farmers-Birch Hill		1,190.17	21,916.56	23,106.73	14,401.97	8,704.76
7NA	Isabelle Creek		17.75	2,347.21	2,364.96	1,675.00	689.96
7NB	Ballaine-Rickert		13.37	1,897.86	1,911.23	1,800.00	111.23
7R	Goldstream-O'Connor Creek	154.64			154.64	154.64	
7S	Graehl Bridge		43.84	1,345.41	1,389.25	1,323.57	65.68
7T	Farmers-Chena Slough		3,296.71	7,274.91	10,571.62	8,198.77	2,372.85
7V	Fairbanks Wireless	495.46			495.46		495.46
7X	Chena Hot Springs Aviation Field		1,361.58	378.00	1,739.58	1,689.58	50.00
7Y	Fairbanks Aviation Field		11,307.32	1,953.90	13,261.22	13,261.22	
8	Nome-Council	201,432.46	127,192.66	56,647.98	384,273.10	179,382.96	204,890.14
8D	Council-Ophir Creek	2,129.84	2,010.00		4,139.84		4,139.84
8H	Casa de Paga	6,413.51	8,808.00	10,079.75	25,301.26	17,439.65	7,861.61
8J	Shovel Creek	5.05	3.00	58.50	66.55	58.50	8.05
8K	Council Aviation Field		504.60		504.60	504.60	



No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
8L	Port Safety Aids .....		256.50		256.50		256.50
9	Rampart-Eureka .....	44,372.94	3,827.00	1,518.32	49,718.26	29,114.36	20,603.90
10*	Seward-Kenai Lake .....	72,387.76	5,000.00	3,396.17	80,783.93	46,260.83	34,523.10
10A*	Seward Radio .....	6,594.04			6,594.04	6,470.04	124.00
10B	Seward-Nash .....		755.25	20,780.75	21,536.00	13,242.30	8,293.70
10C	Lowell Creek Flood Control.....	87,133.25	25,080.75		112,214.00	112,214.00	
10D	Seward Aviation Field .....		756.95	60.00	816.95	571.20	245.75
11A	Eagle-Liberty .....	98,847.26	800.80	600.00	100,248.06	48,263.41	51,984.65
11AA	American Summit-Liberty .....		9,495.64		9,495.64	6,429.14	3,066.50
11B	Liberty-Forty Mile .....	19,237.31		1,216.00	20,453.31	15,251.19	5,202.12
11C	Steel Creek-Jack Wade .....	6,365.66			6,365.66	4,632.50	1,733.16
11CC	Steel Creek-Jack Wade (Summer) .....	551.50			551.50		551.50
11D	Steel Creek-Walkers Fork .....	6,196.70			6,196.70	4,110.00	2,086.70
11E	Eagle-Seventy Mile .....	15,630.59			15,630.59	4,964.59	10,666.00
11F	Jack Wade-Chicken .....	2,406.08			2,406.08		2,406.08
11G	Steel Creek-Canyon Creek .....	914.00			914.00		914.00
11H	Liberty Cabin-Dome .....	5,052.74			5,052.74	2,714.27	2,338.47
11I	Dome-Steel Creek .....	5,049.23			5,049.23	1,300.00	3,749.23
11K	Forty Mile-Steel Creek .....	80.00			80.00		80.00
11L	Franklin-Chicken Creek .....	1,643.25			1,643.25		1,643.25
11M	Jack Wade-Walkers Fork-Boundary .....	125.00			125.00		125.00
11MM	Jack Wade-Mouth of Walkers Fork .....	1,236.00			1,236.00		1,236.00
11N	Lillywig Creek Sled Road .....	909.50			909.50	909.50	
11P	Chicken Aviation Field .....		324.13	550.00	1,474.13	1,474.13	
11Q	Eagle Aviation Field .....		620.75		620.75	620.75	
12A**	Mile 34-Lynx Creek .....	22,192.66			22,192.66	13,953.63	8,239.03
13A	Nome-Bessie .....	59,671.13	18,888.18		78,559.31	38,541.95	40,017.36
13B	Bessie-Snake River .....	54,509.13	19,635.50		74,144.63	29,533.12	44,611.51
13C	Bessie-Little Creek .....	7,728.73	6,835.10		14,563.83	1,133.98	13,429.85
13D**	Bessie-Dry Creek .....	3,218.40		70.80	3,289.20	1,582.47	1,706.73
13E**	Dry Creek-Newton .....	623.74			623.74	399.88	223.86
13F	Nome-Osborne .....	25,909.18	27,060.72		52,969.90	15,393.79	37,576.11
13G**	Grass Gulch .....	1,125.73			1,125.73	786.79	338.94
13H**	Center Creek .....	1,538.80			1,538.80	83.65	1,455.15
13J**	Wonder-Flat Creek .....	2,803.72			2,803.72	170.50	2,633.22
13K	Bessie-Buster .....	33,405.73	16,989.50		50,395.23	17,503.98	32,891.25
13L	Nome Buoys .....		585.00		585.00		585.00
14*	Sitka-Indian River .....	9,610.88			9,610.88	6,274.72	3,336.16
14	Sitka-Indian River .....	3,508.13	2,360.12		5,868.25	3,563.00	2,305.25
14A	Sitka National Monument .....	3,912.73	5,673.65		9,586.38	1,550.00	8,036.38
14B	Sitka Military Cemetery .....	5,023.42	700.00		5,723.42	2,100.00	3,623.42
14C	Pioneer Cemetery Road .....		3,897.62		3,897.62	3,341.02	556.60
14D	National Cemetery Road .....	492.50	350.00	397.50	1,240.00	697.47	542.53
15	Circle-Miller House .....	467,793.79	4,598.63		472,392.42	377,098.92	95,293.50
15A	Central House-Circle Hot Springs .....	2,414.97	1,800.00	3,702.25	7,917.22	6,067.72	1,849.50
15B	Central House-Deadwood .....			2,569.75	2,569.75	2,569.75	
15C	Circle Hot Springs Aviation Field .....		370.00	1,016.50	1,386.50	1,316.50	70.00
15D	Leech Cutoff .....	224.75			224.75	224.75	
15E	Miller House Spur .....		310.98	1,559.55	1,870.53	1,870.53	
16	Chatanika-Miller House .....	593,414.19	9,969.59		603,383.78	472,761.39	130,622.39
16A	U. S. Creek Branch .....			231.67	231.67	231.67	
16B	Eagle Creek Spur .....		54.29	81.17	135.46	81.17	54.29
16C	Chatanika-Miller House (Winter) .....	22,050.13	1,000.00		23,050.13	14,614.74	8,435.39
17	Tanana-Kaltag .....	33,003.21			33,003.21	23,737.80	9,265.41
17A**	Lewis Landing-Dishkaket .....	483.37			483.37	483.37	
17B**	Nulato-Dishkaket .....	735.88			735.88	485.88	250.00
17C	Nulato Aviation Field .....		3,511.98		3,511.98	3,511.98	
17D	Tanana-Koyukuk Sta. Tel. Line .....						
18	Kaltag-Nome .....	54,864.12	8,478.00	565.70	63,907.82	28,137.39	35,770.43
18A	Bonanza-Kotzebue .....	4,653.87	2,462.40		7,116.27	1,230.00	5,886.27
18B	Golovin-Council .....	44.00	70.00		114.00		114.00
18D	Unalakleet Aviation Field .....		274.10		274.10	246.50	27.60
18E	Solomon Aviation Field .....		98.60		98.60	95.00	3.60
18F	Golovin-Aviation Field .....		432.40		432.40	427.30	5.10
18G	Moses Aviation Field .....		232.00		232.00	225.00	7.00
18H	Koyukuk Station-Unalakleet tel. line .....		1,454.00		1,454.00		1,454.00
19**	Kern Creek-Knik .....	13,891.95			13,891.95	10,276.22	3,615.73
19A**	Kenai Lake-Kern Creek .....	6,833.20			6,833.20	6,833.20	
19B**	Mile 27-Mile 29 A. N. R. R. .....	741.66			741.66	741.66	
19C**	Kenai Lake-Mile 27 A.N.R.R. .....	1,595.81			1,595.81	1,595.81	
19D**	Kern Creek-Indian Creek .....	3,758.26			3,758.26	3,758.26	
19E*	Girdwood-Crow Creek .....	3,434.15			3,434.15	891.65	2,542.50
20A**	Knik-Susitna .....	8,437.44			8,437.44	7,807.85	629.59
20B	Susitna-Rainy Pass .....	30,876.98	2,000.00		32,876.98	26,278.29	6,598.69
20C	Rainy Pass-Big River .....	16,436.46			16,436.46	14,509.07	1,927.39
20D**	Dishkaket-Kaltag .....	4,290.00			4,290.00	4,251.40	38.60
20DA	Takotna-Ophir .....	4,734.72			4,734.72	3,800.00	934.72

No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
20DB	Ophir-Dishkaket	4,335.00			4,335.00	3,575.00	760.00
20E**	Susitna-McDougal	8,640.21			8,640.21	8,640.21	
20F**	McDougal-Cache Creek	7,350.00			7,350.00	7,002.90	347.10
20G**	Lakeview-McDougal	3,675.00			3,675.00	3,675.00	
20H	Nancy-Susitna	2,264.16			2,264.16		2,264.16
20J	Susitna-Tyonek	2,643.93			2,643.93	2,643.93	
20K	Susitna Aviation Field		931.10		931.10	931.10	
21	Unalakleet-St. Michael	6,326.57	1,030.00		7,356.57	2,602.63	4,753.94
22	Hot Springs-Sullivan Creek	46,568.84	9,125.33	1,005.00	56,699.17	27,823.84	28,875.33
23A	Snowshoe-Beaver	11,043.03	540.00	2,580.00	14,163.03	10,935.45	3,227.58
23B	Beaver-Caro	59,988.53			59,988.53	30,240.81	29,747.72
23C	Big Creek	9,614.77			9,614.77	6,320.00	3,294.77
23D	Caro-Flat Creek	13,543.94			13,543.94	4,023.26	9,520.68
23E	Caro-Coldfoot	13,167.46			13,167.46	7,559.87	5,607.59
23F	Chandalar Aviation Field		6,747.24	1,468.50	8,215.74	8,215.74	
24*	Mile 29 A. N. R. R.-Sunrise	57,850.94			57,850.94	30,727.85	27,123.09
24A*	Lynx Creek-Six Mile	10,882.40			10,882.40	7,082.40	3,800.00
24B*	Sunrise-Hope	1,085.00			1,085.00	885.00	200.00
25A**	Cripple Creek	6,516.84	2,284.95		8,801.79	5,057.97	3,743.82
25B**	Penny River	1,367.08	600.00		1,967.08	1,276.03	691.05
25C	Nome Wireless	2,336.14	758.00		3,094.14	1,764.91	1,329.23
25D	Mouth of Center Creek	9,618.84	5,799.50		15,418.34	4,617.77	10,798.57
25E	Submarine-Paystreak	28,995.14	4,517.00	677.35	34,189.49	24,370.33	9,819.16
25H**	Otter Creek	1,802.52			1,802.52	1,149.54	652.98
25K	Nome City Dock		2,966.65		2,966.65	2,966.65	
25L	Nome Aviation Field		4,241.75		4,241.75	3,522.70	719.05
25M	Telephone Lines, Seward Pen.		7,999.20		7,999.20	1,700.00	6,299.20
25N	Nome City Streets		672.07		672.07		672.07
25P	Nome Harbor Lights		280.00		280.00		280.00
26	Candle-Candle Creek	42,347.33	27,391.23	4,026.95	73,765.51	34,994.07	38,771.44
26A**	Kugruk River Approach	488.00			488.00		488.00
26B	Bear Creek Trail	460.00	140.00		600.00	340.00	260.00
26C	Candle-Kiwalik	427.91	600.00		1,027.91	1,027.91	
26D	Kiwalik Aviation Field		304.60		304.60	300.00	4.60
26E	Candle Aviation Field		350.00		350.00	350.00	
27	Deering-Inmachuk	41,110.61	43,170.56	1,617.35	85,898.52	30,891.90	55,006.62
27A	Deering Aviation Field		445.50		445.50	445.50	
28	Shelton-Candle	7,565.39	1,369.00	3,199.19	12,133.58	8,207.02	3,926.56
28A	Nome-Serpentine Hot Springs	4,008.61	3,540.00	855.00	8,403.61	3,129.00	5,274.61
29	Ft. Gibbons-Bettles	11,712.56			11,712.56	7,012.11	4,700.45

29A	Bettles-Coldfoot	6,435.59		2,000.00	8,435.59	5,130.00	3,305.59
29C	Mile 70-Hughes	2,167.02			2,167.02	1,708.57	458.45
29D	Wild River Trail	1,425.76			1,425.76		1,425.76
29E	Bettles River Aviation Field		250.00	250.00	500.00	500.00	
30	Hot Springs Landing-Eureka	44,638.60	9,703.71	3,967.09	58,309.40	20,425.81	37,883.59
30A	Hot Springs-Tofty	6,467.73			6,467.73	4,309.26	2,158.47
30B	Manley Hot Springs Aviation Field		225.00	90.00	315.00	290.00	25.00
31	Caribou Creek	12,594.62	540.00		13,134.62	8,580.92	4,553.70
32A	Takotna-Flat	9,151.14			9,151.14	5,437.29	3,713.85
32AA	Takotna-Flat	45.00			45.00		45.00
32AB	Moore Creek	15.00			15.00		15.00
32AC	Candle Creek-Takotna	1,216.09			1,216.09		1,216.09
32B	Iditarod-Flat	61,194.50	13,904.35	12,098.31	87,197.16	49,546.27	37,650.89
32C	Ophir-Iditarod	7,101.13	100.00		7,201.13	5,000.00	2,201.13
32D	Flat-Crooked Creek	4,413.29	200.00		4,613.29	1,480.00	3,133.29
32DD	Flat-Georgetown	150.00			150.00		150.00
32E	Takotna Aviation Field		1,995.19		1,995.19	1,943.19	52.00
32F	Takotna Depot	2,990.80			2,990.80	2,304.20	686.60
33A**	Otter Creek Towpath	448.23			448.23	448.23	
33B**	Summit-Otter Creek	5,047.66			5,047.66		5,047.66
33C	Flat City-Flat Creek	3,068.55			3,068.55		3,068.55
33D	Head Flat Creek-Willow Creek	4,057.99			4,057.99	1,243.00	2,814.99
33E	Willow Creek-Chicken Creek	977.65			977.65		977.65
33F	Flat City-Otter Discovery	5,045.40		11,086.08	16,131.48	9,811.08	6,320.40
33G	Candle Landing-Candle Creek			6,572.00	6,572.00	5,597.00	975.00
33H	Flat Aviation Field		1,400.00		1,400.00	2,400.00	
34**	Iditarod-Dishkaket	4,830.98			4,830.98	4,730.98	100.00
24A	Flat-Holy Cross-Anvik	1,358.49			1,358.49		1,358.49
34B	Iditarod-Shageluk-Anvik	1,033.87			1,033.87	500.00	533.87
35A	Archangel Extension	29,321.08			29,321.08	17,197.92	12,123.16
35A A	Sherry Branch	1,522.43			1,522.43	1,119.32	403.11
35A B**	Fairangel Extension	104.20			104.20	104.20	
35B	Palmer-Fishhook	21,402.28	1,800.00	867.08	24,069.36	16,916.60	7,152.76
35C	Palmer-Matanuska River	32,464.68	106.66	1,729.33	34,300.67	23,656.16	10,644.51
35D	Willow Creek Extension	95,084.37			95,084.37	38,134.14	56,950.23
35E	Wasilla-Fishhook	106,549.97			106,549.97	33,412.63	73,137.34
35F	Wasilla-Knik	50,641.30		345.00	50,986.30	26,435.47	24,550.83
35G	Palmer-Springer		21.15	2,800.83	2,821.98	1,573.32	1,248.66
35H	Wasilla-Palmer	6,357.07	4,215.00	22,057.23	32,629.30	19,057.23	13,572.07
35I	Moose-Palmer	500.00	517.66	7,000.06	8,017.72	6,893.09	1,124.63
35J	Wasilla-Matanuska	12,469.18	8,678.55	2,540.56	23,688.29	9,276.23	14,412.06
35K	Matanuska Trunk Road	7,940.95	5,410.00	21,331.46	34,682.41	15,051.46	19,630.95
35L	Palmer-Matanuska		1,329.81	11,356.15	12,685.96	8,404.70	4,281.26

No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
35N	Houston-Willow Creek	272.00		940.32	1,212.32	940.32	272.00
35O	Fishhook-Goldmint	8,884.83	7,200.00		16,084.83	15,236.83	848.00
35P**	Moose Creek-Baxter			2,218.62	2,218.62	2,218.62	
35Q	Edlund Road		11.25	3,047.19	3,058.44	2,551.69	506.75
35R	Bogard Road		200.64	13,228.58	13,429.22	12,228.58	120.64
35S	Moose Creek Trail	2,118.44			2,118.44	2,041.01	77.43
35T	Werner Connection	1,615.57	1,680.00		3,295.57	2,771.32	524.25
35U	Moose Creek Aviation Field		481.75		481.75	461.50	20.25
35V	Fishhook Aviation Field		917.49		917.49	848.74	68.75
35W	Wasilla Aviation Field		459.50		459.50	459.50	
35X	Wasilla Aviation Field Road		1,135.94		1,135.94	1,135.94	
36	Mineral Creek	16,413.46	17,800.56	24,347.37	58,561.39	35,315.01	23,246.38
36A	Granby Road		349.44		3,081.91	3,081.91	349.44
36B	South 2nd St., Cordova				3,373.15	3,373.15	
36C*	Eyak Lake Road				7,735.85	7,735.85	
36CA	Cordova Aviation Field		926.15		926.15	926.15	
36D**	Valdez-Quartz Creek			524.75	524.75	524.75	
36E**	Valdez-Glacier			616.91	616.91	616.91	
36F**	Shoups Bay			3,457.25	3,457.25	3,457.25	
37	Topkok-Candle	1,026.56			1,026.56	816.56	210.00
37A	Bluff-White Mountain	1,223.23	2,050.00		3,273.23	3,273.23	
38A	Ruby-Long Creek	208,956.24	3,824.59		212,780.83	132,020.35	80,760.48
38B	Poorman-Cripple	3,449.84			3,449.84	1,502.96	1,946.88
38C	Ophir-Cripple	3,853.93			3,853.93	1,899.00	1,954.93
38D	Ophir-Takotna	191,014.59	54,395.84		245,410.43	174,507.50	70,902.93
38DA	Little Creek Road		10,100.46		10,100.46	8,796.04	1,304.42
38E	Long-Poorman	104,994.30	490.00		105,484.30	86,963.07	18,521.23
38EE	Long-Poorman (Winter)	5,368.00	10.00		5,378.00	5,268.00	110.00
38EEET	Tamarack-Poorman			22,322.69	22,322.69	22,322.69	
38F	Poorman-Ophir	2,088.64			2,088.64		2,088.64
38G	Takotna-Landing	8,374.68			8,374.68	7,374.68	1,000.00
38H	Ganes Creek Road		9,531.89		9,531.89	3,403.85	6,128.04
38K	Ruby Aviation Field		1,032.50	600.00	1,632.50	1,200.00	432.50
38L	Ruby Aviation Field Road			500.00	500.00	500.00	
38M	Ophir Aviation Field		625.00	190.00	815.00	815.00	
39*	Juneau-Sheep Creek	45,929.40			45,929.40	25,390.13	20,539.27
40	Douglas-Gastineau Channel	15,572.36	2,443.00		18,015.36	12,019.88	5,995.48
41	Kiana-Klery Creek	3,593.11	37.00		3,630.11	3,014.76	615.35
41A	Kotzebue-Shungnak	1,307.06	1,628.00		2,935.06		2,935.06
41B	Kotzebue-Pt. Barrow	3,180.74	2,737.28		5,918.02	4,400.02	1,518.00
41D	Kotzebue Aviation Field		670.60		670.60	670.60	
42	St. Michael-Kotlik	1,867.51	518.00		2,385.51		2,385.51
43*	Petersburg-Scow Bay	8,171.65	1,500.00	13,794.58	23,466.23	13,497.67	9,968.56
44*	Skagway Valley	10,303.30		821.53	11,124.83	8,803.95	2,320.88
44A	Skagway Trails	11,572.50	3,931.38		15,503.88	11,158.71	4,345.17
45*	Silver Bow Basin	20,669.30	2,796.91		23,466.21	5,938.62	17,527.59
46	Kobi-Eureka	15,917.57			15,917.57	12,571.63	3,345.94
46A	Roosevelt-Kantishna	47,660.99	12,370.51	1,655.03	61,686.53	41,962.69	19,723.84
46B	Lignite-Kantishna	12,646.93	483.07		13,130.00	11,966.91	1,163.09
46C	Nenana-Knights Roadhouse	3,013.11			3,013.11	1,592.58	1,420.53
46D	McKinley Park Road	295,860.76		700.25	296,561.01	266,609.05	29,951.96
46E	Diamond-Telida	9,738.55			9,738.55	6,811.56	2,926.99
46F	Nenana Cemetery	4,384.32	2,590.00		6,974.32	3,818.63	3,155.69
46G	Kobi-Bonfield	5,767.51			5,767.51	5,706.61	60.90
46H	Lake Minchumina Aviation Field		900.00		900.00	750.00	150.00
46J	Kantishna Aviation Field		775.00		775.00	675.00	100.00
46K	Telida Aviation Field		850.00		850.00	600.00	250.00
46M	Nenana Aviation Field		802.00	180.00	982.00	720.00	262.00
47	Coldfoot-Wiseman	10,846.16		2,000.00	12,846.16	8,942.61	3,903.55
47A	Wiseman Aviation Field		3,210.47	1,613.25	4,823.72	4,113.25	710.47
47B	Nolan Branch	18,314.11			18,314.11	16,192.74	2,121.37
47C	Wiseman-Hammond	5,129.89			5,129.89	3,967.07	1,162.82
48	Iliamna Bay-Iliamna Lake	34,339.04			34,339.04	29,832.58	4,506.46
49	Davidsons Landing-Taylor	9,485.09	8,927.00		18,412.09	7,713.17	10,698.92
50*	Stikine River	2,256.75			2,256.75	2,256.75	
51	Talkeetna-Cache Creek	170,162.83	81,109.36		251,272.19	165,339.35	85,932.84
51A	Cache Creek Trail	4,253.11	300.00		4,553.11	2,270.00	2,283.11
51B	Peters Creek Trail	10,130.33	1,000.00		11,130.33	10,206.82	923.51
51C	Yentna-Mills Creek	5,174.80			5,174.80	5,130.44	44.36
51E	Mills Creek-Cache Creek	1,957.44			1,957.44	1,307.45	649.99
51F	Cache Creek Aviation Field		179.90		179.90	179.90	
52*	Ketchikan-Wards Cove	6,801.98	19,318.44		26,120.42	21,120.42	5,000.00
52A*	Ketchikan-Charcoal Point			15,500.48	15,500.48	12,500.48	3,000.00
53	Eagle-Circle	5,746.59			5,746.59	1,684.72	4,061.87
53A	Circle-Ft. Yukon	7,134.18			7,134.18	4,166.57	2,967.61
53B	Ft. Yukon Aviation Field		1,493.89	600.00	2,093.89	1,790.89	303.00
54	Chisana-Nizina	6,263.58		3,208.00	9,471.58	7,327.30	2,144.28
55	Kenai-Russian River	10,765.75	1,300.00	359.25	12,425.00	6,559.26	5,865.74
55A	Kenai Aviation Field		901.51		901.51	901.51	
56**	Tasnuma	1,058.14			1,058.14	1,058.14	
56B**	Katalla-Chilkat			7,752.56	7,752.56	7,752.56	
57	McCarthy-Dan Creek	145,781.38	4,000.00	38,268.20	188,049.58	143,352.23	44,697.35
57A	Nizina River Bridge	126,922.75	25,000.00		151,922.75	125,941.80	25,980.95
57B	Nizina-Chitina River	2,950.57	2,950.00		5,900.57	5,400.57	500.00

No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
57C	McCarthy-Kennecott River	365.39			365.39		365.39
57D	Chititu Branch	4,528.48			4,528.48	4,528.48	
57E	McCarthy-Green Butte	1,804.55			1,804.55		1,804.55
57F	McCarthy Aviation Field		1,780.88		1,780.88	1,780.88	
58*	Hyder-Salmon River	63.50			63.50	63.50	
59	Fairbanks Bridge	72,963.65			72,963.65	61,699.30	11,264.35
59A	Fairbanks Depot	19,838.59			19,838.59	16,707.00	3,131.59
60	Valdez Dyke	56,065.98	10,552.34	4,638.00	71,256.32	56,065.98	15,190.34
60A	Valdez Aviation Field		2,351.65		2,351.65		2,351.65
61	Strelna-Kuskulana	5,746.88	2,278.98	9,080.42	17,106.28	12,536.55	4,569.73
61A	Kotsina Trail	15,699.10	270.00		15,969.10	14,571.55	1,397.55
61B	Nugget Creek Extension	1,630.00			1,630.00		1,630.00
61C**	Elliott-Kotsina			6,858.42	6,858.42	6,858.42	
61E	Farnan Trail	926.16			926.16	926.16	
61F	Bremner Trail	1,141.19			1,141.19	1,141.19	
62	Dime Creek	24,804.80	22,413.59	29,587.59	76,805.98	43,702.96	33,103.02
62A	Haycock-Bear Creek		66.00		66.00	216.00	
63	Dunbar-Brooks	13,580.03	10,143.15	7,075.79	30,798.97	19,229.59	11,569.38
63B	Brooks-Livengood Creek	2,478.45	1,570.21	28,564.86	32,613.52	20,064.86	12,548.66
63BA	Amy Creek Branch	500.00		1,868.45	2,368.45	2,068.45	300.00
63C	Brooks Tram	41,202.69	825.40	6,425.00	48,453.09	18,311.30	30,141.79
63D	Brooks-Aviation Field Road			713.00	713.00	713.00	
63E	Livengood Aviation Field		1,125.25	1,200.00	2,325.25	2,154.00	171.25
64**	Cripple-Lewis Landing	100.00			100.00		100.00
64A	Cripple-Cripple Mountain	447.00			447.00	292.00	155.00
64AA	Cripple-Cripple Mountain (Winter)	851.05			851.05	611.05	240.00
65A	Gulkana-Chistochina	163,509.64			163,509.64	137,633.50	25,876.14
65B	Chistochina-Slate Creek	109.50		149.00	258.50	149.00	109.50
65C	Chistochina-Tanana Crossing	92.20			92.20		92.20
65D	Ketchumstuk-Tanana Cross- ing	1,669.82			1,669.82		1,669.82
65E	Chicken-Ketchumstuk	1,663.50			1,663.50		1,663.50
65F	Grundler-Tanana Crossing	11,072.71			11,072.71	9,372.71	1,700.00
65G	Slana-Chisana	2,468.41			2,468.41	2,468.41	
66**	Matanuska-Chickaloon	353.75		914.55	1,268.30	1,268.30	
67	Nome-Teller	3,434.98	5,013.50	150.00	8,598.48	300.00	8,298.48
67A	Teller-Cape Prince of Wales	761.82			2,574.82		2,574.82
67B	Teller-Bluestone	1,996.61	4,680.00		6,676.61	3,661.45	3,015.16
67C	Teller-Marys Igloo	1,122.72	1,820.00		2,942.72	1,800.00	1,142.72

67D	Teller-American River	292.34	614.00		906.34	849.67	56.67
67E	Teller Aviation Field		522.80		522.80	522.80	
67F	Tin City-Goodwin	195.09	480.00	500.00	1,175.09	1,175.09	
68	Flagging Trails	63,011.65	16,154.53	12,069.53	91,235.71		91,235.71
70	Misc. Surveys and Recon- naissance	11,632.01	617.30	466.49	12,715.80	12,715.80	
72*	Wrangell Oil Dock	2,964.97	2,000.00		4,964.97	4,964.97	
72A*	Wrangell Cemetery Road		588.75	8,639.22	6,289.22		2,350.00
73	Marshall Road	6,704.40	1,615.00	11,685.90	18,979.05	14,558.05	4,421.00
73A	Kotlik-Marshall	1,664.84			3,279.84	850.00	2,429.84
73B	Stuyahok	915.00	745.00		1,660.00	1,660.00	
73C	Old Hamilton-Scammon Bay	845.45	1,500.00		2,345.45	1,853.45	492.00
75	Anchorage Loop	79,464.75	22,024.85	5,606.43	107,096.03	57,003.79	50,092.24
75A	Anchorage-Lake Spenard		2,394.60	15,449.05	17,843.65	10,010.23	7,833.42
75C	Chester Creek-Boat Landing		107.00	927.30	1,034.30	782.42	251.88
75D	Anchorage-Depot	5,858.87			5,858.87	3,966.35	1,892.52
75E	McDonald Road	1,302.67	950.00		2,252.67	1,105.13	1,147.54
75G**	East 1st. St., Anchorage			1,023.46	1,023.46	1,023.46	
75H	Lake Spenard Aviation Field		177.45	100.00	277.45	277.45	
75I	Oilwell Road		4,589.99		4,589.99	4,589.99	
76	Cantwell-Valdez Creek	10,790.80			10,790.80	7,840.20	2,950.60
78	Valdez Depot	4,683.46			4,683.46		4,683.46
79	Seward Depot	4,032.43			4,032.43		4,032.43
80A	McGrath-Takotna	337.23			337.23		337.23
80A A	McGrath-Takotna	4,262.10		332.00	4,594.10	2,182.00	2,412.10
80B	McGrath-Telida	11,053.62			11,053.62	7,178.21	3,875.41
80C	McGrath-Candle Creek	274.47			274.47		274.47
80D	Nixon Fork-Nixon Mine			2,348.00	2,348.00	2,348.00	
80E	Takotna-Twin Peaks	213.16			213.16	113.16	100.00
80F	Medfra-Nixon Mine	1,988.00			1,988.00	1,800.00	188.00
80G	Takotna-Nixon Fork	610.56			610.56		610.56
80GG	Takotna-Nixon Fork (Winter)	183.16			183.16		183.16
80H	McGrath Aviation Field		7,496.58	300.00	7,796.58	7,796.58	
80J	Medfra Aviation Field		345.00		345.00	285.00	60.00
81	Good Creek-Salmon River	2,694.41	7,089.40		9,783.81	7,190.14	2,593.67
81A	Rink River	197.12	1,352.88		1,550.00	1,550.00	
82*	Taku River	899.21		19,309.74	20,208.95	20,208.95	
84	Fairbanks-Council Survey	41,528.75			41,528.75	41,528.75	
86	Fourth of July Creek	4,194.66			4,194.66	1,161.23	3,033.43
87	Woodchopper Creek	872.00			872.00	62.00	810.00
88	Ferry-Eva Creek	20,389.89			20,389.89	18,359.89	2,030.00
89	Kougarok Reconnaissance		100.00		4,312.11	4,312.11	
89A	Seward Peninsula Railroad	136,888.02		24,404.55	161,392.57	64,539.92	96,852.65
89C	Iron Creek-American River		150.00	500.00	750.14	750.14	
90A	Shelter Cabins, 1st Division		340.35		340.35	340.35	

No.	Sub-project Name	Federal Appropriations and "Alaska Fund"	Contributed Funds	Supervised Funds	Grand Total	Construction	Maintenance and Improvement
90B	Shelter Cabins, 2nd Division		24,125.64	5,007.69	29,133.33	25,649.27	3,484.06
90C	Shelter Cabins, 3rd Division		19,734.99	1,097.47	20,832.46	19,278.11	1,554.35
90D	Shelter Cabins, 4th Division		33,065.65	2,007.00	35,072.65	31,460.31	3,612.34
91*	Yakutat	43.73	6.82		50.55	50.55	
92A	Bethel-Quinhagak	1,330.21	1,000.00		2,330.21	1,797.50	532.71
92B	Bethel-Tuluksak	1,484.92	725.00		2,209.92	1,478.48	731.44
92C	Akiak-Russian Mission	784.00	800.00		1,584.00	1,584.00	
92D	Bennet Cutoff	196.00	200.00		396.00	396.00	
92E	Yukon-Kuskokdim Portage	8,541.99	100.00		8,641.99	7,706.14	935.85
92F	Quinhagak-Good News Bay	1,737.96	758.45		2,496.41	2,417.77	78.64
92G	Good News Bay-Togiak	1,304.87	970.00		2,274.87	2,203.33	71.54
92H	Togiak-Nushagak	3,876.10	1,400.00		5,276.10	3,848.47	1,427.63
92I	Lewis Point-Naknek	1,886.14	860.00		2,746.14	2,632.34	113.80
92J	Naknek-Egegik	1,531.50	740.00		2,271.50	2,105.00	166.50
92K	Egegik-Kanatak	922.00			922.00	350.00	572.00
92L	Crooked Creek-Aniak	1,029.58	310.00		1,339.58	820.00	519.58
92M	Aniak-Tuluksak	1,991.26	1,120.00		3,111.26	2,514.96	596.30
92N	Akiak-Canyon Creek	306.00			306.00		306.00
92O	Tuluksak-Foothills	1,444.14			1,444.14	1,185.12	259.02
92P	Holy Cross-Kaltsak	820.15			820.15	500.00	320.15
92Q	Upper Landing-Bear Creek	2,268.80	2,800.00	400.00	5,468.80	4,100.00	1,368.80
93	Chulitna Trail	4,760.60	3,000.00	877.17	8,637.77	6,956.44	1,681.33
93A	Bull River Trail	1,224.93	1,200.00	1,598.81	4,023.74	3,582.32	441.42
93B	Indian River	2,974.76	3,600.00		6,574.76	6,566.23	8.53
93C	Curry Aviation Field		1,119.60	2,900.00	4,019.60	3,376.60	643.00
94	Kodiak-Abberts	55,575.05			55,575.05	46,808.51	8,766.54
95	Kanatak-Becharof Lake	28,347.55			28,347.55	23,882.31	4,465.24
95B	Larsen Bay-Karluk River	962.05			962.05	962.05	
96	Chickaloon-King River	1,588.91			1,588.91	800.00	788.91
96A	Chickaloon Cable	375.49			375.49	272.29	103.20
96B	Chickaloon-Nelchina	5,343.52			5,343.52	5,220.69	122.83
97	Sunrana Footbridge	413.80			413.80	413.80	
97A	Healy Aviation Field		491.79		491.79	491.79	
98	Homer Spit	20,610.19	16,264.56		36,874.75	32,869.75	4,005.00

98A	Nuka Bay Trail	2,023.85	3,724.90		5,748.75	3,650.98	2,097.77
98B	Ninilchick Aviation Field		384.18		384.18	384.18	
98C	Kasilof Aviation Field		674.52		674.52	674.52	
100	Office and General overhead	477,148.43	777.71		477,926.14	233,774.25	244,151.89
101	Territorial General overhead			71,521.31	71,521.31	39,936.42	31,584.89
Totals		\$13,456,039.13	\$1,273,132.38	\$ 929,780.46	\$15,658,951.97	\$8,973,095.57	\$6,685,856.40
*Transferred to Department of Agriculture.							
**Abandoned.							
Richardson Highway and Edgerton Cutoff*							
		6,079,821.96			6,079,821.96	2,731,876.49	3,347,945.47
	Stees Highway*	1,262,614.48	14,873.22	39,943.15	1,317,430.85	980,189.09	337,241.76
*Included in above table.							

### COST OF MAINTENANCE.

The annual cost of maintenance of routes in Alaska varies considerably with the locality, the range of climate being greater than that of the United States, and the cost of labor varying greatly. The experience of this Commission indicates that for all Alaska proper, average maintenance costs, including a fair allowance for floods, etc., are about as indicated in table following:

Classification	Mileage	Annual Maintenance per mile	Total
Wagon Roads .....	1,676½	\$300	\$502,950
Sled Roads .....	1,404¾	25	35,119
Trails .....	7,148	10	71,480
Flagged Trails .....	712	3	2,136
Totals .....	10,941¾	\$ 55.90	\$611,685

The above does not provide for any improvements or extensions. The intermediate, or interior, sections of many of the through routes need improvement to the same standard as the rest so that the entire route may be used throughout by the same traffic without the necessity of breaking loads. A certain amount of new work on extensions must be provided for each year to keep pace with developments. This has only been possible up to the present time at the expense of needed maintenance work.

### INSPECTION.

The magnitude of the task and extent of territory covered by the wide-flung activities of this Commission may be realized from the fact that it would take two years of continuous traveling on the ground with the best facilities available for a single individual to make a complete inspection of the entire mileage for which the Commission is responsible. In view of the growing use of airplanes in Alaska more comprehensive and frequent inspections can now be made by the members of the Commission than was formerly the case. The President or Engineer Officer spend the greater part of each working season inspecting the field work and ascertaining the needs of all sections for transportation routes.

### FEDERAL AID.

The provisions of the Federal Aid Road Acts do not apply to the Territory of Alaska. The original Federal Aid Road Act was approved July 11, 1916, and was amended by the Act approved February 28, 1919. The Federal Highway Act of November 9, 1921, as supplemented and amended, is now the basic law governing Federal aid road work.

The extension of the Federal Aid Road Acts to Alaska has been proposed. In view of the fact that nearly 12 years before the Federal aid idea was adopted, the Alaska Road Commission had been created by Congress in 1905 to meet the special conditions in Alaska, had the

work well in hand; and in view of the further fact that the theory, specifications, methods, etc., of the Federal aid do not meet the conditions in the Territory, Congress has instead increased the powers and appropriations of the Alaska Road Commission.

### DEPARTMENT OF AGRICULTURE.

The National Forests, administered by the U. S. Forest Service, are provided with a road system the work on which is done by the U. S. Bureau of Public Roads. The territory served by this organization, comprising about 5% of the area of the Territory, lies mostly in Southeastern Alaska and could not be tied in with the rest of the Territory by a road system. The work of the two road building agencies is thus entirely distinct and no overlapping of work or effort exists or is possible.

### TERRITORIAL ROAD LEGISLATION.

The present road law in the Territory, known as the Cooperative Road Act, was passed on April 21, 1919 (Chapt. 11, Session Laws 1919). It was made necessary by the federal appropriation for the National Forests, which could be expended only provided cooperative funds were appropriated by the Territory, the Department of Agriculture funds becoming available in the ratio of about three dollars of federal funds to one dollar of Territorial funds. Under this law the Territorial Board of Road Commissioners, consisting of the Governor, the Secretary, and the Treasurer of the Territory, was authorized to enter into cooperative agreements with the Department of Agriculture, the Alaska Road Commission, or other federal bureaus, and to turn over to the disbursing officers of such bureaus territorial funds to be expended by them upon the cooperative projects.

The Territorial Board was also authorized and directed to submit to the Legislature estimates for further work. The Divisional Boards consisted, as before, of one elected commissioner at an annual salary of \$2,500 and two appointed members who should be reimbursed for their expenses for such time as they should actually serve. The Divisional Boards, also, were required to submit annual reports upon January first.

This law further provided that after March 1, 1921, the Divisional Chairman should be appointed from qualified civil engineers in the Territory who should serve without pay and provided for two elected commissioners in each division who should receive a per diem of \$10 for such time as they should actually serve, but whose total compensation should not exceed \$1,000 in any one year.

The following Territorial funds have been appropriated and expended to March 31, 1929:

## APPROPRIATIONS:

Forest Revenues to June 30, 1928 .....	\$ 283,982.09
April 30, 1927, Shelter Cabins .....	20,000.00
May 3, 1917, Roads, Bridges, Trails and Ferries .....	400,000.00
May 3, 1917, Nizina Bridge .....	25,000.00
May 1, 1919, Shelter Cabins .....	5,000.00
May 1, 1919, Roads, etc. ....	375,000.00
May 5, 1921, Nizina River Bridge .....	25,000.00
May 5, 1921, Seward Peninsula Railway .....	24,014.00
May 7, 1921, Shelter Cabins .....	10,000.00
May 7, 1921, Roads, etc. ....	240,000.00
May 3, 1923, Tolovana Tram .....	6,425.00
May 4, 1923, Roads, etc. ....	240,000.00
May 4, 1923, Shelter Cabins .....	15,000.00
May 5, 1923, Kaltag Portage Survey .....	312.72
April 30, 1925, Roads, etc. ....	260,000.00
April 30, 1925, Shelter Cabins .....	20,000.00
April 30, 1925, Telephone Lines .....	3,999.20
April 30, 1925, Pioneer Cem. Road .....	3,341.02
Deposits from sales, 1926 .....	415.00
May 2, 1927, Telephone Lines .....	4,000.00
May 5, 1927, Roads, etc. ....	460,000.00
May 5, 1927, Shelter Cabins .....	32,266.63

Total appropriated to March 31, 1929 .....

\$2,453,755.66

## EXPENDITURES:

Expended by Territory prior to April 1, 1921 .....	\$ 684,239.64
Expended by Territory, April 1, 1921 to March 31, 1929 .....	33,581.06
Supervised by A. R. C. 1921-1929 .....	225,691.32
Cooperative with A. R. C. 1920-1929 .....	1,189,994.41
Cooperative with Forest Service 1920-1929 .....	300,070.09

Total expended to March 31, 1929 .....

\$2,433,576.52

Balance, April 1, 1929, Forest Revenue Fund .....

15,579.14

Balance on deposit with A. R. C. for authorized work....

4,600.00

\$2,453,755.66

## TERRITORIAL BOARD.

The Territorial Board of Road Commissioners, as now constituted, is composed of the following:

Geo. A. Parks, Governor of the Territory.....	Chairman.
Cash Cole, Auditor of Alaska.....	Secretary.
Walstein G. Smith, Territorial Treasurer.....	Member.
Robert J. Sommers.....	Territorial Highway Engineer.

## LOCAL COOPERATION.

Under the authority of the Territorial Cooperative Road Act, approved April 21, 1919, and the Act of Congress approved June 30, 1921, the Commission made additional cooperative agreements for the prosecution of work supported in part by federal funds and in part by funds appropriated by the Territorial Legislature. In the first and second divisions, Southeastern and Western Alaska, respectively, no divisional chairmen were appointed during the past year, all available funds being allotted to cooperative projects. In the other two divisions, superintendents of the Commission were appointed chairmen of the respective Territorial commissions.

The President of the Commission continued to supervise certain public works for the Territory and the work of the Divisional Char-

men as well as the other work supported by appropriations of the Territorial Legislature. No Territorial road building organization has been maintained since March 1, 1921.

The following general road funds were expended on Territorial projects during the fiscal year:

## COOPERATIVE ROAD PROJECT:

Alaska Road Commission Funds .....	\$ 243,546.37
Territorial Funds .....	122,285.59
Miscellaneous Contributions .....	28,330.32
Total .....	\$ 394,162.28

## TERRITORIAL ROAD PROJECTS:

Territorial Funds .....	\$ 34,074.31
Miscellaneous Contributions .....	9,900.00
Total .....	\$ 43,974.31

## SPECIAL PROJECTS:

Shelter Cabins, Territory, 2nd Division .....	\$ 6,064.00
3rd Division .....	3,242.21
4th Division .....	5,490.86
Aviation Fields, Territory, 2nd Division .....	1,851.90
3rd Division .....	6,300.50
4th Division .....	17,448.51
Telephone Lines, Territory .....	2,254.03
Nome Harbor, Territory .....	2,500.00
Valdez Dyke, Territory .....	3,366.44
Gastineau Bar, Territory .....	200.00
Lowell Creek .....	10,000.00
Seward Peninsula Tramway, A. R. C. Funds .....	12,680.14
Tolovana Tramroad, A. R. C. Funds .....	9,256.12
Nizina Bridge, A. R. C. Funds .....	7,617.34
Total .....	\$ 88,272.55

Grand Total .....

\$ 526,409.14

The last biennial Legislature appropriated the following funds for public works in the Territory for the coming biennium, working seasons 1929 and 1930.

Roads, Bridges, Ferries and Trails .....	\$ 320,000.00
Seward Peninsula Tel. Lines .....	12,500.00
International Highway .....	1,500.00
Yukon-Kuskokwim Portage .....	7,500.00
Flood Control Salmon River .....	7,500.00
Reconstruction Valdez Dyke .....	10,000.00
Shelter Cabins .....	20,000.00
Total .....	\$ 379,000.00

From the first item for "Roads, etc.," the following special projects are authorized:

Maintenance Nome Harbor .....	\$ 5,000.00
Telephone Lines .....	12,500.00
Air Mail Subsidy .....	5,000.00
Yukon-Kuskokwim Portage .....	7,500.00
Improvement Iditarod River .....	10,000.00
Maintenance Valdez Dyke .....	15,000.00

Also it is provided that 30% of the total funds available in the second and fourth divisions, and 50% in the first and third divisions may be expended for airplane landing fields or hydroplane moorings.

For the working season of 1929 (fiscal year 1930) the Territorial Board has allotted to the Department of Agriculture \$10,450 and to the Alaska Road Commission the following amounts:

Cooperative Road Projects .....	\$ 63,600.00
Territorial Road Projects .....	44,400.00
Shelter Cabins .....	12,000.00
Aviation Fields .....	43,600.00
Telephone Lines .....	6,000.00
Nome Harbor .....	2,500.00
Valdez Dyke .....	7,500.00
Total .....	\$ 179,600.00

Of the above amounts \$4,600.00 for aviation fields has been deposited. The balance is held subject to the call of the commission. The existing balance of \$6,600.00 in contributed funds includes \$2,000.00 contributed by the Golden Bear Mining Co. for a road in the Wasilla District.

The cooperative Road Act has worked satisfactorily under the conditions imposed. Certainly, the amount of road work accomplished for the money expended has been far in excess of what would have been possible under separate organizations. Had the Territory attempted to expend its \$50,000 per division under an independent organization, nearly one-fourth of the available funds would have gone into overhead, salary and expenses of a divisional chairman and clerk, rent, light, etc. All of this service was furnished free by the Alaska Road Commission and at no additional cost to itself. In addition, the extensive plant and mechanical equipment of the Alaska Road Commission, representing a capital investment of over \$500,000, were furnished where available in the Territorial work without charge except for fuel and ordinary running expenses. Due to the extensive organization of the Alaska Road Commission, it has also been possible to apply Territorial money to outlying projects where the maintenance of an independent organization would have been impossible or prohibitive in cost. Finally, all available money is lumped together and expended upon a comprehensive system with a continuity in plans and a consistency in operations over an extended period of years.

The Alaska Road Commission, also, is a gainer, under the Cooperative Road Act. By having greater funds available, it is able to consolidate purchases and supplies and thus to secure better prices. Conflicts in plans and complications in operations are avoided. By having funds becoming available all the year round, the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of the open working season are minimized, and the entire organization and conduct of operations, are rendered more flexible.

## AVIATION FIELDS.

Aviation has had a very rapid development in recent years due to the large area of Alaska and scarcity of other means of transportation. While in the United States the use of airplanes may save hours or days, in Alaska, weeks may be saved on a single trip.

To keep pace with the development of aviation the Territorial Legislature has authorized during the past four years, the expenditure of a part of Territorial road funds for the construction of aviation fields. The work is performed by the Commission under the existing cooperative arrangement. To date 54 fields have been constructed. 10 are now under construction, 3 are proposed for construction in the near future and 4 are natural sites on which no work has been done.

Three commercial companies operating for the past four years have flown 427,000 plane miles, carrying 2600 passengers 335,000 passenger miles. 155,000 lbs. of mail and express have been transported by air. (See Map in back) Total expenditures to date are \$70,840.56.

## CONSOLIDATION OF WORK UNDER THE COMMISSION.

The following additional duties have been imposed upon the members of the Commission by appropriate authority:

- (a) Effective April 1st, 1921, the Juneau, Alaska engineer district was created by G. O. No. 1, War Department, Office of the Chief Engineers, Washington, February 21, 1921. The President of the Commission, in addition to his other duties, was appointed District Engineer; the other two members of the Commission were placed under the immediate orders of the District Engineer and the Secretary and Disbursing Officer of the Commission, was, in addition, designated as Disbursing Officer for the district. The Alaska district does not form a part of the Northern Pacific Division; the District Engineer reports direct to the Chief of Engineers. Detailed report of the operations of the Alaska District will be found in the Annual Report, C. of E.
- (b) By par. 3, S. O. No. 50-0, War Department, Washington, D. C., March 9, 1921, and under the provisions of Acts of Congress approved June 17, 1910, and June 15, 1917, the District Engineer who is also President of the Commission, in addition to his other duties, has been detailed for consultation or to superintend the construction or repair of any aid to navigation authorized by Congress in the Sixteenth Lighthouse District (includes the Territory of Alaska). The principal work under this



assignment now in progress is supervision of the construction by contract of beacon foundations in Wrangell Narrows.

- (c) At the request of the Territorial government the President of the Commission supervises various Territorial public works such as roads, aviation fields, shelter cabins, telephone lines, etc.
- (d) By informal arrangement, effective April 1, 1922, the President of the Commission agreed to act for the National Park Service, Department of the Interior, on certain matters relating to the improvement of the Sitka National Monument and the development of Mount McKinley National Park.
- (e) At the request of the Secretary of the Interior, the Commission made a survey and submitted a special report upon the control of Lowell Creek, Seward, Alaska, to protect government property in the vicinity from damage due to floods. By the act approved February 9, 1927, this flood control work was assigned to the Secretary of War who has designated the Alaska Road Commission as the agency to carry out the work. The War Department appropriation act of March 23, 1928, included funds for the work, the greater part of which has been accomplished.
- (f) At the request of the Quartermaster General of the Army, the Commission disburses funds and generally supervises the administration of the Sitka National Cemetery created by Executive Order of June 12, 1924.
- (g) At the request of the commanding officer, Chilkoot Barracks, the Alaska Road Commission investigated the reservoir at the barracks and upon request of the Commanding General, 9th Corps Area, is supervising the necessary repairs.
- (h) Supervision and inspection on behalf of the Federal Power Commission of the hydro-electric development at Eklutna.

#### CONSOLIDATED ENGINEERING ORGANIZATION.

The practical result of the foregoing orders has been the development, without legislation, but through executive order or inter-departmental or inter-bureau agreement, of a practical working arrangement through which the facilities of all the services involved are used interchangeably, but a careful account is kept so that each appropriation is eventually expended for the purpose intended by Congress and no appropriation is either increased or diminished by such interchange of working funds or facilities. Separate accounts and reports are rendered to the departments under the direction of which the work is performed.

The result has been an immediate speeding up of development work upon a unified plan based upon a careful survey of the situation, a thorough knowledge of the entire Territory and its problems, and a coordination of all the various conflicting interests after full hearings before all parties at issue. Instead of interminable references between different bureaus which formerly sometimes required papers to travel to Washington and back several times, matters are handled promptly upon the ground, or where the approval of Washington is required, such approval has usually been obtained by a single telegram covering the various angles or the views of the bureaus concerned.

The following are the current activities under consolidated engineering direction:

The construction, repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works, now aggregating over 10,000 miles, and extending from open-all-the-year-round south coast ports to all inhabited parts of the Territory; Territorial roads, bridges, ferries, aviation fields, telephone lines and trails throughout the Territory, covered by cooperative agreements; shelter cabins; Nome-Shelton Tramway (74 miles operated by cars drawn by motors or by dogs); Tolovana Tramway; Valdez Dyke; Yukon-Kuskokwim Portage.

Improvement of Nome Harbor; Improvement of Wrangell Narrows; Improvement of the Tolovana River; the preliminary examination or survey of Ketchikan Creek, Port Alexander, Resurrection Bay, Sitka Harbor, Dry Pass, Cordova Harbor, and Nome Harbor; flood control Salmon River; the investigation of port facilities; the issuance of permits for fish traps and other structures in the navigable waters along the Territory's 26,000-mile coast line; miscellaneous inspections, public hearings and contingencies of Rivers and Harbors; improvement of Sitka National Monument; development of Mt. McKinley National Park; improvement Chilkoot Barracks Water Supply; administration of Sitka National Cemetery; control of Lowell Creek; Maintenance of aids to navigation in Nome Harbor, Safety Harbor and Gastineau Channel Bar; and the inspection of power plant construction at Eklutna.

#### ALASKA TRANSPORTATION PROBLEMS.

In order that the difficulties of transportation within Alaska may be fully appreciated it is necessary for one to visit the Territory and to traverse part of it not yet provided with roads or trails. To one gifted with a good imagination the following brief description will indicate the difficulties in part:

Alaska is a frontier country of vast area, about one-fifth that of the United States proper. With its population of about 30,000 whites and an equal number of natives it is in about the same stage of development as was our great western frontier at the time just preceding the Civil War. There are many reasons why Alaska will not develop so rapidly, however, one of the most important of which is the great difficulty encountered in transportation.

This is essentially a country of very bold relief. Along the entire southern coast line, from Portland Canal east of Ketchikan to False Pass at the southwest extremity of the Alaska Peninsula mountain ranges rise, abrupt and rugged, direct from the sea. This continuous chain of mountains along the coast has done much to retard the development of Alaska since it presents to the visitor a forbidding and discouraging aspect and it has always greatly increased the difficulties of access to the interior.

Beyond these mountains there lies a broad stretch of rolling upland country comprising the valleys of the Copper, Susitna and Nushagak Rivers. The two first named are the only rivers of any size that break through the continuous chain of coast ranges to drain into the Pacific Ocean. The Nushagak flows parallel to the coast range and drains into Bering Sea. Within the valleys of the Copper and Susitna Rivers rise two very rugged mountain groups, the Wrangell and Talkeetna ranges.

Beyond the valleys of the Copper and Susitna rivers the Alaska Range, which may be called the backbone of Alaska, rises to great heights. It includes Mt. McKinley, the highest mountain of North America and the highest in the world in relation to the territory immediately surrounding it. The Alaska Range is broken by numerous narrow but excellent passes and has had no such ill effect on the territory as have the somewhat less high mountains which fringe the coast.

Beyond the Alaska Range there is a vast country, rolling and in part mountainous, which comprises the valleys of the Kuskokwim and of the Yukon with its two main tributaries, the Tanana and the Koyukuk. The lower valleys of the Kuskokwim and Yukon are flat delta.

The Brooks Range, consisting of mountains that are neither especially high nor very rugged, separates the valleys above mentioned from a vast stretch of rolling tundra which stretches to the Arctic Ocean.

The subsoil of the vast interior of Alaska is permanently frozen. This is a condition handed down from a preceding period when the climate of Alaska was much colder than at present. For about four

months during the summer the average temperature is about 55° to 60° while temperatures above 90° are not rare. The surface thaws and the warmth, together with the long hours of daylight, causes vegetation to grow very rapidly. The resultant thick layer of moss and dead vegetation prevents the ground from thawing to any great depth. Where this layer of moss and dead vegetation is removed thawing does continue to bed rock, or at least to very considerable depths.

The frozen condition of the subsoil prevents the drainage of the surface by seepage while the accumulated moss and dead vegetation greatly retard surface drainage. The result is that in proceeding across country in Alaska in its normal condition in summer one wades through a peat-like muck, water-soaked and ankle to knee deep. The going is made rough by the profusion of bunches of grass root growth known locally as "niggerheads."

The above condition, varied only in degree, exists all over Alaska with the exception of the narrow fringe along the southern coast. Movement across country is further complicated, except on the Seward Peninsula and on the Arctic slope, by the presence of scrub timber, much of which is fallen and which must be cleared to permit ready passage.

Movement of a wheeled vehicle without a prepared roadway is impossible everywhere except along a sand or gravel beach or along the gravel beds of the smaller streams.

Many of Alaska's streams are of glacial origin. In these the water is very cold and heavily laden with silt and the current is very swift. Quicksand is often encountered. Such streams are always crossed at considerable hazard.

Alaska is well provided with navigable streams which now serve the same purpose in the Territory as did the rivers in the states before the construction of the railroads. The Yukon, Kuskokwim, Innoko, Iditarod, Koyukuk, Tanana, Kantishna, and the Tolovana Rivers, together with The Alaska Railroad, the Copper River and Northwestern Railway, the White Pass and Yukon Railway, and the Richardson Highway form main highways of commerce. From the seacoast or from points on these main highways freight is moved still closer to its destination on the smaller streams in light draft scows pulled by horses.

During the winter, extending on an average for the whole interior country from November first to April tenth, the streams are frozen over and the ground covered with snow and movement is much less difficult. The stream beds generally form excellent avenues for movement by dogsled or horse-drawn sleds. Trails for dog teams and sled roads for the heavier sleds drawn by horses or tractors are con-

structed at relatively little expense by clearing a lane through the timber, constructing occasional bridges over gullies and open streams, and grading down the especially steep approaches to frozen streams. Winter travel on the large streams is more or less hazardous though, due to danger from overflows or going through holes or thin places in the ice. The trails are gradually being relocated off the river in such places.

During the period from October tenth to November first and from April tenth to May tenth, as an average for the interior country, the streams are just freezing or thawing, movement on or across the streams is impossible on account of running ice, and travel is at a standstill except on the railroads.

The most important occupations in the interior of Alaska are mining, fur production and farming. The most important product is gold. It can be transported by any available means from any point at which it is produced. Other minerals can be mined profitably at present only at localities where railroad or water transportation is immediately available. It follows that in general the problem is to transport supplies of all kinds to the point of consumption rather than from the point of production.

The average cost of transporting a ton of freight one mile by bobsled on a winter sled road, as shown by the table on page 38 is 90c as compared with a cost for summer movement of 60c by auto truck or \$1.50 by wagon. It generally follows that for isolated mines and small mining communities in the remote interior the construction of wagon and automobile roads is not warranted.

It is the policy of this Commission to construct sled roads and summer pack trails to such localities from the nearest point on navigable water or on the railroad. If developments warrant, the summer trail can later be improved into a wagon road. Supplies for such points for use during a certain summer must be delivered at the head of navigation during the preceding summer and freighted over the snow during the preceding winter. The small amount of necessary perishable or emergency freight can be moved during summer over pack trails.

Where the operations are of considerable magnitude and around the larger communities the construction of wagon roads is warranted and necessary on account of the increased travel.

### CONSTRUCTION.

Road construction in Alaska is a rather slow and expensive process. After the road has been located, timber cut and removed, stumps grubbed out, moss and vegetation removed, drainage ditches dug and grading completed it requires a period of three or four years for the

subsoil to thaw, the ground water level to be lowered to its new level and the subsoil to attain equilibrium. Meantime the road is unsuitable for heavy loads and maintenance charges are high. In many places it is impossible at any reasonable expense to grade and drain the roadway and corduroy must be used. Fortunately the scrub timber generally available, makes good corduroy.

Gravel for road surfacing is generally available within reasonable hauling distance. Gravelling is necessary for practically all roads which are used by automobiles. Concrete or other forms of hard surfaced roads are nowhere warranted in the present stage of development of the Territory.

Bridges are built of native or imported timber or steel, depending on their importance. Fir has been found to be the most suitable material for timber bridges but improvements in methods of local timber production now in progress will, if successful, make possible some use of Alaska hemlock for structural purposes.

Metal culverts are being introduced to replace the culverts of native timber heretofore used. The latter rot very rapidly and the frequent replacement required makes them quite expensive.

Sled roads are located on low ground, often swampy, and follow streams or lakes whenever this is advantageous. Clearing of timber, removal of stumps and niggerheads, construction of bridges across deep gullies and grading down of steep approaches are the general requirements in the construction of a sled road. Winter trails for dog teams are constructed on the same principles but require less in the way of bridges or grading of approaches.

Summer trails follow the driest—or the least wet—ground available. If grades are not excessive they are susceptible of later development into wagon roads.

It is the general policy on any route or within a certain district, to make improvements throughout rather than to make extensive improvements on one route or portion of a route which cannot be advantageously used until the remainder or the connecting routes are so improved.

### COMMERCIAL STATISTICS.

A traffic census was begun by the Commission in 1911. Comparing the expenditures for freight on each route at the present rate with the cost of transporting the same amount of freight at the rates prevailing before the road was constructed, a figure is obtained which represents the economic saving to the community served by the construction of the particular route in point.

The data thus collected indicates that the annual saving in cost of transportation of freight due to the construction of roads by the Commission is in excess of \$2,000,000. It is doubtful, however, if anything like that amount of freight would have been transported without the roads and trails and the indirect loss that would have been occasioned by the restriction on output and development if the roads did not exist cannot be estimated.

The traffic census table on pages 40 and 41 gives a synopsis of the traffic reported upon a few typical routes for the calendar year 1928. It shows a very gratifying reaction from recent work performed by this Commission, and an astonishing aggregate of traffic upon trails lying in remote sections.

In the interior, the great cost of moving freight by teaming or packing together with the difficulty and uncertainty of moving it at all, constitutes the main obstacle to the growth and development of the district.

During the opening of the diggings in the Chisana region a few years ago, beans, coffee, sugar, hay, candles, bacon, grain, etc., were sold at \$1.50 a pound. The freight charges were almost a dollar a pound so that the original cost of the article was of relatively little importance. And even at that, the supply could not keep pace with the demand. Recently the freight charges for transporting supplies from Dawson, in the Klondike, to some mines about one hundred miles away in the American 40-Mile District was greater than the original cost of the supplies plus the freight from the United States to the Klondike. (Dawson is 1,700 miles from Seattle).

The cost of transportation by the usual modes of transport in Alaska are shown by the following table:

Winter:	Per Ton-Mile
Bob-sled (sled road).....	\$ 0.90
Double-ender (trail).....	1.30
Dog-team (trail).....	6.30
Summer:	
Truck (wagon road).....	.60
Wagon (wagon road).....	1.50
Pack train (trail).....	4.80
Man (no trail).....	26.67*

(\*)—Average from very widely varying figures. At Lisianski Inlet, in Southeastern Alaska, lumber, pipe, tar paper, groceries, etc., carried on the backs of Indians from the beach up a slippery mountain trail about 7,500 feet long to a new gold strike in a little basin at about 800 feet elevation cost 4 cents per pound or \$80.00 per ton—over 1 cent per ton-foot.

The table shows the actual cost at the rates for teams, labor, food, forage, etc., prevailing in the great interior regions of Alaska. They are based also on the costs of hauling large quantities. On the south coast the comparative values are the same, but the actual values are about one-third less because of lower costs of above controlling elements.

### TRAFFIC STATISTICS.

The available records of traffic show a substantial increase for the calendar year 1928 over that of previous years. Although the records for previous years were less complete than those for the past year it is possible to make a comparison between the 1927 traffic and that for 1928 over the more important routes in the various districts. This comparison, shown in the table below, is necessarily limited to passenger and freight traffic over automobile roads.

#### Comparative Statement of Traffic Over Typical Routes

Route	Persons		Motor Vehicles		Tonnage	
	1927	1928	1927	1928	1927	1928
Haines-Pleasant Camp.....	5,643	6,229	1,841	2,016	251	257
Richardson Highway:						
Valdez .....	18,670	15,312	5,281	4,809	527	272
Willow Creek .....	709	3,012	221	852	78	117
Grundler .....	2,181	3,033	923	1,228	247	376
Richardson .....	3,173	4,286	1,354	1,760	490	443
Summit-Fairbanks Creek .....	2,280	3,239	609	878	863	1,537
Steese Highway .....	1,174	2,371	1	357	100	240
Hot Springs-Tofty .....	455	171	1	0	107	50
Wasilla-Fishhook .....	2,998	4,563	1,921	2,431	982	1,090
Wasilla-Knik .....	2,427	3,670	592	1,387	120	120
Wasilla-Matanuska .....	2,956	5,300	943	2,032	170	265
Bogard Road .....	131	899	58	105	110	47
McKinley Park Road.....	2,635	4,301	1,345	1,692	475	605
Nome-Council .....	571	424	190	156	27	14
Totals .....	46,003	56,810	15,280	19,703	4,547	5,433

For the above routes it is shown that the following increases have occurred in the 1928 traffic as compared with the 1927 traffic:

Number of persons.....	23.5%
Number of motor vehicles.....	28.9%
Tonnage .....	19.5%

These increases show a very gratifying reaction from the recent work performed by the Commission. The following statement shows the 1929 traffic on some of the typical routes and indicates an astonishing aggregate of traffic upon trails in remote sections which would be greatly benefitted if the trails were improved to wagon or auto-truck standard:

1929 TRAFFIC CENSUS.

District	No. Route	Station	Period	No. of Persons	Motor Vehicles	Wagons	Sleds	Pack Horses	Ton-nage
<b>SOUTHEASTERN</b>									
Haines-Pleasant Camp	3A&B	Wells	Jan.-Dec.	6,229	2,016	1	332	1	257
<b>VALDEZ</b>									
Valdez-Chitina-Fairbanks	4BA	Valdez	May-Oct.	15,312	4,809	.....	.....	.....	272
Valdez-Chitina-Fairbanks	4BA	Canon	May-Oct.	9,430	4,024	.....	.....	.....	263
Valdez-Chitina-Fairbanks	4EB	Tiekell	May-Oct.	1,701	761	.....	.....	.....	263
Valdez-Chitina-Fairbanks	4C	Willow Creek	May-Oct.	3,012	852	.....	.....	.....	117
<b>CHITINA</b>									
Chitina-Valdez-Fairbanks	.....	Chitina	Jan.-Dec.	3,785	1,605	60	318	11	839
McCarthy-Nizina	57	McCarthy	Jan.-Dec.	680	305	25	75	35	187
Strelina-Kotsina	61A	Strelina	Jan.-Dec.	97	.....	10	30	20	30
Gulkana-Chistochina	65A	Gakona	Jan.-Dec.	375	119	10	150	25	118
<b>FAIRBANKS</b>									
Fairbanks-Chitina-Valdez	.....	Richardson	Jan.-Nov.	4,286	1,760	.....	1	8	443
Fairbanks-Chitina-Valdez	.....	Grundler	May-Nov.	3,033	1,228	.....	.....	.....	376
Nenana-Tanana	5A	Campbells	Dec.-Mar.	253	.....	.....	130	.....	55
Summit-Fairbanks Creek	7C	Meehan	Jan.-Nov.	3,239	878	85	110	.....	1,537
Fairbanks-Chena Hot Springs	7J	Chena H. S.	Jan.-Nov.	157	.....	.....	97	.....	55
Fairbanks-Circle	15&16	Miller House	Jan.-Dec.	2,371	357	25	299	2	240
Tanana-Bettles	59	Tanana	Dec.-Feb.	132	.....	.....	109	.....	37
Hot Springs-Tofty	30A	Hot Springs	Jan.-Oct.	171	.....	9	129	.....	50
Ruby-Poorman	38A	Long	Jan.-Nov.	753	34	34	315	.....	179
Nenana-Knights	46C	Knights	Jan.-Nov.	310	.....	.....	241	.....	50
Dunbar-Brooks	63	Dunbar	Jan.-Mar.	180	.....	9	88	.....	50
Ferry-Eva Creek	38	Ferry	Jan.-Dec.	217	1	31	9	.....	16
<b>SOUTHWESTERN</b>									
Wasilla-Fishhook	35E	Fishhook	Mar.-Dec.	4,563	2,431	101	113	.....	1,090
Wasilla-Knik	35F	Wasilla	Mar.-Dec.	3,670	1,387	129	56	.....	120
Wasilla-Palmer-Matanuska	35H&J	Wasilla	Mar.-Dec.	5,300	2,032	721	195	.....	265
Fishhook-Goldmint	50	Fishhook	Mar.-Apr.	242	.....	.....	117	.....	120
Bogard Road	35R	Wasilla	Apr.-June	899	105	73	57	.....	47
McKinley Park Road	46D	Park Headquarters	Mar.-Aug.	4,301	1,692	71	117	89	605
<b>NOME</b>									
Nome-Council	8	Safety	June-Oct.	424	156	13	.....	.....	14
Nome-Teller	67	Sinrock	Jan.-Dec.	319	.....	2	143	.....	18
Seward Peninsula Railroad	39A	Nome	June-Nov.	691	230	.....	.....	.....	247
<b>KUSKOKWIM</b>									
Iditarod-Flat	32B	Flat	Jan.-Dec.	1,483	116	240	245	.....	1,200
Iditarod-Ophir	32C	Ophir	Jan.-Dec.	285	.....	.....	210	.....	25
Flat-Crooked Creek	32D	Flat	Jan.-Dec.	268	.....	.....	193	.....	10
Flat-Flat Creek	33C	Flat	Jan.-Dec.	1,014	52	94	47	.....	160
Head Flat-Willow Creek	33D	Willow	Jan.-Dec.	436	16	45	10	.....	60

District	No. Route	Station	Period	No. of Persons	Motor Vehicles	Wagons	Sleds	Pack Horses	Ton-nage
Flat-Otter Discovery	33E	Flat	Jan.-Dec.	986	40	210	96	.....	200
Willow Creek-Chicken	33F	Chicken	Jan.-Dec.	396	.....	42	18	.....	60
Flat-Holy Cross-Anvik	34A	Flat	Jan.-Dec.	265	.....	.....	145	.....	13
Takotna-Ophir	38D	Takotna	Jan.-Dec.	1,220	183	40	432	.....	255
Little Creek Road	38DA	Little	Jan.-Dec.	215	98	22	25	.....	35
Ganes Creek	38H	Ganes	Jan.-Dec.	86	112	13	.....	.....	60
Cripple-Cripple Mountain	54A	Cripple	Jan.-Dec.	169	.....	.....	64	10	79
McGrath-Takotna	30AA	Takotna	Jan.-Dec.	832	.....	.....	721	.....	18
McGrath-Telida	30B	McGrath	Jan.-Dec.	515	.....	.....	422	.....	35
Medfra-Nixon Mine	30F	Medfra	Jan.-Dec.	136	.....	65	64	.....	35
Bethel-Tuluksak	32B	Bethel	Jan.-Dec.	1,628	.....	.....	1,082	.....	110
Togiak-Nushagak	32H	Togiak	Jan.-Dec.	165	.....	.....	122	.....	7
Lewis Point-Naknek	32I	Naknek	Jan.-Dec.	385	.....	.....	306	.....	16
Crooked Creek-Aniak	32L	Aniak	Jan.-Dec.	284	.....	.....	227	.....	25
Holy Cross-Kaltshak	32P	Holy Cross	Jan.-Dec.	185	.....	.....	162	.....	18
Upper Landing-Bear Creek	32Q	Bear Creek	Jan.-Dec.	98	.....	46	.....	.....	20

## SUBSISTENCE COSTS.

Location	Av. No. Men Crew	No. Days Worked	Cost per Day per Man
<b>Valdez District</b>			
Richardson Highway			
Miles 9-19 .....	21	90	\$1.74
Mile 25 .....	25	86	1.67
Mile 31 .....	34	91	1.82
Mile 47 .....	30	135	1.67
Mineral Creek .....	9	94	1.96
<b>Fairbanks District</b>			
Richardson Highway			
Mile 31* .....	5	193	1.91
Miles 70-80* .....	30	160	1.94
Mile 123* .....	5	140	2.74
Steese Highway			
Mile 48* .....	6	172	2.13
Mile 76* .....	5	151	2.66
Mile 103* .....	6	160	2.58
Miles 83-131* .....	21	122	1.93
Miles 110-160* .....	16	132	2.40
Miles 124-158* .....	19	228	2.17
Miles 140-150* .....	15	129	2.49
Miles 143-156* .....	15	123	2.18
Miles 130-150* .....	12	270	2.06
Fairbanks Locals .....	14	140	1.94
Fairbanks Locals .....	14	145	2.00
Long .....	17	122	2.29
Wiseman .....	6	141	2.22
Chandalar .....	6	205	3.34

\*Miles from Fairbanks.

**Southeastern District**

Wells ..... 11 148 2.09

**Kuskokwim District**Takatna ..... 6 122 2.80  
Flat ..... 12 109 3.44

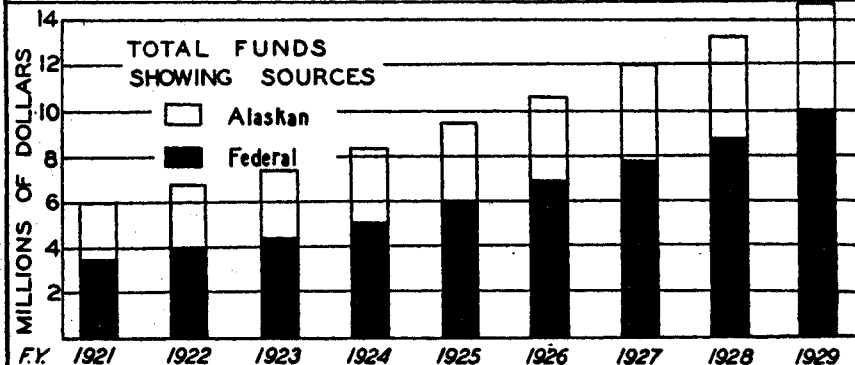
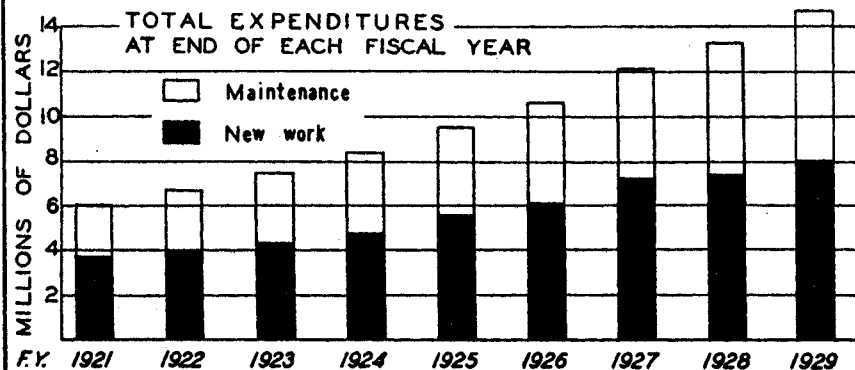
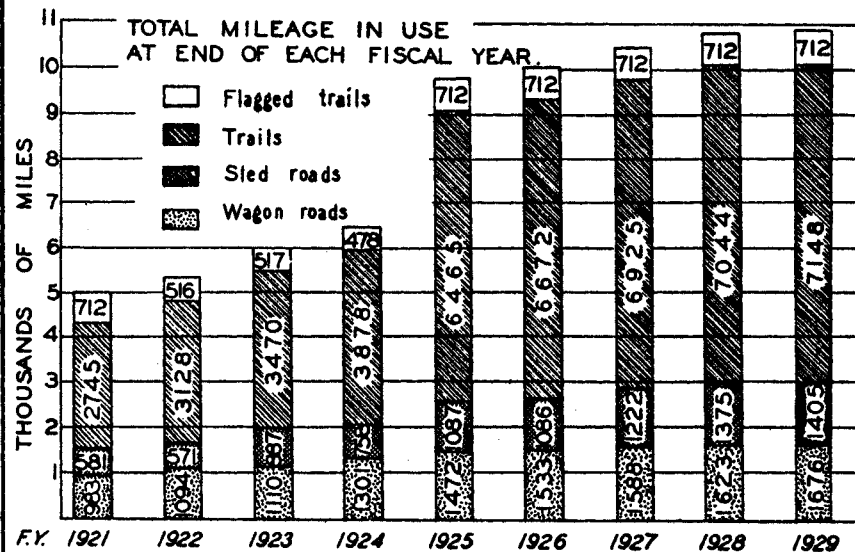
## TWENTY-FIVE YEARS' SERVICE.

With the period covered by this report the Alaska Road Commission concludes its twenty-fifth year of service. The work accomplished consists of the construction and maintenance of 1676 miles of wagon and tram road, most of which is suitable for automobiles, 1404 miles of winter sled road, 7148 miles of trail and 712 miles of flagged trail. This work has been done at a total cost of \$14,729,170.51 of which \$8,090,412.93 was for new construction and \$6,638,758.58 for maintenance. About \$10,000,000 of the funds expended were derived from War Department Appropriation Acts. The balance, about \$4,700,000 or over 31 per cent of the total expenditures, was obtained from Alaskan sources. The work accomplished, the funds expended for new work and maintenance and the amounts derived from Federal and Alaskan sources are shown on the diagram opposite. The work accomplished by the Commission naturally divides itself into three periods or phases.

The first was that covered by the period of time during which General Wilds P. Richardson, U. S. Army, Retired, was President of

## ROAD CONSTRUCTION and EXPENDITURES

## ALASKA ROAD COMMISSION - 1905 - 1929.



the Commission and extended from 1905 to 1917. This was essentially a period of pioneering. While this period covered nearly all the stampedes into the Territory, settlements and traffic lines of communication were very unsettled. With small but increasing appropriations, the pioneer development of the Territory was followed with great intelligence through this period. By 1913 a comprehensive program of operations was drawn up calling for the expenditure of \$7,500,000 during the succeeding ten years. During the last two years of General Richardson's direction, Congress appropriated \$500,000 each year for the work.

The largest project of the Commission, the Richardson Highway from Valdez to Chitina to Fairbanks, was located and improved over the major portion of the distance so as to provide for wagon traffic. By 1907 it was passable throughout for dog-teams; by 1910 for a light horse-drawn wagon; and in 1913 the first light automobile made the through trip from the interior to the coast. This period laid the foundation for all future work and terminated with the opening of the so-called War Period, 1917-20.

During this second period the work of the Road Commission along with many other Federal works both in Alaska and the U. S., suffered from lack of support because of the precedence given to war activities. Appropriations during the last two years of the period were reduced to \$100,000 per year, prices were high and labor scarce. Under such disadvantages the gain in mileage was slight and maintenance funds were available only for the most urgent requirements. However, such roads as were needed for the commerce of the Territory were kept open. Major Wm. H. Waugh, Engineers, U. S. Army, was President of the Commission during this period.

The third period, 1920 to the close of the fiscal year, 1929, was characterized by increased appropriations, broader legislation, procurement of mechanical equipment, reopening of old trails and roads, heavier construction to withstand motor traffic, and adjustment of lines of communication to the vast change brought about in Alaska by the completion of The Alaska Railroad from Seward which reached Fairbanks in 1923. Federal appropriations increased from \$350,000 to a maximum in 1927 of \$1,000,000 per year, and other resources were secured so that funds available for the current season's work aggregate \$1,300,000. General James G. Steese, was President of the Commission from 1920 to 1927, inclusive.

The pioneer period of the Alaska Road Commission is largely over. All existing mileage has been opened and improved, so far as funds have permitted. The present network of roads serves as an infallible guide for the future development of overland routes through the Territory. This development only calls for additional funds for construction.

**44A—Skagway Trails—(6 Miles Trail).**—This sub-project comprises the group of trails leading north from Skagway and includes the suspension bridge over the Skagway River. The main trail extends from Skagway to the old town of Dyea. From this route short trails branch to Smugglers Cove, Lookout Point and to A. B. Mountain.

The trails are suitable for foot travel only.

The trail to Dyea was brushed out and some grading performed. Repairs were made to the Smugglers Cove section and that to Lookout Point.

**81—Good Creek-Salmon River—(1½ Miles Road).**—This road extends from Parkers ranch on Good Creek, Strawberry Point, eastward to and across Salmon River, connecting up several homesteads.

It is of narrow graded earth type, 70% gravel surfaced, and suitable for wagons and farm tractors.

The road was shaped with a grader, drainage established and ½ mile gravel surfaced.

**81A—Rink River—(¾ Mile Road).**—This road extends from the head of small boat navigation on Rink River, Strawberry Point, to the Rink homestead and will serve other homesteaders locating in this section.

The road was constructed during the season of 1928. It is graded 20 ft. wide between ditches with a 12-ft. crown. One bridge, 60 lin. ft. was constructed over a tidal slough.

#### DISTRIBUTION OF EXPENDITURES.

Type	Miles	Expenditure	Unit Cost
		Dollars	Dollars per Mile
Road	63	\$ 18,433.42	\$ 292.59
Trail	23	490.63	21.33
Totals	86	\$ 18,924.05	\$ 212.63

#### EAGLE SUB-DISTRICT.

Supervised from the Juneau Office.

Fred Price, General Foreman in Charge, Eagle.  
July 1 to Oct. 31, 1928.

D. F. Millard, General Foreman in Charge, Eagle.  
June 1 to June 30, 1929.

This sub-district includes that part of the Territory north of 63° 30' north latitude and east of the 144th meridian. It includes a region of early development in the history of Alaska. During the past few years, no extensive development has occurred. The system of winter sled roads and summer trails giving access from Eagle to the Fortymile and Seventymile districts, includes the most important projects within the sub-district.

All projects in this sub-district are supported by the Alaska Road Commission exclusively, with the exception of shelter cabins and aviation fields which are supported by the Territory exclusively.

#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road	Sled Road	Trail	Total Miles
11A	Eagle-Liberty	20	7	...	27
11AA	American Summit-Liberty	...	...	12	12
11B	Liberty-Fortymile	...	23	...	23
11C	Steel Creek-Jack Wade	...	15	...	15
11CC	Steel Creek-Jack Wade	...	...	15	15
11D	Steel Creek-Walker's Fork	...	27	...	27
11E	Eagle-Seventymile	4	16	40	60
11F	Jack Wade-Chicken	...	...	20	20
11G	Steel Creek-Canyon Creek	...	...	5	5
11H	Liberty-Dome	...	...	10	10
11I	Dome-Steel Creek	...	...	12	12
11J	Fortymile-Franklin	...	30	...	30
11K	Fortymile-Steel Creek	...	8	...	8
11L	Franklin-Chicken	...	10	...	10
11LL	Franklin-Chicken	...	20	...	20
11M	Jack Wade-Walker's Fork-Boundary	...	...	18	18
11MM	Jack Wade-Mouth Walker's Fork.	...	12	...	12
11N	Lillywig Creek	...	1¼	...	1¼
11P**	Chicken Aviation Field	...	...	...	...
11Q**	Eagle Aviation Field	...	...	...	...
53	Eagle-Circle	...	...	160	160
65D	Kechumstuk-Tanana Crossing	...	...	60	60
65E	Chicken-Kechumstuk	...	...	28	28
86	Fourth of July Creek	5	5	...	10
87	Woodchopper Creek	...	...	8	8
90D**	Shelter Cabins 4th Division	...	...	...	...
Totals		29	174¼	388	591¼

(\*\*) Entirely supported by Territorial Funds.

#### SUMMARY OF EXPENDITURES.

Sub-Project No.	Federal	Territorial	Construction	Maintenance and Improvement	Total
11A	\$ 2,742.54	\$	\$	\$ 2,742.54	\$ 2,742.54
11AA	412.50	...	...	412.50	412.50
11B	1,235.80	...	...	1,235.80	1,235.80
11C	196.00	...	...	196.00	196.00
11CC	155.00	...	...	155.00	155.00
11D	705.50	...	...	705.50	705.50
11E	1,505.04	...	...	1,505.04	1,505.04
11F	527.60	...	...	527.60	527.60
11G	...	...	...	...	...
11H	817.48	...	...	817.48	817.48
11I	817.48	...	...	817.48	817.48
11J	...	...	...	...	...
11K	...	...	...	...	...
11L	331.50	...	...	331.50	331.50
11LL	...	...	...	...	...
11M	...	...	...	...	...
11MM	476.00	...	...	476.00	476.00
11N	...	...	...	...	...
11P	501.00	...	501.00	...	501.00
11Q	165.39	...	165.39	...	165.39
53	207.14	...	...	207.14	207.14
65D	...	...	...	...	...
65E	...	...	...	...	...
86	...	...	...	...	...
87	...	...	...	...	...
90D	...	...	...	...	...
Totals	\$ 10,129.58	\$ 666.39	\$ 666.39	\$ 10,129.58	\$ 10,795.97



**11A—Eagle-Liberty—(20 Miles Road; 7 Miles Sled Road).**—This is the main route from Eagle to the Fortymile District. The first 20 miles have been improved to summer wagon road standard. This section starts from Eagle and follows up the right limit of American Creek to Discovery Fork, thence along the right limit to the summit at Mile 20. From the summit a winter sled road follows down the right limit of King Solomon to the mouth of Liberty Fork, at Mile 27.

This route is suitable for use by horse or tractor drawn wagons to Mile 20 during the summer seasons.

Seasonal repairs were made and maintenance performed on the road section.

**11AA—Eagle-Liberty—(12 Miles Trail).**—This summer pack trail extends from its junction with the wagon road at the American Summit to Liberty where it connects with the route to Dome and Steel Creeks.

1½ miles were reditched and corduroyed across wet ground.

**11B—Liberty-Fortymile—(23 Miles Sled Road).**—This is a continuation of Route 11A from Liberty Cabin to the mouth of O'Brien Creek on Fortymile River, a distance of 23 miles, or 50 miles from Eagle.

The route is suitable only for use by bob-sleds in winter.

Extensive repairs were made and grades widened where necessary.

**11C—Steel Creek-Jack Wade—(15 Miles Sled Road).**—This winter sled road starts at the mouth of Steel Creek, at the end of Route 11K, follows up the left limit to the summit of the ridge, crosses over and down the left limit of Jack Wade to the post office, a distance of 15 miles, or 73 miles from Eagle.

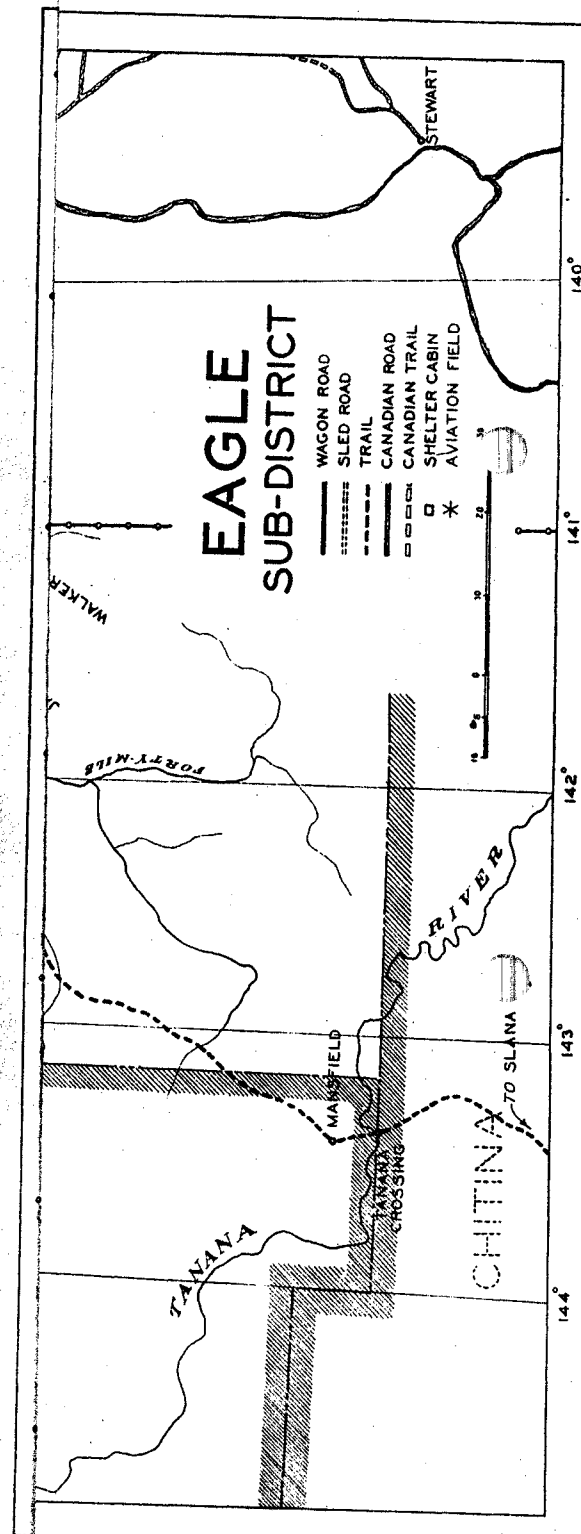
This route is suitable only for bob-sleds in winter.

One bridge was replaced and washouts repaired. General maintenance was performed.

**11CC—Steel Creek-Jack Wade—(15 Miles Trail).**—This is the alternate summer pack trail to Route 11C crossing the ridge northwest of the winter sled road.

General repairs were made and maintenance performed.

**11D—Steel Creek-Walkers Fork—(27 Miles Sled Road).**—This winter sled road is an extension of Route 11K. From Steel Creek it follows the bed of the Fortymile River to the mouth of Canyon Creek, up the latter to its head, over a divide, and up the right limit of Walker's Fork to within 5 miles of the International Boundary.



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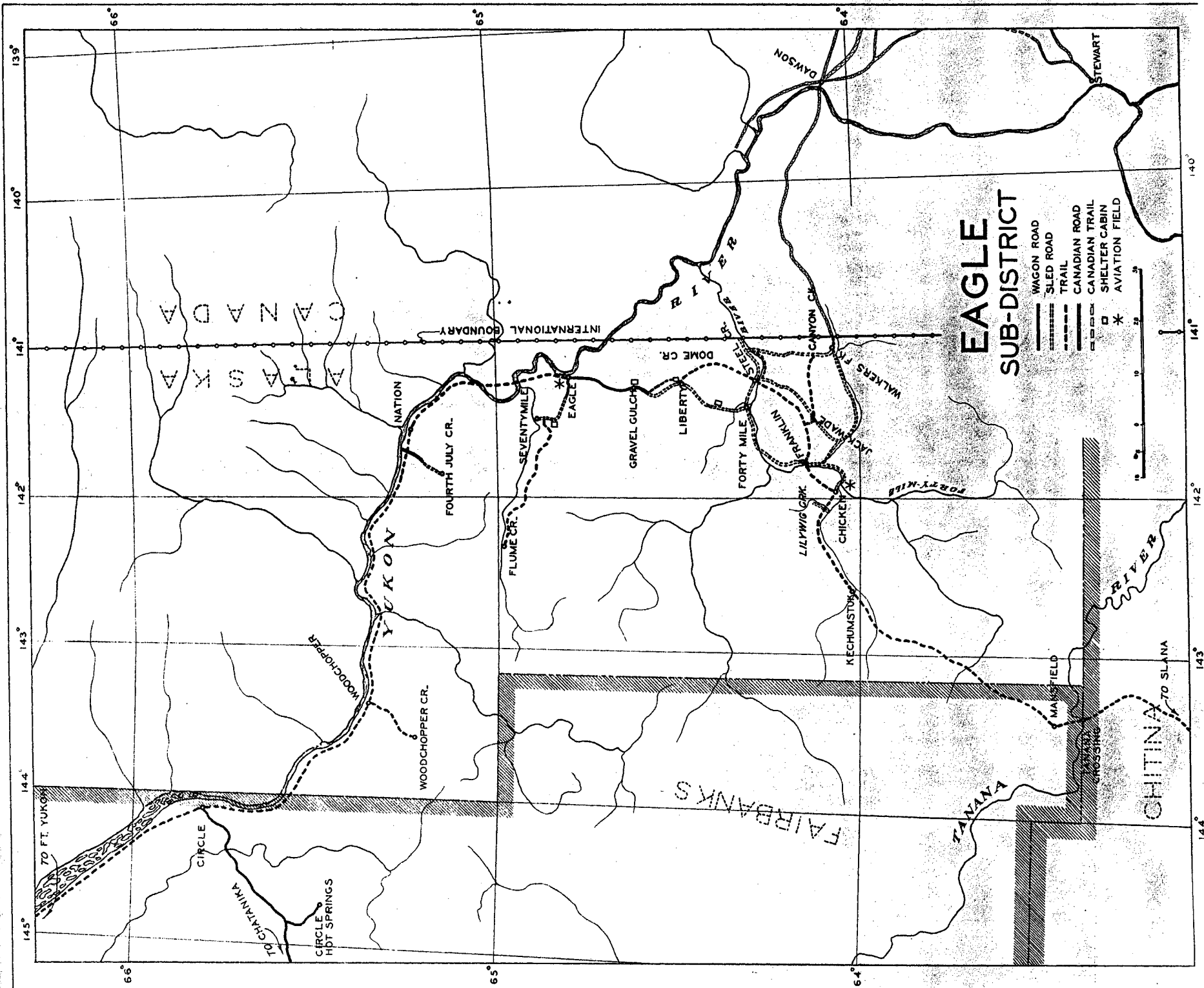
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The route is suitable only for bob-sleds in winter.

Maintenance was performed.

**11E—Eagle-Seventymile—(4 Miles Road, 16 Miles Sled Road, 40 Miles Trail).**—The route to Seventymile leaves Eagle through the old Army post of Fort Egbert, following the wagon road across American Creek 4 miles. It then continues as a winter sled road up Excelsior Creek, across a low summit and down the right limit of Rock Creek to its mouth at Seventymile. The pack trail leaves the sled road at Rock Creek Bridge several miles above the mouth of Rock Creek, crosses over a low divide into Bryant Creek and follows up the right limit to a mile below the falls where it crosses and continues up the left limit to Barney Creek. Here another crossing is made to the right limit and again back to the left limit and across Placer Creek near its mouth. The trail then climbs the ridge which it follows for a distance of 10 miles, dropping down again and crossing the Seventymile just below Nugget Creek. It then continues up the right limit of Seventymile to Alder and Flume Creeks, a total distance of 60 miles from Eagle.

The road is suitable for wagon traffic. The sled road is passable for pack horses in summer and bob-sleds in winter. The trail is suitable for use by pack horses in summer.

Additional improvement was made to the trail section. Maintenance was performed on the road and sled road.

**11F—Jack Wade-Chicken—(20 Miles Trail).**—The trail climbs the ridge west of Jack Wade Post Office, follows around the head of Napoleon Creek and drops down to the crossing of the Fortymile River at Franklin. It then climbs the ridge following the right limit of Kettle Gorge and drops down to a fork of Chicken where it joins the winter sled road following the right limit of Chicken Creek to Chicken Post Office. The distance from Jack Wade to Franklin by this route is 12 miles and from Franklin to Chicken 8 miles. This is a part of the through summer trail route from Eagle to Chicken.

The route is suitable for pack horses in summer.

A cable ferry was installed at the crossing of the Fortymile River. General maintenance was performed.

**11G—Steel Creek-Canyon Creek—(5 Miles Trail).**—This is a summer pack trail which extends from the mouth of Steel Creek along the right limit of the Fortymile River for a distance of 5 miles to the mouth of Canyon Creek.

No work was done.

It is a summer trail suitable for use by pack horses or by dog sleds in winter.

No work was done.

**65E—Chicken-Kechumstuk—(28 Miles Trail).—**From Chicken this pack trail crosses the flats, then across Mosquito Fork and around Taylor Mountain, crossing Mosquito Fork again at Kechumstuk.

It is a summer trail suitable for use by pack horses or by dog sleds in winter.

No work was done.

**86—Fourth of July Creek—(5 Miles Road, 5 Miles Sled Road).—**This route leads from the landing on the Yukon River up the right limit of Fourth of July Creek to the hydraulic workings of the July Creek Placer Company, then crosses the creek and follows up the left limit to the camp.

The first five miles of this road have been sufficiently improved so that wagons may be used. The remainder of the route while passable at times for wagons is suitable only for use by bob-sleds.

No work was done.

**87—Woodchopper Creek—(8 Miles Trail).—**This trail leads from Woodchopper Landing on the Yukon River 8 miles up Woodchopper Creek, serving several miners and prospectors along the creek.

It is suitable for use by pack horses in summer or double enders in winter.

No work was done.

#### DISTRIBUTION OF EXPENDITURES.

Type	Miles	Expenditure	Unit Cost Dollars per Mile
Road	24	\$ 3,200.00	\$ 133.33
Sled Road	110	3,692.38	33.56
Trail	269	3,237.20	12.03
Totals	403	\$ 10,129.58	\$ 25.14

#### BETHEL SUB-DISTRICT.

Carl Lottsfeldt, Superintendent, Takotna.

This sub-district includes the lower Kuskokwim Valley and the Yukon-Kuskokwim portage routes. It contains no road projects. The important activities are located along the coast line or the Kuskokwim River so that summer transportation is by boat, supplemented by short trails. Winter transportation is by dog sled.

A much needed winter trail has been established extending from McGrath in the upper Kuskokwim Valley, via Aniak, Bethel, Goodnews Bay, Togiak, Dillingham and Naknek to Kanatak.

All projects in this sub-district were supported by the Alaska Road Commission exclusively, with the exception of shelter cabins which were supported by the Territory exclusively, and the Bear Creek sled road which was a cooperative project.

#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Sled Road	Trail	Total Miles
90C**	Shelter Cabins-3d Division	.....	.....	.....
90D**	Shelter Cabins-4th Division	.....	.....	.....
92A	Bethel-Quinhagak	.....	90	90
92B	Bethel-Tuluksak	.....	44	44
92C	Aklak-Russian Mission	.....	75	75
92D	Bennett's Cutoff	.....	18	18
92E	Yukon-Kuskokwim Portage	.....	120	120
92F	Quinhagak-Goodnews Bay	.....	60	60
92G	Goodnews Bay-Togiak	.....	53	53
92H	Togiak-Nushagak	.....	125	125
92I	Lewis Point-Naknek	.....	86	86
92J	Naknek-Egegik	.....	50	50
92L	Crooked Creek-Aniak	.....	74	74
92M	Aniak-Tuluksak	.....	60	60
92N	Aklak-Canyon Creek	.....	45	45
92O	Tuluksak-Foothills	.....	32	32
92P	Holy Cross-Kaitshak	.....	53	53
92Q*	Upper Landing-Bear Creek	26	.....	26
Totals		26	985	1,011

(\*) Cooperation with Territory of Alaska.

(\*\*) Entirely supported by Territorial Funds.

#### SUMMARY OF EXPENDITURES.

Sub-Project No.	Federal	Territorial	Construction	Maintenance and Improvement	Total
90C	\$ .....	\$ 550.00	\$ 550.00	\$ .....	\$ 550.00
90D	.....	1,895.35	1,869.43	25.92	1,895.35
92A	221.00	.....	.....	221.00	221.00
92B	.....	.....	.....	.....	.....
92C	.....	.....	.....	.....	.....
92D	.....	.....	.....	.....	.....
92E	7,706.14	.....	7,706.14	.....	7,706.14
92F	.....	.....	.....	.....	.....
92G	.....	.....	.....	1,271.38	1,271.38
92H	1,271.38	.....	.....	.....	.....
92I	.....	.....	.....	100.00	100.00
92P	100.00	.....	.....	70.00	70.00
92L	70.00	.....	.....	489.00	489.00
92M	489.00	.....	.....	.....	.....
92N	.....	.....	.....	.....	.....
92O	.....	.....	.....	170.00	170.00
92P	170.00	.....	.....	.....	.....
92Q	570.80	800.00	1,000.00	370.80	1,370.80
Totals	\$ 10,598.32	\$ 3,245.35	\$ 11,125.57	\$ 2,718.10	\$ 13,843.67

**90C—Shelter Cabins, 3rd Division.—**The following work was accomplished:

No. Route	Location	Work Done	Cost
92I	Patch of Woods, 56 miles from Dillingham	12 ft. by 14 ft. log cabin erected	\$ 550.00

**11H—Liberty-Dome—(10 Miles Trail).**—From Liberty Cabin a summer pack trail follows the ridge around the head of McKinley Creek and down the right limit of Dome Creek to the hydraulic workings near the mouth of Dome Creek. This is a part of the through summer trail route to Chicken.

Maintenance was performed and some improvements made.

**11I—Dome-Steel Creek—(12 Miles Trail).**—This is a continuation of Route 11H from Dome Creek up the right limit of Dick Dale Creek, around the heads of Flat and Twin Creeks and down a steep bench to Steel Creek. It is a part of the through summer pack trail to Chicken.

Three miles of relocation were constructed leading down from the bench into the Fortymile at Steel Creek. The maximum grade was reduced from 40% to 16%.

**11J—Fortymile-Franklin—(30 Miles Sled Road).**—This sled road is a continuation of Route 11B, extending from the mouth of O'Brien Creek up the Fortymile River to Franklin Post Office at the mouth of Franklin Gulch, a distance of 30 miles, or 80 miles from Eagle. The route is largely on the river ice and is usable only during the winter.

No work was done.

**11K—Fortymile-Steel Creek—(8 Miles Sled Road).**—This winter sled road branches off Route 11B at the mouth of O'Brien Creek and follows down the Fortymile River a distance of 8 miles to the mouth of Steel Creek, 58 miles from Eagle. It follows the river ice the entire distance.

No work was done.

**11L—Franklin-Chicken—(10 Miles Sled Road).**—This winter sled road is a continuation of Route 11J and follows up Franklin Gulch to the mouth of Kettle Creek, then over a low divide, along the right limit into a fork of Chicken Creek. It follows down the right limit to the post office, a distance of 10 miles, or 90 miles from Eagle.

General repairs and maintenance were performed. The route from the ferry to Franklin was improved.

**11LL—Franklin-Chicken—(20 Miles Sled Road).**—This is an alternate winter sled route which follows the main Fortymile River to the mouth of Dennison Fork and then across to Chicken Post Office. It follows the river ice for the entire distance to the mouth of Chicken Creek.

No work was done.

**11M—Jack Wade-Walker's Fork-Boundary—(18 Miles Trail).**—This pack trail leaves Jack Wade Creek at Robinson Creek, climbs to the top of the ridge and follows around the head of Squaw, Baby, Camp and Twelvemile Creeks to the head of Canyon Creek. It there picks up the winter sled road, Route 11D, and follows it to Walker's Fork and on to the Boundary.

No work was done.

**11MM—Jack Wade-Mouth of Walker's Fork—(12 Miles Sled Road).**—This winter sled road is a continuation of Route 11C leading from Jack Wade Post Office down Wade Creek to Walker's Fork and down the latter to its confluence with the Fortymile River. It serves as an alternate route from Steel Creek via Jack Wade to Chicken.

General repairs were made.

**11N—Lillywig Creek—(1¼ Miles Sled Road).**—This winter sled road extends from the Fortymile River up Eagle Creek to the mouth of Lillywig Creek. It serves several quartz prospects.

No work was done.

**11P—Chicken Aviation Field.**—This landing field, 350 ft. by 750 ft., is situated on the left limit of Chicken Creek, ½ mile downstream from Chicken Post Office.

The area was cleared, plowed and leveled with grader, providing a very good landing field. Residents of the locality contributed teams and labor, valued at \$550.00.

**11Q—Eagle Aviation Field.**—This landing field, 350 ft. by 900 ft., is located on the grounds of the abandoned Military Post adjacent to the town of Eagle. Additional leveling was performed and one building removed from the area.

**53—Eagle-Circle—(160 Miles Trail).**—This winter trail follows the general course of the Yukon River between Eagle and Circle. Cutoffs have been provided across large bends in the river, thus greatly shortening the length. The greater part of the route is on the ice of the river.

It is suitable for use by dog sleds.

Maintenance was performed.

**65D—Kechumstuk-Tanana Crossing—(60 Miles Trail).**—This is a continuation of Route 65E, and extends from Kechumstuk along the left limit and across Little Indian and Indian Creeks to Mitchell's Ranch, a distance of 15 miles. From Mitchell's Ranch it crosses the flats, then across Lake Mansfield and Marsh Lake and on to Tanana Crossing, a total distance from Kechumstuk of 60 miles.

**90D—Shelter Cabins, 4th Division.**—The following work was accomplished:

No. Route	Location	Work Done	Cost
92E	90 miles from Russian Mission	Tent and stove placed	\$ 25.92
92M	26 miles below Kaltshak	12 ft. by 14 ft. log cabin built	319.43
92P	15 miles above Kaltshak	12 ft. by 14 ft. frame cabin built	800.00
	Arolic Gap, halfway from Quinhagak to Mines	12 ft. by 14 ft. frame cabin built	750.00
Total			\$1,895.35

**92A—Bethel-Quinhagak—(90 Miles Trail).**—This is the winter mail trail between Bethel and the village of Quinhagak to the south and on the east side of the estuary of the Kuskokwim River. It is part of the through winter route from Bethel to Kanatak, and is only suitable for dog sleds in winter.

No work was done.

**92B—Bethel-Tuluksak—(44 Miles Trail).**—This trail connects Bethel and Tuluksak both on the Kuskokwim River. The portion from Tuluksak to Akiak is largely on the river ice.

The route is suitable for use by dog sleds in winter.

The trail on the ice was marked with willows and banks at approaches to the river graded down.

**92C—Akiak-Russian Mission—(75 Miles Trail).**—This winter mail trail extends from Akiak on the Kuskokwim River to Russian Mission on the Yukon River, via Phillips and Big Georges.

It is a winter dog sled trail.

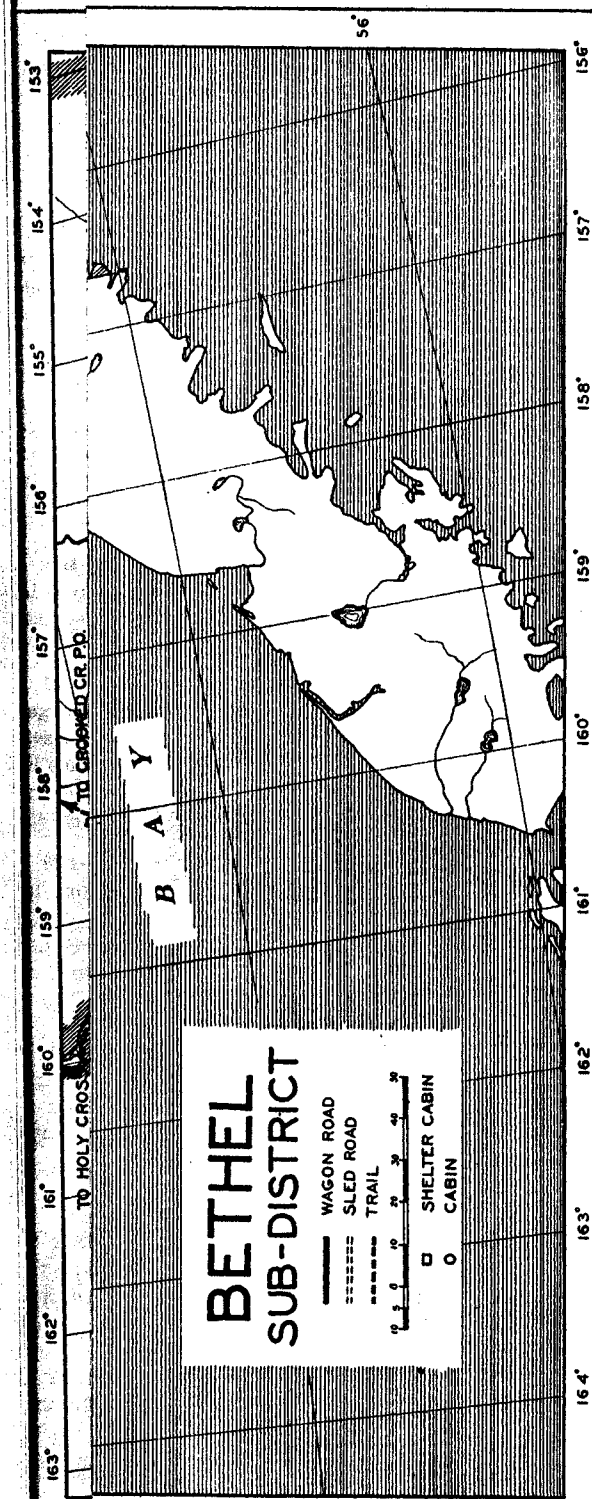
No work was done.

**92D—Bennett's Cut-off—(18 Miles Trail).**—This winter dog sled trail extends from Big Georges on Route 92C to Bennett's Trading Post on the Yukon River, about 24 miles below Russian Mission.

No work was done.

**92E—Yukon-Kuskokwim Portage—(120 Miles Trail).**—This summer portage is passable with difficulty for canoes and poling boats from Russian Mission via the Yukon River, Portage Slough and the Tulakwiksak River to the High Portage, then by a series of grassy lakes and sloughs, down Crooked Creek, up Johnson Creek, and over another portage to Mud Creek and down to the Kuskokwim River.

An examination was made of this route with a view to its improvement for small boat travel. Two trams, totaling 1½ miles are proposed, and the improvement of the water portions of the route is proposed with Territorial funds.





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Ties, poles and rails for the portage trams have been delivered at the site, preparatory to construction of the trams this year.

**92F—Quinhagak-Goodnews Bay—(60 Miles Trail).**—This winter dog sled trail is an extension of Route 92A down the east shore of the estuary of the Kuskokwim River to Goodnews Bay. It is a part of the through winter route, Bethel to Kanatak.

No work was done.

**92G—Goodnews Bay-Togiak—(53 Miles Trail).**—This winter dog sled trail extends along the coast from Goodnews Bay to the Togiak school house on Togiak Bay and is a part of the through route from Bethel to Kanatak.

No work was done.

**92H—Togiak-Nushagak—(125 Miles Trail).**—This is a winter dog sled trail connecting the settlement of Togiak with the settlement at Nushagak at the mouth of the Nushagak River. It is a part of the through route from Bethel to Kanatak.

Improvement was made on this route between Dillingham and Snag Point to provide for increased travel between these points. 3 miles of trail were brushed out and widened, a bridge 40 ft. in length was constructed over Andrews Creek and 2 bridges each of 10 ft. span were erected over small sloughs. A plank walk 2500 ft. long and 2 ft. wide was built, connecting the wharf at Snag Point with the trail.

**92I—Lewis Point-Naknek—(86 Miles Trail).**—This is a winter dog sled trail from Nushagak by way of Kogiung at the head of Kvichak Bay to the canneries at the mouth of Naknek River. It branches from the Togiak-Nushagak trail at Lewis Point and is a portion of the through route from Bethel to Kanatak.

No work was done.

**92J—Naknek-Egegik—(50 Miles Trail).**—This winter dog sled trail extends along the shore of Kvichak Bay from the Naknek River to the mouth of Egegik River. This is a portion of the through route from Bethel to Kanatak.

Maintenance was performed.

**92L—Crooked Creek-Aniak—(74 Miles Trail).**—This route connects the Bethel system of trails with the Iditarod system by way of the Flat-Crooked Creek trail. The route is largely on the Kuskokwim River but improvements have been made on several important portages.

It is a winter dog sled trail.

Portions of the route on the river ice were marked with willows right after the freezeup.



92M—Aniak-Tuluksak—(60 Miles Trail).—This winter dog sled trail is a part of the through route from Iditarod to Bethel. It connects the settlements at Aniak and at Tuluksak, both on the Kuskokwim River.

Annual staking of portions on the river ice was performed and a short portage constructed to cut out a large bend in the river.

92N—Akiak-Canyon Creek—(45 Miles Trail).—This route extends from Akiak to the placer mines on Canyon Creek. The Kiselalik and Kushluk Rivers are crossed enroute by ferries. It is a summer trail, suitable for foot travel, or for dog sleds in winter.

No work was done.

92O—Tuluksak-Foothills—(32 Miles Trail).—This route leads from the mouth of Tuluksak River on Route 92M up the Tuluksak to the foothills where it joins the sled road from Upper Landing to Bear Creek. It is a winter dog sled route.

No work was done.

92P—Holy Cross-Kaltshak—(53 Miles Trail).—This winter dog sled trail connects Holy Cross on the Yukon River with the Bethel system of trails, striking the Kuskokwim River at Kaltsak. It follows closely the Paimiut portage.

A relocation near Paimiut was constructed which took the travel off overflow sloughs and shortened the length of the route. Marking tripods which had been burned were replaced.

92Q—Upper Landing-Bear Creek—(26 Miles Sled Road).—This winter sled road extends from the upper landing on the Tuluksak River, the head of navigation, to mining operations on Bear Creek.

The route is used by tractor drawn wagons in summer and bob-sleds in winter.

Additional grubbing and corduroying were performed and 85 lin. ft. of bridges constructed. The New York Alaska Dredging Company contributed labor and subsistence valued at \$400.00.

#### DISTRIBUTION OF EXPENDITURES.

Type	Miles	Expenditure	Unit Cost Dollars per Mile
Sled Road .....	26	\$ 1,370.80	\$ 52.72
Trail .....	480	10,027.52	20.89
Totals .....	506	\$ 11,398.32	\$ 22.53

#### VALDEZ DISTRICT.

T. H. Huddleston, Supt., Valdez.

This district embraces that portion of Alaska lying between 145° 10' and 147° west longitude and extending south from 61° 49' north latitude.

The principal work within this district is the maintenance and improvement of the Richardson Highway from Valdez, which is the northernmost open all-year-round port in Alaska, to Willow Creek, a distance of 92 miles. This section of the Richardson Highway passing through Keystone Canyon and across the summit of the Coast Range is probably the most scenic route in Alaska and has required the most expensive construction.

The Richardson Highway is supported by the Alaska Road Commission exclusively. Other expenditures in this district were either upon cooperative projects or exclusively Territorial projects.

#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road Miles
4BA	Valdez-Ptarmigan Drop .....	33
4BB	Ptarmigan Drop-Ernestine .....	30
4C	Ernestine-Willow Creek .....	29
36*	Valdez-Mineral Creek .....	5
36A**	Granby Road .....	5
36B**	South Second Street, Cordova .....	¼
60**	Valdez Dyke .....	.....
60A*	Valdez Aviation Field .....	.....
76	Valdez Depot .....	.....
Total .....		105¼

(\*) Cooperative with Territory of Alaska.

(\*\*) Entirely supported by Territorial Funds.

#### SUMMARY OF EXPENDITURES.

Sub-Project No.	Federal	Territorial	Construction	Maintenance and Improvement	Total
4BA	\$ 79,984.20	\$ .....	\$ .....	\$ 79,984.20	\$ 79,984.20
4BB	35,338.92	.....	.....	35,338.92	35,338.92
4C	8,643.87	.....	.....	8,643.87	8,643.87
36	1,298.02	2,500.00	.....	3,798.02	3,798.02
36A	.....	.....	.....	.....	.....
36B	.....	.....	.....	.....	.....
60	.....	3,366.44	.....	3,366.44	3,366.44
60A	.....	1,592.28 (a)	1,592.28	.....	1,592.28
78	.....	.....	.....	.....	.....
Totals .....	\$125,265.01	\$ 7,458.72	\$ 1,592.28	\$131,131.45	\$132,723.73

(a) Includes \$800.00 contributed by City of Valdez.

4BA—Valdez-Ptarmigan Drop—(33 Miles Road).—This portion of the Richardson Highway extends from Valdez across the Coast Range. The severe and varied climate and topography encountered makes this section the most difficult to maintain of any of the entire road.

The road is 75% gravel surfaced and is suitable for motor traffic during the summer season.

Annual repair of flood damage, which is large in this section, and annual maintenance were performed. Heavy rock widening was done in Mile 13 and the roadbed widened to sixteen feet from Mile 24½ to 28. ½ mile along the lake in Mile 28 was raised 2½ ft., widened and graveled. From Mile 27 to 27½ the road was regraded, widened

and surfaced. A 1¼-mile relocation was constructed in Miles 31 & 32. This involved some very heavy rock work, the construction of 105 lin. ft. of frame bent trestle and the erection of one 80-ft. truss span. 765 lin. ft. of pile trestle bridges were renewed in Miles 1 and 3.

**4BB—Ptarmigan Drop-Ernestine—(30 Miles Road).**—This portion of the Richardson Highway drops down the Tsaina and Tiekhell River Gorges and then climbs again over Ernestine Dome.

22 miles of this route now have a heavy gravel surface and the entire section is suitable for motor traffic during the summer season.

Annual repair and maintenance were performed. The road was widened Miles 43 to 46, fills raised, and gravel surface placed Miles 47 to 50, requiring 14,025 cu. yds. 44 metal pipe culverts were installed and 95 lin. ft. of trestle bridges renewed.

**4C—Ernestine-Willow Creek—(29 Miles Road).**—This portion of the Richardson Highway is located over the elevated rolling country between Ernestine and Willow Creek. At the latter point connection is made with the road to Chitina.

The entire route is gravel surfaced and suitable for motor traffic.

Annual repairs and maintenance were performed. 4 metal pipe culverts were installed. A 156-ft. pile trestle bridge was constructed in Mile 78 as a detour around a troublesome mud slide at this point.

**36—Valdez-Mineral Creek—(8 Miles Road).**—This road extends from the beach, about 2 miles west of Valdez, up Mineral Creek for a distance of 8 miles to an area of mining activity.

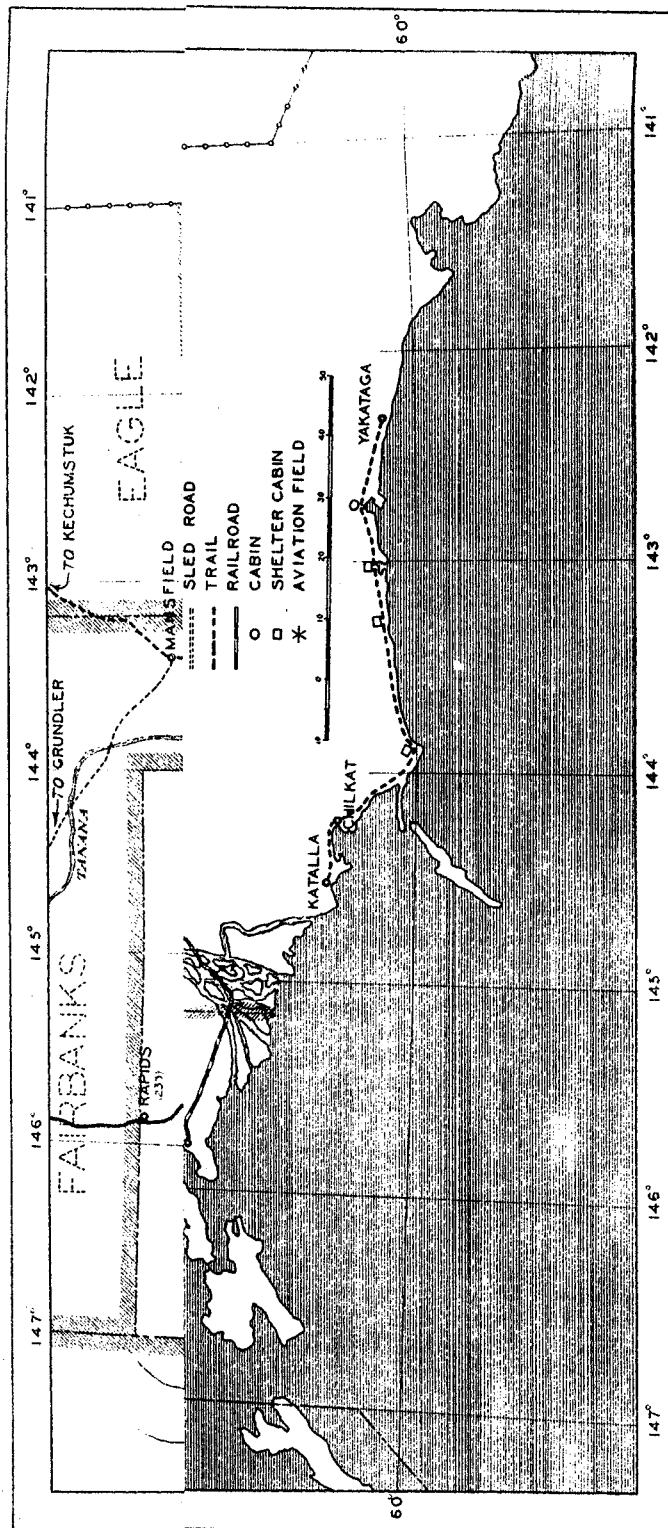
The route is suitable for wagon traffic.

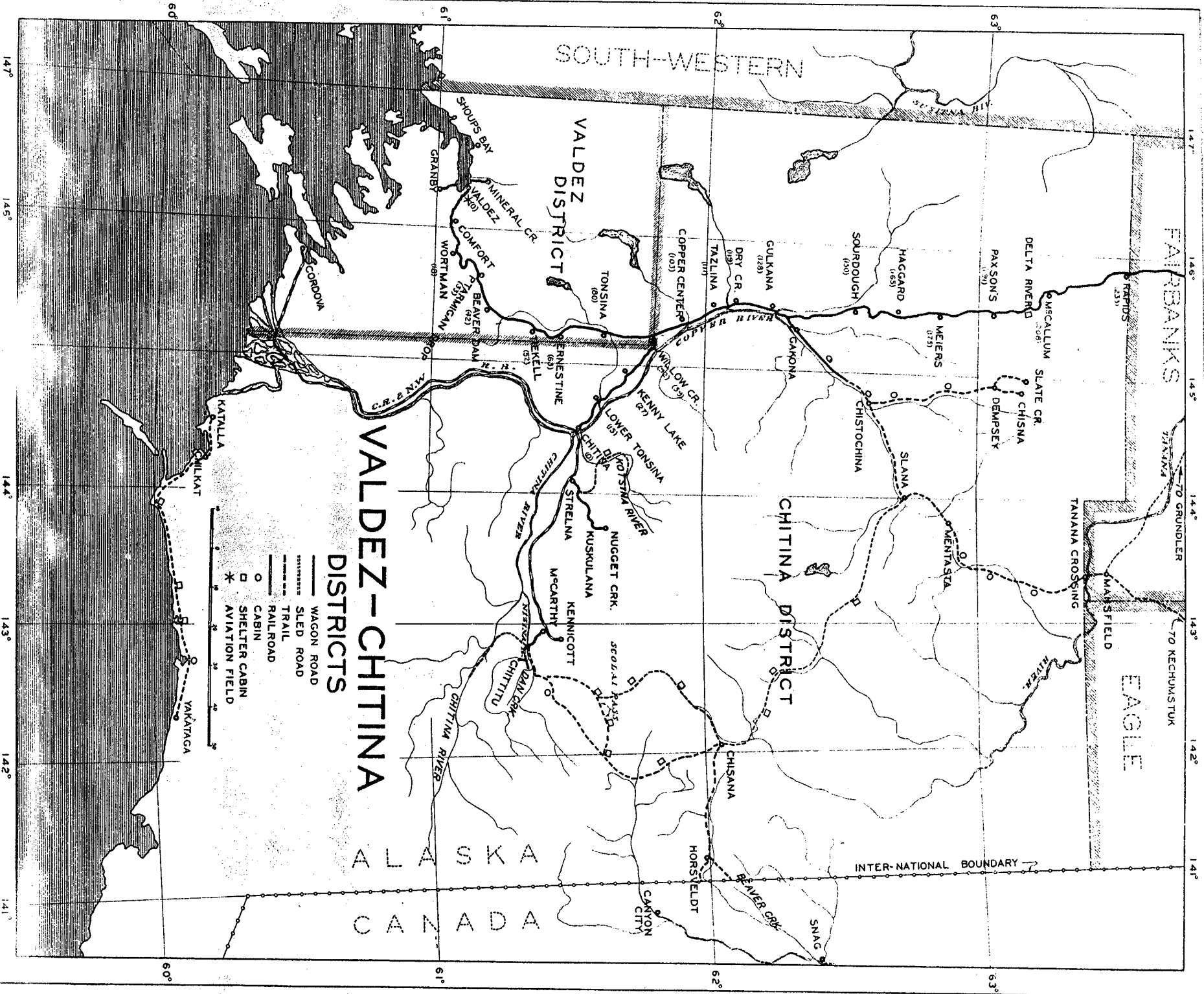
Slides were removed and maintenance performed. Two sections totaling 1 mile were widened. A brush dike for the protection of the road was constructed in Mineral Creek at Mile 1. An aerial tramway 200 ft. in length was erected over Mineral Creek at Mile 4.8.

**36A—Granby Road—(5 Miles Road).**—This road was originally built by the Granby Company to haul supplies from their wharf on the beach to the mines in Solomon Gulch. On the beach, it is now connected with the old trail from Fort Lisicum to Valdez. It is used as a means of communication between the different properties in the Gulch, principally the Granby Mines and the power plant which supplies the City of Valdez with light and power.

The route is suitable for motor traffic.

No work was done.





# VALDEZ-CHITINA DISTRICTS

- WAGON ROAD
- SLED ROAD
- TRAIL
- RAILROAD
- CABIN
- SHELTER CABIN
- AVIATION FIELD

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**36B—South Second Street, Cordova—(¼ Mile Road).**—This is an extension of South Second Street outside the city limits of Cordova.

The road is narrow graded with a light surface and is suitable for light motor traffic.

No work was done.

**60—Valdez Dike.**—The Valdez Dike was constructed by this Commission in 1913 to protect the government property within the limits of Valdez from overflow by the streams issuing from the Valdez Glacier. A special appropriation for the purpose was made by Congress. Subsequent maintenance charges have been met by contribution by the City of Valdez and the Territory of Alaska, the Commission performing the work.

1,108 lin. ft. of brush fascines and rock rolls in wire netting were placed to strengthen weak sections of the surface mattress.

**60A—Valdez Aviation Field.**—This field is located in the northeast part of the townsite of Valdez and inside the dike. Its dimensions are 2,300 ft. by 250 ft. with a cross run of 730 ft. at the center.

The filling of low spots was completed, the area was leveled with grader and rolled. Proper boundary markers were placed.

**78—Valdez Depot.**—This sub-project comprises the district headquarters building in Valdez.

No work was done.

**DISTRIBUTION OF EXPENDITURES.**

Type	Miles	Expenditure	Unit Cost Dollars per Mile
Road .....	100	\$127,765.01	\$1,277.65

**CHITINA DISTRICT.**

**R. J. Shepard, Superintendent, Chitina.**

**Frank Shipp, Asst. Superintendent, Chitina.**

This district includes that part of Alaska lying between the 141st and 147th meridians, west longitude, and south of 63° 30' north latitude, with the exception of the area west of 145° 10' west longitude and south of 61° 49' north latitude which comprises the Valdez district.

The most important projects within the district are the Richardson Highway extending from Chitina on the Copper River and Northwestern Railway up the Copper and Gulkana River Valleys and then across the Alaska Range through Isabelle Pass to Rapids on the Delta River, and the Gulkana-Chisana route now under construction.