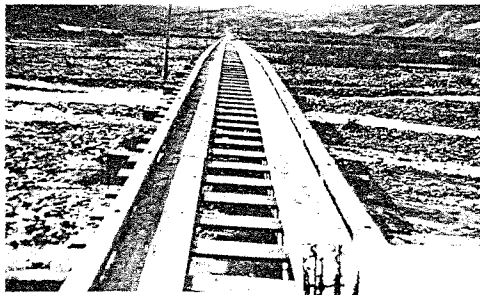
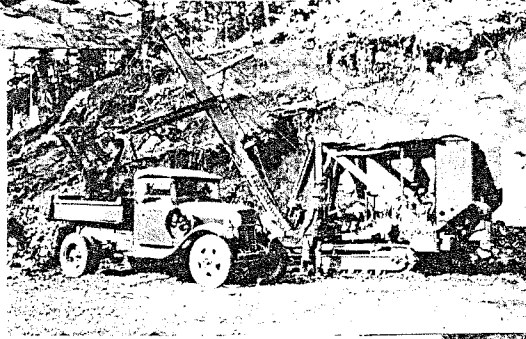
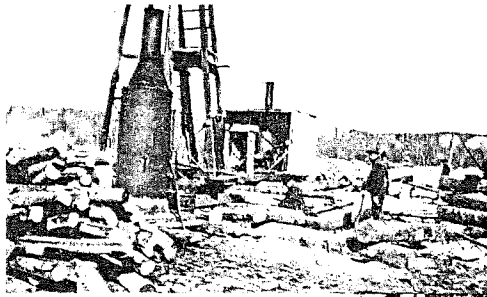


ALASKA ROAD COMMISSION HISTORICAL NARRATIVE

State of Alaska Department of Transportation and Public Facilities



Report No. AK-RD-83-37

Alaska Road Commission Historical Narrative

Final Report

by

Claus-M. Naske
Professor of History

June 1983

Prepared for:

State of Alaska
Department of Transportation and Public Facilities
Division of Planning and Programming
Research Section
2301 Peger Road
Fairbanks, Alaska 99701

The contents of this report reflect the view of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Alaska Department of Transportation and Public Facilities. This report does not constitute a standard, specification or regulation.

Front and back cover photos courtesy of University of Alaska Archives,
Alaska and Polar Regions Department, the Ray Huddleston Collection.

CONTENTS

ACKNOWLEDGEMENTS	i
PREFACE	ii
CHAPTER ONE EARLY EXPLORATION OF ALASKA	1
CHAPTER TWO THE APPOINTMENT OF RICHARDSON AS PRESIDENT OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA	30
CHAPTER THREE WILDS P. RICHARDSON AND JAMES WICKERSHAM	53
CHAPTER FOUR THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1912-1917	78
CHAPTER FIVE A NEW ERA FOR THE ALASKA ROAD COMMISSION	108
CHAPTER SIX THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1920-1925	127
CHAPTER SEVEN THE MIDDLE YEARS OF THE 1920s	190
CHAPTER EIGHT HIGH HOPES AND DISAPPOINTMENTS	221
CHAPTER NINE THE LAST FEW YEARS UNDER THE WAR DEPARTMENT, 1929-1932	254
CHAPTER TEN THE ALASKA ROAD COMMISSION AND ALASKAN AVIATION	283
CHAPTER ELEVEN THE TRANSFER OF THE ALASKA ROAD COMMISSION	308
CHAPTER TWELVE TOLLS ON THE RICHARDSON HIGHWAY	325
CHAPTER THIRTEEN THE DIFFICULT YEARS OF THE EARLY 1930s	352
CHAPTER FOURTEEN THE LATTER YEARS OF THE LEAN 1930s	379

CHAPTER FIFTEEN THE WAR YEARS	400
CHAPTER SIXTEEN THE FUROR OVER HOUSE REPORT NO. 1705	421
CHAPTER SEVENTEEN POSTWAR REORGANIZATION AND A PROPOSED FERRY SYSTEM	434
CHAPTER EIGHTEEN PECULIAR ALASKAN PROBLEMS, THE STRUGGLE FOR PREEMINENCE, AND THE GENERAL ACCOUNTING OFFICE	452
CHAPTER NINETEEN THE FLUSH YEARS	471
CHAPTER TWENTY THE LAST YEARS OF THE ALASKA ROAD COMMISSION	498
APPENDIX A MEMBERS OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1905-1932	A-1
APPENDIX B LAWS RELATING TO THE CONSTRUCTION OF ROADS IN ALASKA	B-1
APPENDIX C WORK PERFORMED DURING THE 1917 CONSTRUCTION SEASON	C-1
APPENDIX D RECONNAISSANCE SURVEY - FORT GIBBON (TANANA) TO KOYUKUK AND KOBUK RIVERS TO KOTZEBUE, 1923-1924	D-1
APPENDIX E SUMMARY OF ALL EXPENDITURES TO JUNE 30, 1933	E-1

ACKNOWLEDGEMENTS

Many friends helped me to complete this project. Bob Thomas suggested the topic to me, Henry Springer materially supported the initial phases and launched me on the final one. Librarians at the University of Alaska gave unstinting help, especially Pauline Gunther who unfailingly pulled obscure Congressional documents. Archivists at the National Archives and the Library of Congress in Washington, D.C. were very helpful, as were staff members at the Federal Records Centers in Suitland, Maryland, and Seattle, Washington, the Franklin D. Roosevelt Library in Hyde Park, New York, the Harry S. Truman Library in Independence Missouri, and the Dwight D. Eisenhower Library in Abilene, Kansas. David Hickok, the Director of the Arctic Environmental Information and Data Center of the University of Alaska in Anchorage provided a refuge for the first two phases of this work when a hostile administrator in the College of Arts and Sciences made scholarly pursuits all but impossible. Louise Flood of the Institute of Water Resources typed the second phase of the project accurately and speedily. The project then moved to the Geophysical Institute which is a wonderful place to accomplish work. Administrative chores are accomplished by skilled personnel quickly and accurately. Neta Stilkey always makes sure that monies are accounted for and monthly statements are on time. Kathy Allen and Meg McCoy typed the entire manuscript cheerfully and speedily. They must be sick of roads, trails, and bridges in Alaska. Carla Helfferich and Cathy Morack gave the manuscript editorial attention, and Jeanne Hume, with eagle eyes, painstakingly proofread the entire manuscript. I thank them all, including Al Belon who let it happen. Finally, I would like to thank Larry Sweet for many courtesies rendered.

PREFACE

On August 17, 1956, Secretary of Commerce Sinclair Weeks and Secretary of the Interior Fred A. Seaton jointly announced that, effective September 16, the Alaska Road Commission, formerly a part of Interior and before that of the War Department, would be absorbed by the Bureau of Public Roads, a part of Commerce. Established in 1905 as an agency of the War Department and named the Board of Road Commissioners for Alaska, it soon was called the Alaska Road Commission. In 1932 it was transferred to the Department of the Interior in the wake of a reorganization.

The 1956 transfer to the Bureau of Public Roads took place because in that year Congress included Alaska on a modified basis in the Federal Aid Highway Act. This legislation eliminated much of the uncertainty about future funding, thus facilitating planning. As previously stated, it also called for the demise of the venerable Alaska Road Commission, which ended the existence of this 51-year-old agency. The Board of Road Commissioners for Alaska started its work in 1905 when less than a dozen miles of wagon roads existed in Alaska. It was directed by a board of road commissioners consisting of three military officers, one of whom occupied the position of president of the board, another that of chief engineer, and the third as secretary and disbursing officer.

The first major road built in the territory was the Richardson Highway from Valdez to Fairbanks. This route originated as a winter trail, but with the increased traffic caused by the rapid development of the placer gold deposits around Fairbanks and construction of the military telegraph line, "The Trail," as this route was originally known, was gradually improved. First it became a wagon road, later the commission upgraded it sufficiently to accommodate the model-T Ford, and eventually it became a modern, paved highway kept open on a year-round basis.

Construction methods changed radically from 1905 to 1956. The early labor consisted largely of building crude wagon roads, cutting brush, and flagging winter trails. During the 27 years from 1905 to 1932 the Alaska Road Commission developed an elaborate system of trails

and sled roads, totaling more than 10,000 miles, but less than 500 of those miles consisted of low-standard roads. This system was designed to serve military needs as well as those of the largely itinerant population of fishermen, trappers, and miners. The commission eventually abandoned the system of trails and sled roads and instead built airfields. Heavy construction machinery gradually replaced hand labor and horses and wagons. The Alaska Road Commission acquired its first automotive equipment, surplus military vehicles, after World War I. Giant earth-movers that could haul twenty times as much material at greater speeds than the original equipment came into use, and where workers had earlier corduroyed mudholes to support horses and wagons, in the 1950s they laid asphalt to enable rapid, dustfree travel.

By 1956 the Alaska Road Commission had accomplished much. It had grown from a few dozen employees to a well-organized highway department. The headquarters staff in the early 1950s consisted of more than a hundred individuals, and district engineers at Anchorage, Fairbanks, Valdez and Nome handled field operations with more than a thousand employees during the peak of the summer construction season. It had pioneered Alaska's transportation network -- then consisting of 998.5 miles of through roads, 1,234.6 miles of feeder roads, 1,361.3 miles of local roads, and many bridges, airstrips, tramways, and ferries which it had built and maintained over the years -- and provided important employment opportunities for many Alaskans.

The year 1956 was indeed a milestone in Alaska's transportation history. For decades territorial leaders and citizens had argued that they were entitled to benefits bestowed by the Federal Aid Highway Act of 1916 and its various subsequent amendments. A significant measure, it helped revolutionize America by providing federal money for highway links between country and city and made the automobile widely popular as a new means of travel. The federal government would match state highway expenditures if the roads met its high standards. But in the western states, where the federal government owned large areas of "public domain" lands which could not be taxed by the states and therefore produced no revenue, a more favorable matching ratio than the dollar-for-dollar

applicable in other states was devised. This formula was based on the total area of the state, the proportion of public domain to the total area, the state's population, and the existing road mileage used for transporting the mails.

As members of Congress contemplated Alaska's vast, nearly roadless area and the fact that better than 99 percent was part of the public domain, they shied away from the expense of including the territory in the 1916 legislation. Alaska's delegates to Congress attempted time and again between 1916 and 1956 to amend the Federal Aid Highway legislation to include the territory, always unsuccessfully. Other noncontiguous possessions without Alaska's problem of vast size and huge public domain, such as Hawaii and Puerto Rico, had little public domain land and, therefore, participated in the national program much earlier than did Alaska.

It was not until the early 1950s that Congress, largely at the urging of the military, appropriated substantial amounts of money for an accelerated road construction program. Between 1950 and 1952 the Alaska Road Commission received \$20 million or more annually for these purposes. And even though appropriations from 1953 on dropped considerably after those fat three years, the precedent for more spending and the "defense" justification were set. After all, America and the Soviet Union were engaged in the so-called "Cold War", and the United States considered Alaska its forward bastion in that conflict. Also, Alaska was in a better position to participate financially because in 1955 the territorial legislature had raised the motor fuel tax from two to five cents a gallon. But even with this boost, monies from this source and other highway user taxes would amount to only slightly more than \$2 million a year, inadequate to even cover maintenance.

At the urging of Delegate E. L. "Bob" Bartlett, Congress decided to allow Alaska to use federal matching funds for both construction and maintenance. Congress arbitrarily set the Territorial matching requirement at 10 percent. In return for these benefits, Bartlett agreed to have Alaska's share of the funds computed on a modified basis. Instead of giving the territory credit for all the public domain and nontaxable Native lands, as would ordinarily have been the case, he proposed that

only half of those public lands be used in the matching formula.¹ The committee agreed, but on the Senate floor Francis Case of South Dakota complained that Alaska would receive too much money in comparison with the contiguous states. Therefore, the fraction of the public domain used in computing the matching formula was reduced from one-half to one-third. Under this formula, Alaska was allotted \$13,390,000 in fiscal year 1958.² The same legislation, however, also excluded Alaska from the new 41,000-mile National System of Interstate and Defense Highways. To finance this program, Congress increased federal taxes on tires, trucks, trailers, buses, and motor fuel in the lower 48 states as well as in Alaska.³ But despite this obvious inequity, Alaska at last participated in the Federal Aid Highway program.

REFERENCES

1. E. L. Bartlett to Tennessee Plan Delegation, Alaska Statehood Committee and Robert Retherford, February 27, 1957, E. L. Bartlett Papers, Statehood File, box 19, folder Legislative History, January-February 1957, U.A. Archives, Fairbanks, Alaska; U.S. Stat. 377; U.S. Cong., Senate, Committee on Interior and Insular Affairs, Alaska Statehood and Elective Governorship: Hearing on S. 50 and S. 224, 83C., 1S., August 17-25, 1953 (Washington: GPO, 1953), pp. 345-46; U.S. Cong., House, Subcommittee on Roads of the Committee on Public Works, National Highway Program, Federal Aid Highway Act of 1956: Hearings on H.R. 8836, 84C., 2S., February 7 - March 5, 1956 (Washington: GPO, 1956), pp. 179-180, 160.
2. Cong. Record, 84C., 2S., pp. 9203-9204.
3. Anchorage Daily Times, July 9, 1956; 70 Stat. 377, 378, 398.

CHAPTER ONE

EARLY EXPLORATION OF ALASKA

Although United States citizens traded and undertook sealing and whaling voyages in the North Pacific and the Arctic in the early 19th century, the government only slowly joined other nations in exploring the Far North. Numerous nations had searched for the Northwest Passage, hoping to gain a shortcut to the Orient, but the United States did not officially participate in this quest until 1850, when Congress accepted two ships from the American merchant Henry Grinnell to join the massive search for the British Sir John Franklin arctic expedition. The Secretary of the Navy appointed Lieutenant Edwin Jesse De Haven to command.

Elisha Kent Kane, the most famous member of a prominent Philadelphia family and a surgeon on De Haven's expedition, launched his own expedition in 1853. When Kane failed to return on schedule, the Navy dispatched two relief vessels under the command of Lieutenant Henry J. Hartstene. Later expeditions led by Isaac Israel Hayes and Charles Francis Hall followed, all exploring the arctic seas.¹ Although these explorers and their successors in the 1860s had no direct contact with Alaska, they established a tradition of scientific arctic exploration.

The Western Union Telegraph Expedition

In 1865, two years before the American purchase of Russian America, the Western Union Telegraph Company undertook an audacious scheme -- namely, to build a telegraph line from the United States along the Great Circle land route through North America to Siberia and the Amur Basin, there to connect with a Russian wire from Europe. The line was to pass through British Columbia and the Yukon Territory, through Russian America, and thence thousands of miles through Siberia. Much of the territory to be traversed was unexplored wilderness. The Western Union Telegraph Company invested heavily in the project, hoping to install two wires capable of handling a thousand messages a day at \$25 per message, which would have amounted to gross revenues of \$9 million annually.

There were to be three divisions, one each in Canada, Russian America, and Asia. Colonel Charles Bulkley assumed overall command, and the directors chose Robert Kennicott to head the Russian-American division.² Kennicott had spent the winter of 1860-61 at Fort Yukon under the auspices of the Smithsonian Institution and the Chicago Academy of Sciences. Kennicott had worked hard and collected much ethnological and zoological material. For the Western Union Expedition, he engaged a few other naturalists and organized the "Scientific Corps" to gather data and specimens as official work permitted. The Scientific Corps even had its own flag, a scallop outlined on a blue cross, and members wore uniforms.³

The Russian-American phase of the telegraph work was further divided into two sections -- one to explore the Yukon east from Nulato and connect with the party working north through Canada, and the other to investigate the area between the Yukon and Bering Strait. Then, Kennicott suddenly died near Nulato in May 1866. William Healy Dall, a young scientist in the party, succeeded him as chief of the Scientific Corps, and the work proceeded. In the summer of 1867 members of the expedition learned, much to their sorrow, that the telegraph project had been terminated because at long last the Atlantic cable had been laid successfully.⁴ This killed the commercial prospects for the overland telegraph line.

The Work of the United States Coast Survey

In the summer of 1867 the United States Coast Survey, the leading federal civilian scientific agency, undertook the first official government exploration of Alaska which was intended to serve political purposes. The Superintendent, Benjamin Pierce, ordered Coast Survey Assistant George Davidson, who had worked on the Pacific Coast since 1850, to prepare for a reconnaissance to the northwest. Davidson and his crew were to collect information which was to be used to lobby members of the House of Representatives to vote for the bill appropriating money for the Alaska purchase.⁵ They made the reconnaissance and compiled much useful information on the geography, resources, and coastal features of Alaska and produced a map of the region for the Department of State. In 1869 the survey is-

sued another map (Alaska and Adjoining Territory), compiled from surveys by the Russian naval officer and cartographer, M. D. Tebenkov, from Russian manuscript items obtained in Sitka, from the notes of naturalist William Healy Dall about the Yukon, and from Davidson's observations. In that same year, the Coast Survey also published harbor charts for Sitka, St. Paul in the Pribilof Islands, and two harbors on Unalaska Island.

Davidson returned to Alaska in 1869, but it was William Healy Dall who was the principal American scientist in Alaska during the early years following the purchase. Dall left on the first of his four cruises as a Coast Survey assistant in 1871. He and other agency personnel obtained specialized knowledge about Alaska as the Coast Survey slowly traced the 34,000-mile-long coastline of the new territory.

Captain Charles F. Raymond's 1869 Trip to Alaska

In 1869 the government sent Charles F. Raymond, a young Army captain, to Alaska to investigate trade and discover whether Fort Yukon, established in 1846 by the Hudson's Bay Company at the junction of the Porcupine and Yukon Rivers near the Arctic Circle, was in American or Canadian territory. Raymond wrote a superb description of the Yukon River and noted various natural resources, such as spruce and birch, but found no signs of minerals in the area. He believed that agriculture would be of secondary importance, for individuals were not interested in it and engaged in other pursuits.⁶ A couple of years later, in 1871, the Office of the Chief of Engineers utilized Raymond's notes when it published a map of the Yukon River.

The War Department Turns Its Attention to Alaska

The War Department's responsibility for mapping the Far West ended in the early 1880's, and it again turned its attention to Alaska. Lieutenant Patrick Henry Ray, while attached to the Army Signal Service from 1881 to 1883, led a ten-man expedition to Point Barrow as part of the U.S. participation in the International Polar Year. There he observed the weather,

tides, and the earth's magnetism and made several overland explorations from his Point Barrow base.⁷

After Ray returned to St. Michael at the mouth of the Yukon River in the fall of 1883, he met a group led by Lieutenant Frederick Schwatka. The latter's party had just finished a summer's reconnaissance which took them from southeastern Alaska, across the coastal range, and down the Yukon River. Schwatka's official report described his journey and also mentioned that the army would have no problems controlling the Native population. Like countless summer travelers after him, he complained about "the blistering heat and dense swarms of gnats and mosquitoes that met us at every turn."⁸

A year later, Lieutenant W. R. Abercrombie led a party on a difficult reconnaissance up the ice-choked Copper River, passing the Childs and Miles Glaciers before the lateness of the season forced a return to the coast.⁹

In 1885 the Army sent Lieutenant Henry Allen into the Prince William Sound region and ordered him to ascend the Copper River before the ice broke. Allen and his group successfully accomplished their goal, and then crossed the Alaska Range to the Yukon River. Allen, as others before him, was dubious about Alaska's agricultural potential but noted that hardy vegetables could be raised in the Yukon Valley. He also pointed out that it was possible to build a road from Prince William Sound to the Yukon River.¹⁰

Various Phases of Federal Exploration

After Allen's expedition in 1885, the War Department made no further appropriations for Alaskan explorations. In essence, the Army's role in Alaskan scientific exploration between 1867 and 1877, can be divided into three phases. The first occurred between 1867 and 1877, when the Army governed the region with headquarters at Sitka and various posts scattered along the southern coast. During this period the Army did very little exploratory work and mainly restricted itself to tours of inspecting

generals and one reconnaissance along the Yukon River. The Army Signal Service dominated the second phase, beginning before the Army left Alaska and ending in the early 1880s. Army personnel made meteorological observations in the Aleutians and the Yukon-Kuskokwim Delta during this time; they contributed mainly background information. The third phase resembled the pre-Civil War explorations of the trans-Mississippi West undertaken by the Corps of Topographical Engineers, which, after 1863, ceased to exist as a separate organization and became the U.S. Army Corps of Engineers. The original overland reconnaissance resulted principally from one departmental commander's curiosity about an unknown wilderness combined with the ambitions of his energetic aides. This phase ended with Henry Allen's 1885 exploration of the Copper, Tanana, and Koyukuk Rivers.¹¹ From 1886 until 1898 the only official U.S. expeditions to Alaska were to the Selawik and Kobuk River valleys by officers of the United States Navy and the Revenue Marine Service. Science in the military services declined, and in 1885 Congress and the press criticized the newer civilian scientific bureaus elsewhere in the federal government when the so-called Allison Commission directly tackled the issue of civilian versus military control of federal scientific activity. It proposed the creation of a federal department of science and also suggested the consolidation of surveying and mapping agencies. This was never done. It took some years, prolonged conflict of personalities, meager and uncertain appropriations, and various re-organization proposals before the new programs worked smoothly.¹²

The Navy's hydrographic office and the Coast and Geodetic Survey continued conducting hydrographic surveys in Alaska. The former incorporated on its charts the results of surveys by naval vessels in southeastern Alaska. After 1880, however, it concentrated on mapping foreign waters and restricted itself to the coasts facing and bordering Siberia. The Coast and Geodetic Survey, with principal responsibility for domestic waters, continued its work and issued charts, particularly for southeast Alaska and the Aleutians.¹³ In short, various agencies and bureaus of the federal government had accomplished much work in Alaska during this short time with very limited financial resources. Historian Morgan Sherwood, a student of federal exploration in Alaska, concluded that

"given the tiny populations, the remoteness of Alaska, the limited economic inducement to development, the national political, intellectual, and economic atmosphere, federal exploration of the Far Northwest was relatively fast, extensive, and progressive."¹⁴.

The First Gold Discoveries in Alaska

But if the federal government's interest in Alaska was not continuous, a stream of hardy individuals kept coming North to try to make their fortune. Written records reveal that as early as 1869 William Henderson and James Strichan had gone to the Chilkat country to prospect. In 1871 a soldier found gold in the Indian River on the outskirts of Sitka, and in 1880 Joseph Juneau and Richard T. Harris found the precious metal near the site on which Juneau was to be built. Prospectors roamed throughout southeast Alaska, and before long a few made their way over the Chilkoot Pass to the headwaters of the Yukon River.¹⁵

Gold Found in the Dease Lake Region of British Columbia

In 1874 miners discovered gold in the Dease Lake region of British Columbia. As news of the discovery spread down the Stikine River, it sparked a minor gold rush. Fort Wrangell, at the mouth of the Stikine, boomed as a transfer point of cargo and men from ocean craft. In 1874 some three thousand people traipsed through Fort Wrangell, and it soon became a popular wintering place for miners, with in the construction of stores, bakeries, restaurants, and a saloon and dance hall.¹⁶ In the early 1880s, numerous prospectors examined the bars of the Yukon River for gold, and by 1886 some two hundred miners had gradually worked their way down the Yukon to the mouth of the Steward River. Leroy N. McQuesten and his partners built a trading post, and that winter Arthur Harper, one of the other traders, convinced two prospectors to explore the gravels and bars of the Fortymile River which joined the Yukon River 100 miles farther downstream. The two found gold later in the season, and a minor stampede followed.¹⁷

Further Gold Discoveries in Alaska

That same year gold was discovered at Franklin Creek, a tributary of the Fortymile River in American territory. More discoveries followed. Mining activities began on Dome Creek in 1893, in the placers of Wade Creek in 1895, and in those of Chicken Creek in 1896. In the spring of 1896 the center of the footloose mining population had shifted from Fortymile in the Yukon Territory to Circle City on the banks of the Yukon River on American soil.¹⁸ In the late fall 1896 George Washington Carmack and his two Indian companions found gold in quantities never before seen in the Yukon. Soon thousands rushed to the Klondike in Canada's Yukon Territory.¹⁹

The U.S. Geological Survey Comes to Alaska

It was no wonder that the mineral discoveries awakened the interest of the U.S. Geological Survey. In 1895 Congress ordered it to report on the gold and coal resources of Alaska and appropriated \$5,000 for the study. Two scientists spent a month in southeastern Alaska, then traveled to Kodiak, the Alaska Peninsula, and the Aleutian Islands. The following year Congress appropriated another \$5,000 to finance a mineral survey of the Yukon gold regions. In his 1896 report, the director of the Geological Survey described the work performed during the last couple of field seasons and recommended that the survey's Alaska budget estimate of \$2,500 for fiscal year 1897-1898 be increased to \$25,000. The recommendation roughly coincided with the big Klondike strike of the fall.²⁰ In 1898, geological studies of Alaska on a regular basis began.

Worldwide Attention On Alaska

The rush focussed worldwide attention on the north and lured thousands to the Klondike and Alaska, among them many not seeking gold, such as sportsmen, scientists, political and civic figures, con men, and fugitives from the law. They came from all parts of the United States, Canada, and abroad. At the same time, federal bureaus, some new to the north, be-

gan work to fill the knowledge gaps about the region and to disseminate available data in their respective fields. For example, the Bureau of Navigation published a circular on navigational conditions on the Yukon and Porcupine Rivers; the Labor Department issued bulletins on opportunities, prices, and problems of capital and labor in the gold fields; and the Department of Agriculture dispatched investigators to evaluate the agricultural possibilities of the North.²¹

Congress Reacts to the Gold Rushes

Between 1897 and 1899 Congress passed two major pieces of legislation. The first made various provisions for the construction of railroads and extended the homestead laws to Alaska. It also provided that citizens of Canada were to be accorded the same mining rights as American citizens were granted in the Dominion and that goods could be transported duty free between Alaskan and Canadian ports if the latter granted reciprocal rights.²² The other piece of major legislation was a clarifying act which provided for the punishment of crime in Alaska and also gave a code of criminal procedure. This act was very complex and lengthy. It codified the laws of Oregon and modified them somewhat for Alaska. It also included a tax system, the first levied in the district, and legalized the sale of liquor.²³

Lawmakers introduced a great many Alaska measures between 1900 and 1901, including bills pertaining to Native welfare, reindeer herding, education, the fisheries, the judiciary, and a recurrent request for an Alaskan delegate to Congress. In 1900 Congress passed a civil code and a code of civil procedure. With this piece of legislation, Congress began to deal directly with the problem of providing a general governmental system for Alaska. The measure divided Alaska into three parts, and courts were established at Sitka, Nome, and Eagle City on the Yukon, with authority to convene elsewhere when necessary. It also made possible the incorporation of municipalities for the first time.²⁴

The Army Returns North

As early as 1871, disputes had arisen over the Canada-Alaska boundary, but little attention had been paid to them. Two routes to the gold fields of Alaska led through Haines Mission and Dyea at the head of Lynn Canal, claimed by Canada. During August and September of 1896, Captain D. D. Gaillard of the Corps of Engineers conducted a preliminary examination of the disputed area and concluded that the Canadian claims were unjustified. In order to protect its interests until the matter could be settled officially, the United States once again ordered troops north. Army troops arrived at Dyea and Fort Wrangell in February 1897, and a detachment of troops was stationed at Skagway.²⁵ In 1898, both governments agreed that a joint commission should settle the matter. No agreement was reached, however, and in 1903 officials renewed negotiations. On October 20 of that year an arbitration tribunal decided in favor of the American claim except for two small islands which went to Canada.²⁶

After receiving conflicting reports about disorders in Alaska in the summer of 1897, the War Department ordered Captain Patrick Henry Ray and Lieutenant Wilds P. Richardson to investigate. The two officers were to determine the extent of the troubles, whether the food supply was sufficient to sustain the population, and if troops would be required to enforce law and order.²⁷ The two officers arrived at Saint Michael near the mouth of the Yukon River in August 1897. They observed strained and destitute people and feared that the coming winter might bring starvation. Ray requested that a detachment of troops be sent to Saint Michael for temporary duty, and in September of that year Colonel George M. Randall with two officers and 25 enlisted men arrived and established a military station, known as Fort St. Michael.

By late fall Ray had decided that it was necessary to station a permanent military force at a central point in interior Alaska. The presence of the troops, he reasoned would not only have a salutary moral effect on the population but also aid the civil authorities in maintaining law and order.²⁷ Since most settlements were located along the Yukon River, Ray recommended that the first and largest post be located on the

north bank of the Yukon River opposite and slightly below the mouth of the Tanana. This was a geographically and commercially central location. In 1899 this became the site for Fort Gibbon.²⁸ In case the War Department decided to establish a post on the upper Yukon River, Ray recommended a site at the mouth of Mission Creek near Eagle City close to the Canadian border. In 1899 the War Department chose this approximate site for the construction of Fort Egbert.

Finally in March 1898, based on Ray's and Richardson's recommendations, the Secretary of War directed that three military exploring expeditions investigate interior Alaska. The orders were very specific, stating that the expeditions collect

all the information valuable to the development of the country regarding topographical features, available routes of travel, feasible routes for railroad construction, appropriate and available sites for military posts, mineral resources, timber, fuel, products, capability of sustaining stock of any kind, animals, etc., should be embodied in a report with necessary accompanying maps and plates, to give the department information on which to base its action, and the public as full an understanding as possible of the resources, etc., of the country.²⁹

The first of these expeditions was to drive reindeer north from eastern Alaska and then to explore the trails from the Yukon to the Tanana. The second expedition, under the command of Captain William Ralph Abercrombie, was to explore from Valdez to the Copper River and to the tributaries of the Tanana River. Captain Edwin Forbes Glenn assumed command of the third expedition. He was ordered first to Prince William Sound to explore routes to the Copper and Susitna rivers; from there he was to proceed to Cook Inlet and explore north from tidewater to one or more crossings of the Tanana. Both expeditions suffered severe hardships, and the results were hardly worth the time, energy, and money expended. The exception was the valuable work performed by topographical assistant Emil Mahlo and geologist F. C. Schrader with the Abercrombie party and geologist W. C. Mendenhall with Glenn. The U.S. Geological Survey had loaned the latter two men to the War Department for the expeditions.³⁰

Army explorers discovered suitable routes in the interior and recommended the construction of a military road. They also knew that prospect-

ors would eventually require some kind of transportation in the future and encouraged tying various mining camps into the same connecting line. A proper system of trails, roads, river transportation, or a combination of all of these would do much to enhance the economic prospects of the North.³¹

War Department Orders Military Road From Valdez to Copper Center, Eagle

In March 1899 the War Department ordered that an exploring expedition go to Valdez, open a military road to Copper Center, and from there go by the most direct route to Eagle City. Captain Abercrombie led the expedition that was to survey and mark the road, which was also to be open for public travel. In late April 1899 the members of the expedition started construction of the road. Originating at the military reservation at Valdez, it ran up the Lowe River Valley through Keystone Canyon and Thompson Pass to the Tonsina Valley, where construction ceased in October. Using only hand tools, the soldiers had built a 93-mile trail suitable for pack horses.³²

The Glenn Expedition

War Department orders of March 1899 also directed the organization of a Cook Inlet exploring expedition, under the command of Captain Edwin F. Glenn, to explore the country northward via the Matanuska, Susitna, Yentna, and Kuskokwim Rivers for the most direct and practicable route from tidewater to the crossings of the Tanana River. It was a continuation of Glenn's previous exploratory work, not a road-building enterprise. His primary duty was to find a direct route to the Tanana and from it to the military posts on the Yukon. One section of Glenn's expedition led by Joseph Herron made an important contribution when it accomplished the first official exploration of the upper Kuskokwim.³³

The Army in Retrospect

In retrospect the Army was not the best organization for exploring the North at that time. Soldiers seldom made any surveys. U.S. Geological Survey geologists or civilian topographers did most of the mapping. Army parties were too large for primary exploration, and much backtracking was necessary to carry up supplies. And finally, the Army's cumbersome and regulation-bound expeditions compared unfavorably with the extremely mobile and independent Geological Survey parties.³⁴

When the War Department created the "Department of Alaska" in 1900, garrisons were located at Fort Davis near Nome, Fort St. Michael near the mouth of the Yukon, Fort Gibbon near Tanana, Fort Rampart, Fort Egbert at Eagle, Fort Liscum near Valdez, and Fort William H. Seward at Haines. To communicate with the nation's capital from the Yukon River generally required six months for a one-way message. It was soon obvious that if the Army was to perform its function properly, it would be necessary to connect the Department of Alaska Headquarters at Fort St. Michael with the other Army posts by military telegraph and cable lines. The entire Alaska system then needed to be tied in directly with Washington, D.C. Responding to this need Congress appropriated \$405,550 for the project on May 26, 1900.³⁵

Constructing a Telegraph Communication System

Construction of the Washington-Alaska Military Cable and Telegraph System, or WAMCATS as it was called, got under way promptly. Fort Egbert became the base for building the first telegraph line, a 12-mile segment which ran along the Yukon River eastward to the Canadian boundary. There it connected with the previously constructed Canadian line which ran to Dawson City and Whitehorse. After completion of the new 12-mile segment, Fort Egbert could send messages to Dawson and Whitehorse. From there they were carried overland to Skagway and then sent by mail ship to Seattle.³⁶ When the Canadians completed the trans-Canadian line to Vancouver in June 1901, it became possible to contact the contiguous states directly from Fort Egbert.³⁷

In 1900, telegraph lines were strung between Nome and Fort Davis, a distance of four miles, and to Port Safety, about 20 miles distant. The next year, 1901, saw much construction activity. The first undersea cable in Alaska crossed Norton Sound, connecting Port Safety with Fort St. Michael, and soldiers under the command of Lieutenant George Gibbs completed the 448-mile telegraph line from Fort St. Michael to Fort Gibbon. Construction between Eagle and Valdez lagged, however, and Brigadier General A. W. Greely, the chief of the Signal Corps, sent twenty-one-year-old Lieutenant William Mitchell to Fort Egbert to investigate delays in connecting the telegraph line to the south. Mitchell made his base at Fort Egbert between 1901 and 1903 and directed the buildings of the Eagle-Valdez line to the Tanana River, some 153 miles distant, and the 204-mile segment of the Goodpaster Line, all under rather difficult conditions.³⁸

In the summer of 1902 Mitchell completed the line to Tanana Crossing, where he met Captain George Burnell who had built the line from Valdez. Messages could now be sent from Fort Liscum on Prince William Sound to Fort Egbert on the Yukon, then retelegraphed over the Canadian line to Vancouver and Seattle. After a new submarine cable was laid from Juneau to Skagway in the summer of 1909, telegraphic messages from southeast Alaska went through Skagway and Whitehorse and down the Canadian line.³⁹

The final work consisted of joining the Fort Egbert-Fort Liscum line to the one from Fort St. Michael, which extended only to Baker on the Tanana River. In January 1903 Lieutenant Mitchell rushed from Eagle to the confluence of the Goodpaster and Tanana Rivers, thus discovering an excellent route for the line. After incredibly hard work, Mitchell met Lieutenant Gibbs near the Salcha River on June 27, 1903, thus making the final connection to the trans-Alaska telegraph system. The men of the U.S. Army Signal Corps had completed the 1,506 miles of overland lines and a few hundred miles of submarine cable in just three years, one month, and one day, a truly impressive achievement against, at times, overwhelming odds. The government had spent approximately \$617 per mile for the overland lines and about \$52 per mile for the submarine cable.⁴⁰

In 1903 Congress appropriated another \$485,000 for the construction of submarine cables from Juneau to Sitka and on to Seattle, a distance of

1,377 miles, but it was not until 1904 that these lines were completed. Another Congressional appropriation in April 1904 provided money for laying a submarine cable from Sitka across the Gulf of Alaska to Valdez, a distance of 600 miles. This project was also accomplished in 1904, thus completing an all-American telegraph system.⁴¹

Completion of the system did not end the job. Now arose the difficulties of maintenance. Stationed at log cabins spaced forty miles apart, detachments of soldiers maintained the line. Each detachment consisted of one Signal Corps repairman and two Army soldiers. Through blizzards, summer heat and mosquitoes, forest fires, and storms these men kept the line operating. It was lonely and monotonous duty at low wages. In 1907 the Signal Corps began to use wireless or radio equipment, and by the end of 1915 WAMCATS had reduced its land lines to 848 miles. In 1936 Congress renamed the organization the Alaska Communication System, and by the end of June 1940, radio had entirely replaced the cables.⁴²

A Senatorial Visit to the North

The gold discoveries had focussed congressional attention on Alaska. They also brought the Army back to the north once again, this time to stay and play an important role in the territory's development. With all the activity, at the turn of the century, the United States Senate appointed a subcommittee of its Committee on Territories to journey to Alaska in 1903 and make a "thorough investigation of existing conditions, her resources and her needs, with the purpose to ascertain and report what, if any, legislation is required for that district."⁴³

The four Senators assigned to the subcommittee met in Seattle and sailed for Alaska on June 28. They cruised through the Inland Passage to the head of Lynn Canal, stopping at various settlements along the way. They went over the White Pass to Lake Lebarge, the Lewes River, and along the upper Yukon River to Dawson City, where they visited the gold fields and examined the Yukon Territory's form of government. From Dawson the group continued downstream all the way to St. Michael, stopping at various settlements and Army forts. At St. Michael the U.S. Revenue Marine

Service cutter McCulloch took the Senatorial party aboard, and they visited Nome, St. Paul in the Pribilof Islands, Dutch Harbor, and Unalaska, passing through the Aleutian Islands into the North Pacific. They continued their journey along Alaska's southern coast, stopping at Karluk and Kodiak, Valdez and Sitka. The Senators visited Juneau a second time and returned to Seattle on August 26. Throughout their extensive journey, the Senators held hearings and took testimony from residents. By the time they returned to Seattle, they had covered a distance of 6,600 miles, but only 111 of those miles on land⁴⁴ (Figure 1).

Senators Hear Testimony

During the course of their journey, the Senators took testimony from sixty-one witnesses in eleven settlements and towns. The witnesses were concerned with a wide variety of subjects, ranging from agriculture to boundary questions, coal and copper deposits, the necessity for an elected delegate to Congress, fish hatcheries, freight rates, game laws, the insane, the need for lighthouses and better mail service, surveys and taxes, and the need for a territorial government and better transportation. Numerous individuals addressed the lack of roads and trails. William Daily of Ketchikan told the Senators that he represented the Unuk Mining, Smelting, and Transportation Company of Danville, Illinois. The company's mines were located forty-two miles from the mouth of the Unuk River. Daily told the group that his company at the time was constructing a wagon road to its mines at an estimated expense of \$50,000. Daily reminded the Senators that the Canadian government built roads into territories to aid economic development, but no similar provisions were made in Alaska, he complained.⁴⁵

Lieutenant William Mitchell Testifies

At Eagle on the Yukon River, the Senators called on Lieutenant William Mitchell of the U.S. Signal Corps, then in charge of building part of the Alaska telegraph system, to testify on territorial condi-

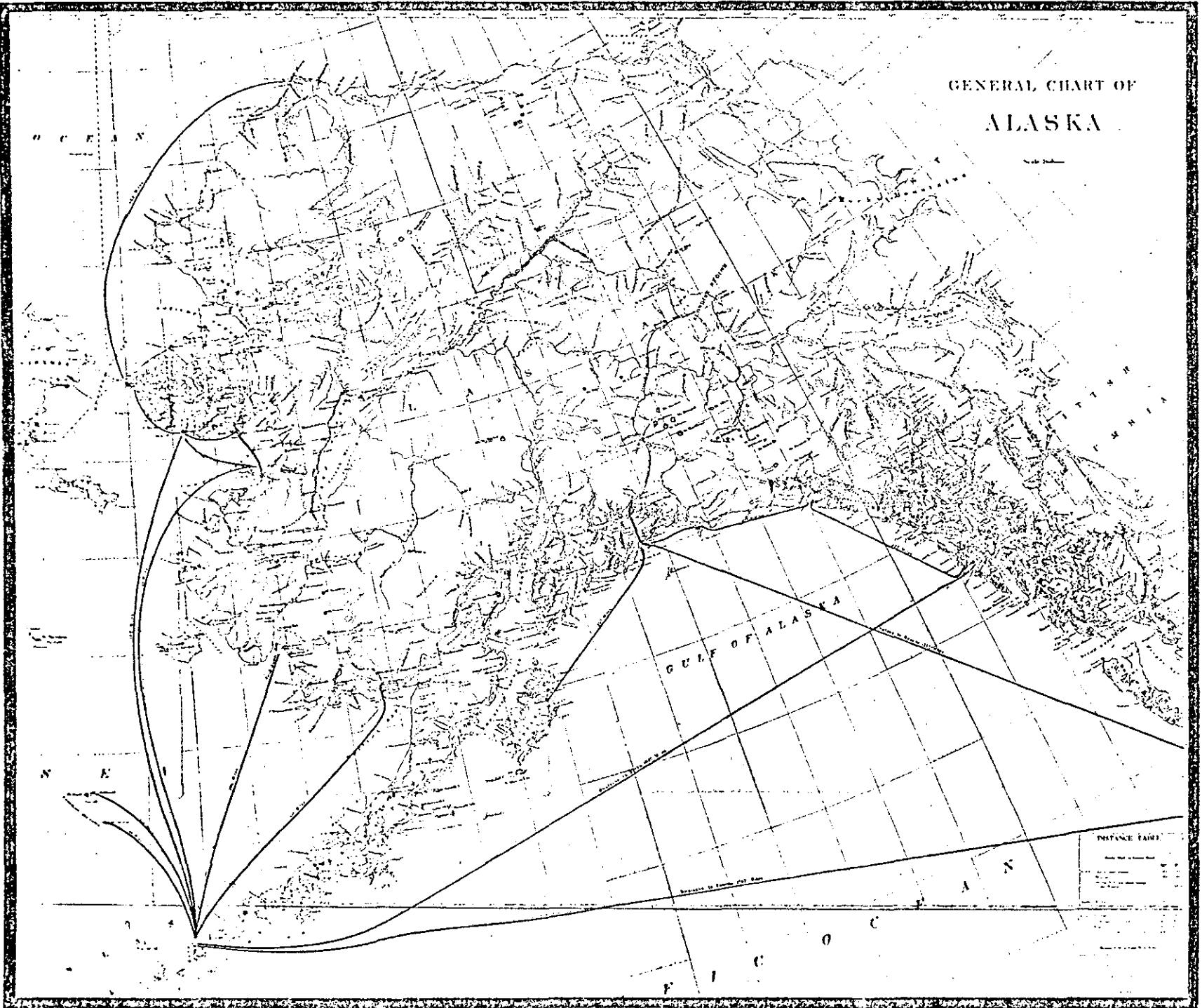


Figure 1. Route of Senate Subcommittee on Territories 1903 trip to Alaska.

tions and needs. Mitchell told the group that it would cost more than two million dollars to construct a fair wagon road from Eagle to Tanana Crossing and from there to the head of steamboat navigation at Chena at the confluence of the Chena and Tanana Rivers, a distance of about 520 miles. The lieutenant related that a wagon road from Tanana Crossing to Copper Center, a distance of 165 miles, would be easier to construct because the country was not as rugged as along the Tanana or near Eagle. It would be as expensive as the others because materials would have to be transported across the difficult coastal mountains. A continuation of the route from Copper Center to Valdez, although only 103 miles in length, would be difficult to build because of the mountainous character of the country. Mitchell told the Senators that a prospective wagon road would leave Copper Center and follow a low ridge to the Tonsina River, a distance of about 25 miles; from there to Teikel Station was another 24 miles, thence 23 miles to Saina, 13 miles to Dutch Flat, 8.5 miles to Keystone Station, and a final 12 miles to Valdez. A military trail already existed between Valdez and Copper Center. This trail connected with another one and led to Tanana Crossing. Although very crude, it made possible the transportation of supplies with pack animals.⁴⁶

The Testimony of Abraham Spring

Abraham Spring of Fairbanks pointed out that next to the necessity for a comprehensive mining code, Alaska needed roads and trails. Only Congress could appropriate the sums necessary to construct the wagon roads connecting Alaska's principal settlements. Miners themselves could build the feeder roads. Spring suggested that miners be permitted to perform road work annually in lieu of the required assessment labor on claims and that the whole system of road building should be under the direction of commissioners who know the needs of the various districts. The lack of good trails and wagon roads made mining very expensive. Miners and trading companies had built trails and bridges by subscription, each contributing as much as they could afford. But each fall the winter trails had to be reconstructed, and each spring

the summer trails and bridges had to be rebuilt. Spring explained to his audience that there was "no intelligent supervision of the work, there is no engineering skill."⁴⁷

Judge James Wickersham Meets the Senators

Federal Judge James Wickersham supported the contention of many witnesses that the cost of getting provisions from the navigable streams, particularly the Yukon, was so high as to be almost prohibitive. Witnesses had repeatedly asked that the government build wagon roads from points along the rivers to the mining camps. Wickersham explained that the development of large areas of low-grade mining ground around Nome had only been made possible by competitive, cheap ocean transportation. Goods and supplies were landed almost as cheaply as they could be bought in Seattle, Portland, or San Francisco. Supplies destined for the areas along the Yukon, however, either came down the river via Skagway and Dawson or upriver from St. Michael. Miners had to wait until winter to transport their goods on dogsleds from distributing points on the Yukon and its tributaries to the mines. Supplies destined for miners working at Coldfoot in the Koyukuk landed at Bettles, at the head of navigation but below the mining center, at \$135 per ton. From Bettles, supplies had to be forwarded to Coldfoot in the summer by a scow pulled by horses along the riverbank or, even more laboriously, by poling boats; in the winter freight traveled on dogsleds. This added an additional \$200 a ton to freight costs, making the total \$335 per ton at Coldfoot. To illustrate even further, the freight on a 50-pound sack of flour delivered to Bettles came to \$3.37. Transporting the same sack to Coldfoot cost an additional \$5.00 or a total of \$8.37. The 50-pound sack of flour eventually retailed for well over \$10.00. A table showing 1903 freight rates from St. Michael to various Yukon River points follows.

ALASKA FREIGHT RATES, 1903,
FROM ST. MICHAEL TO YUKON RIVER POINTS

Destination	North American Transportation and Trading Company's local-freight tariff between St. Michael and Dawson. (Rates in dollars per ton of 2,000 pounds or 40 cubic feet, at ship's option.)				Northern Commercial Company. Through-freight tariff between San Francisco or Seattle and Yukon River points. (Rates in dollars per ton of 2,000 pounds or 60 cubic feet measurement, April 10, 1903.)	
	Miles	Up-stream	Down-stream	Miles	North bound	South bound
St. Michael.....	0	-----	\$45.00	1,601	\$ 135.00	\$27.00
Kotlik.....	67	\$15.00	43.00	1,534	35.00	30.00
Andreafski.....	181	18.00	41.00	1,420	38.00	32.00
Russian Mission.....	293	22.00	39.00	1,308	40.00	34.00
Holy Cross.....	358	24.00	37.00	1,234	40.00	34.00
Anvik.....	405	26.00	36.00	1,196	40.00	35.00
Greyling.....	427	27.00	36.00	1,174	45.00	35.00
Kaltag.....	570	31.00	33.00	1,031	50.00	38.00
Nulato.....	610	33.00	32.00	991	50.00	39.00
Koyukuk mouth.....	630	34.00	31.00	971	50.00	39.00
Novikakat.....	762	38.00	28.00	839	55.00	42.00
Weae-Tanana.....	901	42.00	25.00	780	55.00	45.00
Baker Creek.....	981	60.00	45.00	1,000?	-----	-----
Chena-Fairbanks.....	1,201	70.00	55.00	700?	80.00	65.00
Rampart.....	981	44.00	23.00	620	55.00	47.00
Fort Hamlin.....	1,072	46.00	21.00	529	57.00	49.00
Dahl River.....	1,082	47.00	21.00	519	57.00	49.00
Fort Yukon.....	1,224	50.00	18.00	377	60.00	52.00
Circle.....	1,309	53.00	15.00	292	65.00	54.00
Star City.....	1,479	56.00	12.00	122	70.00	58.00
Eagle.....	1,499	56.00	11.00	102	70.00	58.00
Cliff Creek.....	1,537	57.00	10.00	64	70.00	59.00
Fortymile-Cudahy.....	1,548	58.00	10.00	53	70.00	59.00
Dawson.....	1,601	60.00	-----	0	70.00	60.00
Bergman.....	1,070	-----	-----	-----	100.00	75.00
Bettles.....	1,150	-----	-----	-----	135.00	95.00

Wickersham told the Senators that to develop interior Alaska's mining potential, the following wagon roads were essential:

- 1) from Valdez across to Eagle City by way of the Fortymile River;
- 2) a branch road from Tanana Crossing, north along the Tanana River to Fairbanks and thence across to Rampart;
- 3) a branch road from Circle City on the Yukon to Fairbanks;
- 4) a continuation of the Tanana Valley road to Coldfoot on the Koyukuk; and
- 5) branch roads from these main trunk lines to the various mining centers.

When asked what institutional framework was needed for road building, Wickersham suggested that a three-member road commission be appointed in each of Alaska's three judicial districts with the territorial governor an ex officio member of each commission. The chief executive was the right person for the job, Wickersham suggested, for he received a good salary and had very little to do. The construction should be financed from the monies raised in each division from the license fees paid outside of incorporated towns.⁴⁸

Formal Resolutions Given Senators

In addition to much testimony by individual witnesses favoring the construction of roads and trails, two communities also submitted formal resolutions to the Senators. The citizens of Eagle regarded the lack of roads and trails the main drawback to the development of the country. The construction of roads and trails would encourage the mining industry; furnish routes for the Postal Department and decrease the cost of mail delivery; save the judiciary thousands of dollars annually in traveling fees and reduce per diem expenses of marshals, witnesses, and jurors; and it would save the War Department thousands of dollars in freight

costs. The citizens of Nome urged Congress to make liberal appropriations for the construction of permanent roads, trails, and bridges between Nome and settlements in the interior and on the coast, and that the trails and roads be provided with guideboards or stakes of sufficient height to be readily observed above the snow line.⁴⁹

The Senators Return to Washington, D.C.

After their return from the extensive Alaska trip, the Senators summarized their impressions to their colleagues. They had been awed by Alaska's vastness and surprised at the lack of transportation facilities. "Outside the few and scattered settlements called towns, which are found in different parts of Alaska proper, and most of which are but the centers of mining interests," they commented, "there is not to be found a single public wagon road over which vehicles can be drawn summer or winter." It was true. The military trail between Valdez and Eagle, constructed by the War Department in 1899-1900, was only fit for saddle and pack animals. Summer transportation relied on the waterways and on pack horses and dog teams during the long winters. The Senators observed that Alaska's development depended "more upon the improvement of transportation facilities than upon any other one instrumentality." The federal government had done nothing to construct a transportation system. "It has neither built roads nor provided other means of transportation," the Senators stated, "and the hardy and adventurous who have sought the wealth hidden in the valley of the Yukon, the Koyukuk, and Seward Peninsula have done so amidst difficulties that can only be understood by those who have made a study of the situation." The Senators contrasted federal inactivity with Canadian achievements in the Yukon Territory. Between 1898 and 1903, the Canadian government had spent \$1,025,000 to construct and maintain 850 miles of wagon roads and winter trails leading to the camps from Dawson. Some 225 miles of the total had been thoroughly constructed and carried the heaviest of freight, such as machinery so large as to require the use of 6 to 12 horses.⁵⁰

The Senators Make Their Recommendations

The subcommittee recommended that the government construct a system of transportation routes and that the basis for such a system should be a well-built wagon road connecting the Pacific Ocean at Valdez with Eagle on the Yukon River, a distance of approximately four hundred miles. The road should follow the general lines of the military trail which Captain Abercrombie and his men had built in 1899-1900. The military telegraph line, recently completed, followed the same route. The committee explained that Valdez was the finest most northerly harbor on the Pacific Coast, open and ice-free throughout the year, and a natural gateway to the interior and a key to its economic development. Eagle, once connected by a road, should become the distributing point for American goods for most of the vast Yukon basin. Most importantly, the committee believed that a system of wagon roads and trails would allow miners to use modern heavy machinery in extracting minerals, would induce immigration, and even result in a permanent population "wedded to the soil." In conclusion, the subcommittee members stated that it was "as much of a duty to build the road [between Valdez and Eagle] and secure the American interests of the district to the United States as it was to build the first Pacific railroad to connect the Pacific Coast with the territory east of the Rocky Mountains." To finance such a program of road construction, Senators suggested that the taxes on the salmon fisheries be increased and that, together with already available revenues, these monies would "constitute an annual fund which, if wisely used, will result in a grand advance in Alaska's development and wealth."⁵¹

A Deluge of Alaska Bills

The subcommittee had distributed its report to the full Senate on January 12, 1904, and three days later a deluge of Alaska bills descended upon both Houses. Most of these measures were referred to the

Committees on Territories, and those bodies held extensive hearings in an attempt to coordinate the different parts of the Alaska program. An appropriation to conduct a preliminary survey of a wagon road from Valdez to Fort Egbert at Eagle and for a military trail between the Yukon River and Coldfoot passed quickly. The Secretary of War was to make the necessary arrangements.

Survey For a Wagon Road From Valdez to Fort Egbert

Thereupon, the War Department appointed J. M. Clapp, an assistant engineer in the Seattle office of the Corps of Engineers, to head the survey parties. Clapp assigned four of these parties, with a total of 48 men, to the Valdez-Fort Egbert survey, each to cover approximately 100 miles of the proposed wagon road. Clapp appointed Oscar A. Piper and two assistants to survey the Yukon-Coldfoot route. From there they went via the White Pass and upper Yukon to Fort Egbert. The remaining two, left Seattle with 25 pack horses on June 1, 1904, for Valdez to begin their work at that end. On August 14, 1904, the four parties had completed the 430-mile survey, and Clapp estimated that it would cost \$3,500 per mile or approximately \$1.5 million for building the wagon road from Valdez to Fort Egbert.⁵²

Reconnaissance of the Yukon-Coldfoot Route

In the meantime Piper and his men and pack animals continued downstream on the steamer John Cudahy and on June 21 landed opposite Fort Hamlin, an abandoned Alaska Commercial Company trading post named for Charles S. Hamlin, an assistant Secretary of the Treasury between 1893 and 1897 and a commissioner at the convention between Great Britain and the United States in 1897 to determine the fur seal-fishery controversy. Forty miles northeast of Rampart, at Fort Hamlin, the Yukon emerges from the flats and narrows into a single stream, flanked on either side by densely timbered ridges. After cutting trail for a couple of days, the party left the Yukon on June 24, surveyed in a northwesterly direction,

and reached Coldfoot on July 12. The party concluded its field work on August 14. Piper found about eighty well-built cabins at Coldfoot, most of them deserted for the mining season. He estimated that Coldfoot had a winter population of about sixty souls, and the whole Koyukuk Valley a population of approximately three hundred miners. He calculated that it would cost about \$6,000 to build a 136-mile trail, sufficient to meet the current needs of the miners⁵³ (Figure 2).

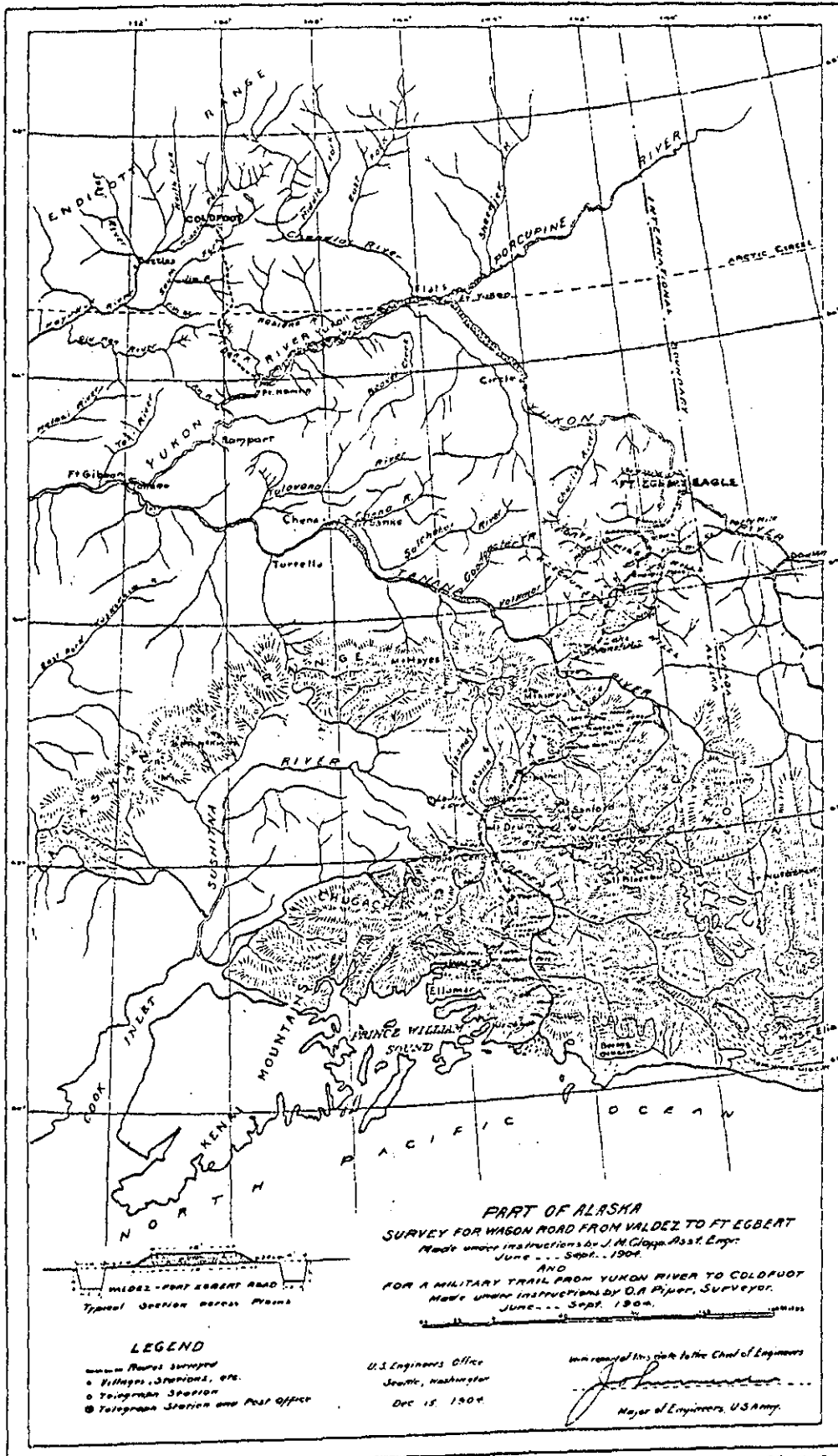
Creation of the Board of Road Commissioners for Alaska

Knute Nelson, U.S. Senator for Minnesota since 1895 and the Senator most actively involved with Alaska legislation since his 1903 visit north, introduced a measure in 1904 reapportioning the money received for licenses outside of the towns. It designated such fees the "Alaska Fund" and gave 5 percent to the Secretary of the Interior for the care of the insane, 25 percent to elected school boards under the superintendency of the territorial governor for the education of white children, and the remaining 70 percent to the Secretary of War for road construction. Roads were to be built under the direction of a Board of Road Commissioners composed of an engineer officer of the U.S. Army to be appointed by the Secretary of War and two other officers drawn from troops stationed in Alaska. The Board was empowered,

upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters . . . to any town, mining or other industrial camp or settlement, between any such town, camps or settlements . . . , if in their judgment such roads or trails are needed and will be of permanent value for the development of the district.

The Board was not to build roads or trails to transitory settlements. Any work worth more than \$5,000 was to be let for bid and awarded to

Figure 2. Survey for wagon road from Valdez to Fort Egbert and military trail between Yukon River and Coldfoot.



H Doc 192 88 S

the lowest bidder, but if all bids were deemed too high, the Board possessed the power to perform the required work by buying the necessary materials and hiring the men. The Board also was responsible for the maintenance of this transportation network.⁵⁴

FOOTNOTES

1. John Edwards Caswell, Arctic Frontiers: United States Explorations in the Far North (Norman: University of Oklahoma Press, 1956), pp. 13-67
2. Morgan B. Sherwood, Exploration of Alaska, 1865-1900, (New Haven and London: Yale University Press, 1956), pp. 16-17.
3. Ibid., pp. 17-20
4. Ibid., pp. 21-30
5. Morgan B. Sherwood, "George Davidson and the Acquisition of Alaska," Pacific Historical Review, May 1959, pp. 141-154.
6. U.S. Cong., Senate, 56C., 1S., Captain Charles P. Raymond, Reconnaissance of the Yukon River, 1869, in Compilation of Narratives of Explorations in Alaska, Senate Rept. No. 1023 (Washington: GPO, 1900), P. 41.
7. Ibid., Lt. Patric Henry Ray, International Polar Expedition to Point Barrow, 1884, pp. 363-380.
8. Ibid., Lt. Frederick Schwatka, Report of a Military Reconnaissance Made in Alaska in 1883, p. 316.
9. Ibid., Lt. W. R. Abercrombie, Report of a Supplementary Expedition into the Copper River Valley, Alaska, 1884, pp. 381-408.
10. Ibid., Lt. Henry T. Allen, Report of a Military Reconnaissance in Alaska Made in 1885, pp. 445, 488-489.
11. Sherwood, Explorations, pp. 86-87.
12. A Hunter Dupree, Science in the Federal Government: A History of Policies and Activities to 1940 (Cambridge: Harvard University Press, 1957), pp. 215-231.
13. A set of published Goard and Geodetic Survey Charts is in R G 23, N.A.
14. Sherwood, Exploration, p. 192.
15. Robert N. De Armond, The Founding of Juneau (Juneau, Alaska: Gastineau Channel Centennial Association, 1967), pp. 23-37.
16. Bobby Dave Lain, North of Fifty-Three: Army Treasury Department, and Navy Administration of Alaska, 1867-1884, Unpublished Ph.D. Dissertation, The University of Texas at Austin, 1974, pp. 44-45.

17. Claus-M. Naske, "The Historic Forty-Mile District," The Northern Engineer, Summer 1976, p. 42.
18. Ibid.
19. William R. Hunt, North of 53°: The Wild Days of the Alaska-Yukon Mining Frontier, 1870-1914 (New York and London: MacMillan Publishing Co., and Collier MacMillan Publications, 1974), pp. 24-25.
20. Sherwood, Explorations, pp. 143-144.
21. Ibid., pp. 152-153.
22. Claus-M. Naske, An Interpretative History of Alaskan Statehood (Anchorage, Alaska: Alaska Northwest Publishing Company, 1973), p. 4.
23. Ibid., pp. 4-5
24. Ibid.
25. U.S. Army, Alaska, The Army's Role in the Building of Alaska, USARAL Pam 360-5, April 1969, pp. 26-28.
26. Ibid., p. 28.
27. Ibid.
28. Ibid., p. 32
29. Ibid., pp. 32-34
30. Sherwood, Exploration, pp. 156-162.
31. USARAL Pam 360-5, p. 41.
32. Ibid., pp. 41-42.
33. Sherwood, Exploration, pp. 163-166.
34. Ibid., p. 167.
35. William A. Quirk, III, Historical Aspects of the Building of the Washington-Alaska Military Cable and Telegraph System, with Special Emphasis on the Eagle-Valdez and Goodpaster Telegraph Lines, 1902-1903 (Washington, D.C.: U.S. Department of the Interior, Bureau of Land Management, 1974), p. 1.
36. Ibid.

37. Ibid., p. 2.
38. Ibid., p. 2-3.
39. Ibid., p. 4.
40. Quirk, Washington-Alaska Military Cable, pp. 6-7
41. Ibid., p. 7.
42. USARAL Pam 360-5, pp. 53-63.
43. U.S. Cong., Senate, 58C., 2S., S. Rpt. 282, Conditions in Alaska, Report on Subcommittee of Committee on Territories (Washington: GPO, 1909), p. 1.
44. Ibid., p. 2.
45. U.S. Cong., Senate, 58C., 2S., S. Rpt., 282, Conditions in Alaska, Hearings before Subcommittee of Committee on Territories Appointed to Investigate Conditions in Alaska (Washington: GPO, 1904), P. 9.
46. Ibid., pp. 54-64.
47. Ibid., pp. 94-101.
48. Ibid., pp. 118-124.
49. Ibid., pp. 92-93, 164.
50. Senate Rpt. 282, Conditions in Alaska, Report of Subcommittee of Committee on Territories, pp. 9-11.
51. Ibid., pp. 11-17.
52. U.S. Cong., House, 58C, 3S., House Doc. 192, Wagon Road from Valdez to Fort Egbert, Alaska, and Military Trail Between Yukon River and Coldfoot, Alaska, (Washington: GPO, 1904), pp. 1-3.
53. Ibid., pp. 16-23.
54. Jeanette P. Nichols, Alaska: A History of its Administration, Exploitation, and Industrial Development During its First Half Century Under the Rule of the United States (New York: Russell & Russell, Inc., 1963), pp. 231-233, Report of the Board of Road Commissioners for Alaska for the Season of 1905, November 1, 1905, pp. 1-2, Xerox copy.

CHAPTER TWO

THE APPOINTMENT OF RICHARDSON AS PRESIDENT OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA

The President signed the legislation creating the Board of Road Commissioners for Alaska on January 27, 1905, and in March, upon the wish of President Theodore Roosevelt, the Secretary of War designated Major Wilds Preston Richardson of the 9th Infantry President of the Board and filled the remaining two positions with the appointments of Lieutenants George B. Pillsbury and Samuel C. Orchard. Richardson, then 44 years of age, was already an old Alaska hand. Born on March 20, 1861, in Hunt County, Texas., he had entered the U.S. Military Academy at West Point in the summer of 1880 and graduated as a second lieutenant of the 8th Infantry on June 15, 1884. He then served in a garrison in California and in frontier duty in Apache Country and in western Nebraska. Promoted to first lieutenant on December 16, 1889, he served as an instructor in tactics at his alma mater from 1892 to 1897. He received orders in August 1897 to serve in Alaska where, except for a few brief details elsewhere, he remained for 20 years.¹

The New Board Members Travel to Alaska

The War Department directed the new Board to meet at Skagway on May 15, 1905. On the way to Skagway from Seattle, Richardson and Pillsbury stopped at Ketchikan and Juneau, where Orchard met the two, and then the three men stopped at Haines. They made a preliminary inquiry into the road needs of southeastern Alaska, and soon found that citizens in the region were concerned about the expenditure of monies from the Alaska Fund, preferring to have these spent in the region in which they were collected. Richardson pointed out that "on account of the somewhat exceptional status of the courts in Alaska, embracing as it [sic] does, certain extra executive and administrative functions, a sort of sentiment of territorial division has grown up in the minds of many of the people." The Board president decided to ignore these divisions and

instead try to accomplish what was best for all of Alaska.²

At the end of May, Richardson made his first report to the military secretary of the Army. In operation for only a few weeks, the board already had received petitions from the Chambers of Commerce of Eagle on the Yukon River; Fairbanks on the Tanana River; and Valdez on Prince William Sound, all urging that further work be undertaken on the Trans-Alaskan Military Road or the "All American Route" as it also was called, from tidewater to the middle Yukon. All petitions had mentioned the constantly increasing traffic along this route and its difficulties because of the "wretched condition of the trail in many places, becoming worse each year," and for the need to construct bridges or safe ferries across wild streams. Richardson commented that the route had many advantages but was difficult to build and maintain, and the War Department already had spent large sums of money on it. Alaskan economic conditions just then did not justify the expenditures for a well-constructed highway or wagon road. There was little money for the many needs, Richardson continued, and the law also prevented the board from spending most of its funds on this kind of general work to the exclusion of local needs in various localities. The All American Route was used for supplying and maintaining the military telegraph line, and the Board, therefore, had decided to make some improvements at the terminal points of the route at Valdez and Eagle and also in the vicinity of Fairbanks.³

Since the route was important from a military point of view, Richardson then asked the Army to assign a company of engineer troops to Alaska. This company, to be stationed at Valdez, would work under the direction of the Board in improving the military trail and mail route between Valdez, Fairbanks and the Yukon. Richardson promised that the Board would "separate as far as practicable, the duty of the troops from the work of civilians under employment, and would, of course, give consideration to the difference in status, pay, etc., and would endeavor to protect them from unnecessary hardship".⁴

Richardson Organizes the Board

The War Department denied the major's request for a company of engineers, but approved his plans for the organization of the Board and the way in which it would conduct its work. Actually, the Act of January 27, 1905, which established the Board of Road Commissioners for Alaska prescribed the duties of the board in such detail as to make it unnecessary to prepare any regulations. The Act, among other things, provided that whenever more than \$5,000 were to be expended for road or trail work the job had to be advertised and awarded to the lowest bidder. Richardson asked, and the War Department agreed, that the general rules and regulations applicable to contracts and purchases for the War Department "generally shall apply to the contractual undertakings of the board," except that advertisements and proposals were to be submitted in triplicate. One copy was to go to the Returns Office of the Interior Department, one to the Treasury Department, and the third was to be retained by the disbursing officer of the Board. The Board also was to have the authority to accept bids, award work and approve contracts negotiated by the disbursing officer "where the construction by contract is found to be advantageous to the public interest." Copies of contracts were sent to the Assistant Secretary of War who was "to be the medium of communication between the Board and the War Department." In addition to the detailed report to be submitted as soon as work on a road or trail had been completed, the Board pledged itself to render a full report at the end of each season on the total work performed during the preceding working season. Richardson also stated that the annual report would "contain such information in respect to population, conditions, prospective benefits, etc., as will be necessary to acquaint the department with the character and progress of the work." And finally, Richardson asked that the disbursing officer be authorized, with board approval, "to incur and pay the necessary expenses for office hire, and to purchase such office furniture, instruments, and other material as may be necessary for the execution of the work" of the Board.⁵ The War Department approved all of Richardson's requests, and with the organi-

zational details taken care of, the Board members turned to their work.

The Board Members Travel in Alaska in 1905

During the summer of 1905 they traveled widely. Richardson went down the Yukon River via the White Pass, visiting Eagle, Circle, and Rampart. He went up the Tanana River to Fairbanks and from there down to St. Michael, Nome, and Ophir Creek (Council City) districts, and other parts of the Seward Peninsula. Orchard inspected the Valdez Trail and determined what improvements were necessary. Pillsbury examined a section of a road from Whitehorse to Yukon Crossing in the Yukon Territory; he then went to Ketchikan and ordered a survey for a road across a short portage of four miles on Prince of Wales Island from the Cholmondely Sound to Hetta Inlet; he also ordered a survey for a road from Haines Mission up to the Chilkat and Klehini River Valleys toward the international boundary. As if that was not enough for one short season, Pillsbury then went to Valdez in September and crossed Big Delta Pass into the interior, the proposed route of the new trail from the coast. From Fairbanks he went downriver to St. Michael and Nome and left Alaska by ocean steamer late in the fall.⁶

Richardson's Impressions

Richardson estimated that the new town of Fairbanks had a population of approximately 3,000, with another 5,000 working miners on the creeks in the vicinity. The Fairbanks Chamber of Commerce appealed to Richardson to have a wagon road constructed between the camp and adjacent mines, for with the spring breakup, the two stage lines had been forced to suspend operations because the trails had become nearly impassable, to wit:

The town could now only be reached on foot, and it was not uncommon to see miners come in here [Fairbanks] late in the evening, almost exhausted, with their clothing torn and draggled in the mud, after a trip of some thirty miles over a trail from six inches to two feet deep in mud, and from forcing their way through the brush and timber to avoid some of the worse places.⁷

Richardson quickly concluded that Chester W. Purington's 1895 observations on road building in the subarctic had been correct. Purington had remarked that

A serious detriment to the making of a road in Alaska is the thawing of the ground beneath the moss. It has been the universal experience that wherever the moss is cut into, thawing immediately commences, and the trail which was passable becomes a filthy, slimy mass of mud, roots, and broken stone, a difficult route for men on foot, a slow and tiresome road for loaded animals, and an impassable obstacle to any sort of vehicle. In regions further south under temperate conditions, trails frequently are developed into fair wagon roads by much usage. Such development can never take place in any part of the Northwest.

Purington recommended that in sections with poor drainage the moss be left intact, even be added to by material taken from the side ditches, and the surface then be corduroyed with heavy brush or poles. On top of this a covering of gravel would add insulation.⁸

On Richardson's recommendation, the Board then spent a total of \$7,851 in the Fairbanks area, building a six-mile road from Gilmore to Summit, designated as route No. 7, and a trunk road from Summit to the mines on Cleary Creek. The Board of Road Commissioners for Alaska contracted the work since it had no employees of its own.⁹

Major Richardson was particularly concerned with the development of interior and northwest Alaska. This necessitated the speedy development of the Valdez-Fairbanks route, consisting of three separate trails. The first, from Valdez to Copper Center, essentially followed the military trail Abercrombie had built earlier; the second led up the Tanana River from Fairbanks; and the third connected these two from Copper Center to the mouth of the Delta River or to Isabel Pass. Richardson pointed out that the new route would speed mail delivery and thus save time and money. The Board president reported that some work had already been accomplished on trails 4, 5, and 6, consisting primarily of repairs and improvements, such as replacing approximately 3,032 feet of worn-out corduroy with stone ballast and building numerous small bridges over dangerous crossings. He proposed that the dangerous Tanana River be crossed just above the mouth of the Delta River.¹⁰

Richardson arrived in the Nome district on August 22 to survey conditions and assess needs. He described existing forms of transportation, which consisted of a few narrow-gauge railroads -- the Wild Goose route, or the Nome Arctic Railway, which crossed Anvil Creek and extended about sixteen miles across the valley of the upper Nome River; the Solomon River Railroad from the mouth of the Solomon up to the mouth of the East Fork, approximately fourteen miles; and the Council City and Ophir Creek Railroad, running from Council to claim No. 15 Ophir, approximately eight miles. There were a few stagecoaches and numerous gasoline boats and "horse boats," five-ton scows pulled by horses along the banks of the creeks where safe footing could be found or in the stream when it was not too deep. When all else failed, men poled the scows upriver. Residents of Nome petitioned the Board to survey and construct a road leading directly into the heart of the peninsula, a distance of about one-hundred and seventy-five miles. Although too expensive to construct all at once, Richardson believed that short sections should be built where most needed as funds permitted.¹¹

The Board President's Recommendations

Richardson proposed to the War Department the construction of about 300 miles of roads and approximately 1,200 miles of trails, all urgently needed to further economic development. He estimated that it would cost about \$2,500 to \$3,000 per mile of road and approximately \$250 per mile of trail. The Alaska Fund was totally inadequate to meet these needs, and Richardson, therefore, suggested that Congress appropriate \$1 million outright. "Such an expenditure at this time," he argued, "would be of immense benefit to the country in the way of increased production and the opening of new fields." With such an appropriation, the Board could purchase its own animals, tools, and equipment and organize its work on the most economical basis. He explained that the Board had overexpended its \$28,000 budget by \$1,786.61, made necessary by building a permanent organization.¹² The major was an ambitious and capable man. In order to gain success and prestige in

his profession as a military engineer on the frontier, he needed to build his own organization and substantially increase the size of his budget. This, he probably reasoned, would give him the flexibility to build a transportation system in the north which, in turn, would enhance his career.

Back in Skagway at the end of the summer season, Richardson developed a grandiose plan for the development of an integrated railroad and road system. The major briefly described some of the existing railroads, six altogether with relatively short mileages. There was the White Pass and Yukon Railway between Skagway and Whitehorse; and the Alaska Central Railroad which had completed about fifty miles from Seward, intending eventually to reach Fairbanks, some twenty-six miles constructed from Chena and Fairbanks to the mining creeks in the Tanana Valley. Only the Alaska Central and Solomon River Railroads featured broad gauges: all the others were narrow gauge.¹³ Farsightedly, the major stated that "the time has now arrived when the government should in some way undertake to control and promote this [railroad] construction in Alaska, by prescribing a uniform gauge . . . for all roads and . . . by giving substantial aid to some one road which might be regarded as a trunk line for the whole territory." He then suggested a route for such a trunk line. It would start from Haines Mission, proceed up the Chilkat and Tlehini Rivers and go into the interior via an easy pass. Once over the mountains the route led west and north over a rolling plateau country, intersecting the upper waters of the Alsek and White Rivers, to the headwaters of the Tanana, and thence down to Fairbanks. From or near Fairbanks, the route led across the country toward the Rampart mines to about twenty-five miles below the town of Rampart. If necessary, the Yukon River was narrow enough in that spot to be spanned by a bridge, in fact, that was "the only point that I know of for 1,500 miles on the Yukon where a bridge can be successfully thrown across at reasonable expense," Richardson asserted. This then was the proposed main trunk line. "Omitting for the present the gap along the Yukon" between the crossing point and Kaltag, he continued, "the line should be taken up again" at Kaltag and continued to Unalakleet and

thence along the coast. One branch would lead to St. Michael near the mouth of the Yukon, and another to the head of Norton Sound at Council City. At the latter point the main trunk line would connect with the small system or roads already under construction in the area.¹⁴

Richardson then contended that the existing railroads might reject this main trunk line, but he dismissed the potential opposition as unimportant. The most significant advantage of his plan was that it would open the country from a protected harbor in southeastern Alaska. Trade would "develop along natural lines all the way to the westward, instead of going from Seattle . . . in broken lots to southeastern Alaska, Valdez, Resurrection Bay and Nome." In case the War Department rejected the railroad proposal, Richardson suggested that the government consider the construction of a road from Valdez to the upper Tanana and thence to Fairbanks and Rampart. Should this option be adopted, the Major suggested that the "best solution for the question of territorial or other form of government for Alaska would be to separate southeastern Alaska altogether from the rest of the territory and attach it to the State of Washington." For without the railroad, southeastern Alaska would not be tied into the rest of Alaska either commercially, economically, or politically, while the Valdez-Fairbanks-Rampart road would connect the bulk of the territory commercially and politically, and make it a close Seattle trading partner. Richardson also urged the War Department to establish a military post at Kaltag, a key point for the lower Yukon River and the northwestern part of Alaska. This post would easily serve the purposes of Fort Gibbon, St. Michael, and Fort Davis combined. Should the Haines-Fairbanks-Rampart railroad be built, the major thought that the military post at Valdez should be relocated at a point on the upper Tanana where the route crossed the boundary. In that scenario the posts at Haines Mission, Eagle, the upper Tanana and Kaltag would "meet the needs of the whole territory in the way of military supervision."¹⁵

The War Department Response And Board Accomplishments

Much to his chagrin, the War Department did not respond favorably to most of his suggestions, except for approving the construction of a wagon road from Valdez to Fairbanks. Still, the Board could look back on a productive first year. It had directed various reconnaissances and surveys, undertaken some repairs and improvements, built short stretches of road from Haines up the Chilkat River to the Indian villages of the Chilkat Valley, and similar projects in the Fairbanks and Nome districts. The three men agreed that the monies accruing to the Alaska Fund and available for road construction were wholly inadequate to meet even the most immediate and pressing transportation needs of the Territory. Furthermore, the monies from this fund varied and were received at irregular intervals, making it almost impossible to plan ahead and commit funds for long-range projects. The members of the board were united in their opinion that the law which had created the Board of Road Commissioners for Alaska needed to be amended. In November 1905 the Army called Major Richardson to Washington to give a personal report and spell out needed changes. In early 1906 Congress amended the legislation, as requested. As approved, it regularized the collection of license monies and raised the cost of roadwork which could be performed by government forces from \$5,000 to \$20,000.¹⁶ Congress also made a direct appropriation of \$150,000 to be expended at the direction of the Board.

Organization of Work

To carry out the necessary work over such a vast territory, properly supervise it, and protect expenditures, the Board gave much thought to the organization of the office and to the transfer of funds and methods of payment. It divided Alaska into districts, with sub-offices and with a civil engineer as superintendent in charge of each district. These superintendents were to act as disbursing agents for the Board. After the Board had laid out the work, the engineer officer became responsible for seeing it carried out. For that reason he was in charge of the organization of all working parties and for their

immediate direction in the field, as far as possible and consistent with the responsibilities of the other Board members. The disbursing officer, for similar reasons, had great freedom in supervising all office details relating in any way to his responsibility of accounting for funds, property, and records.¹⁷

In order to pay for labor and supplies at distant points, the Board made agreements with local banks to cash checks drawn by the various superintendents. The board had suitable checkbooks printed and distributed. The superintendents were to keep receipts and make a careful accounting. Since there were no banks in some areas where work was performed, it soon became necessary to extend this system to some kind of arrangement with commercial or trading companies. This was done by entering into a written agreement with such companies to furnish supplies and pay the laborers. Eventually, the Board established a system of payment on the overdraft principle. It reimbursed the bank or commercial company each month (or more often if desired) for amounts paid out, paying a negotiated rate of exchange varying from one-fourth to one-half of one percent.

With the framework in place, the Board accepted a 1906 budget of \$230,500, an increase of eight times over the previous year. Of the total, \$80,500 accrued from the Alaska Fund. In addition, Congress also appropriated an extra \$35,000 for a reconnaissance and preliminary survey for a mail and pack trail from the navigable waters of the Tanana River near Fairbanks to the vicinity of Council City on the Seward Peninsula, a distance of approximately 600 miles. The Board hired a civil engineer, J. I. McPherson, who selected a feasible route.¹⁸

The Board's Second Year of Operation

The Board of Road Commissioners for Alaska was not idle during the winter of 1905-06. It shipped rations, forage for the animals, and tools from Valdez and Fairbanks and distributed them in caches along the trail and also constructed a bridge across the Tazlina River; made a reconnaissance of a part of the route from Fairbanks to Rampart; and

flagged 247 miles of exposed trails on the Seward Peninsula. The Board used two assistants and a seven-dog team for flagging -- red flags placed at 50 to 150 feet apart (depending on the terrain) to make winter travel less hazardous by keeping travelers from getting lost.¹⁹ The Board also improved another 40 miles of road, cut 285 miles of new trail, and upgraded another 200 miles already in use. Additionally, it located and surveyed another thousand miles of roads and trails.²⁰

Boards Accept Private Monies

The Board accepted \$7,366.50 which the citizens of Nome had collected to enable the construction of a road from town to the so-called second beach line, about three miles back from the coastline. That, together with what the Board was able to spend, resulted in the construction "of a veritable boulevard, 22 feet between ditches, over which thousands of tons have been transported" where formerly only the lightest wheeled traffic was possible.²¹

Specifically, that season the board accomplished the following location surveys:

<u>Place</u>	<u>District</u>	<u>Distance</u>
Gulkana to Donleys	Valdez	121 miles
Fairbanks to Donleys	Fairbanks	127 miles
Delta to Banner	Fairbanks	13 miles
Donleys to Banner	Fairbanks	51 miles
Fortymile to Eagle	Fairbanks	57 miles
Rampart to Glenn	Fairbanks	30 miles
Hope to Sunrise	S.W. Alaska	39 miles
Preliminary survey	Fairbanks	18 miles
Tolovana-Glenn	?	?
Sundry surveys	Seward Peninsula	19 miles
		<u>475 miles</u>

It constructed and marked the following mileages:

Wagon roads	46.5 miles
Roads maintained and improved	40.0 miles
Sled trails - full width for double sleds	181.0 miles
Trails - cleared half width	81.0 miles
Winter trails flagged	247.0 miles
Bridge over the Tazlina River	
Maintenance of the Bonanza Ferry ²²	

Board Purchases Horses

Early in the construction season the Board decided to purchase its own horses rather than to pay the high price of hire. Team rentals at Nome, Fairbanks, and Rampart cost between \$15.00 and \$18.00 per day. At that price, the Board reasoned, it monthly paid what it would cost to buy a team outright. And if funds permitted in 1907, it intended to purchase its own animals for all projects.²³

Board and Signal Corps Cooperation

In 1906 the Board and Signal Corps began a close working relationship. Wherever practical, the latter changed the route of the telegraph lines to follow the location of permanent trails. This, of course, was to facilitate maintenance. For example, it changed the course of the line to follow the cut-off section from Gulkana to the mouth of the Delta and modified the line between Fairbanks and Rampart and from Kaltag to Unalakleet.²⁴

By the end of 1906 the Board had given form and structure to its organization. Within a couple of years of its establishment, it had become an important federal agency. Major Richardson, as president of the Board, had gained considerable influence in Alaska. For the agency he directed had begun to provide Northerners with the basic framework of a transportation system, and he also controlled a sizable payroll.

The Economic Impact of the Board's Work

Numerous economic benefits quickly resulted from the work of the Board. For example, in the Fairbanks district it had built a 4.07-mile-long road, costing \$2,439 per mile, connecting Summit to Cleary. Some 5000 tons of freight moved over this segment at a reduction of \$10.00 per ton, saving Cleary miners \$50,000 in 1907. A parallel road from Summit to the mines of Fairbanks Creek, 9.22 miles in length and costing \$1,300 per mile, had resulted in a reduction of freight rates by \$20

per ton. The Fairbanks Creek miners had saved an estimated \$40,000 on the transportation of their supplies.²⁵

Improvements in the overland mail trail had resulted in speedier deliveries. In 1906 the first winter mail arrived in Nome on December 5, taking only 49 days from Seattle. The previous year it had not arrived until December 29, and the year before that not until December 31. This represented a time saving greatly appreciated by the citizens of Nome and Seward Peninsula. Ed. S. Orr and Company operated a stage line between Valdez and Fairbanks, a distance of 376 miles. The company held the contract for carrying the winter mail between the two cities. Between November and April, mail and passenger stages left Valdez and Fairbanks weekly. The company set a record for the 1906-07 winter season of six days, 10 hours, and 10 minutes. It usually took nine days to reach Fairbanks and eight going back to Valdez. There were 39 stations along the route, and it took 180 horses, run in relays, to keep the stages moving.²⁶

Richardson Lobbies Congress For Funds

Back in Washington, Richardson's lobbying efforts with Congress paid off handsomely for the 1907 fiscal year when it allotted \$250,000 for his Alaskan projects. Together with \$90,000 from the Alaska Fund, the Board disposed of a record budget of \$340,000.²⁷

More Requests for Road Construction but Inadequate Funds to Meet Them

Unfortunately, requests for road and trail construction from all sections of Alaska poured into Board headquarters "so far in excess of the abilities of the Board to meet, with the funds available or likely to become available in the near future," that Board members thought it wise to issue a circular explaining to Alaskans their policies and limitations. In its circular, the Board drew a distinction between monies accruing from the Alaska Fund and special Congressional appropriations for the "construction and maintenance of military and post

roads, bridges, and trails." The Board had decided to use monies from the former source mainly for local improvements and from the latter for "the location and construction of main trunk lines of communication through the territory, and especially the through mail route from Valdez to the Seward Peninsula." The Board welcomed petitions for projects but requested that each be accompanied by the best information available, such as character of the route desired, tonnage to be transported, number of people to be benefited, the probable permanence of the community, and the approximate cost of the desired undertaking. But the Board also reminded its constituents of Alaska's vast size and that it would take years before all regions requiring aid could even be examined. Actual construction work had to wait for these preliminary reconnoissances. Finally, the Board encouraged monetary contributions from communities in order to stretch funds.²⁸

Annual Report

In his report to the Secretary of War, Board president Richardson differentiated among three different types of construction used. Wagon roads had to accommodate year-round traffic of considerable tonnage. Therefore, they had to be located with suitable grades and be crowned, ditched, and drained and corduroyed or planked where necessary. Winter sled roads had to meet the requirements of winter travel only, therefore no crowning, ditching, or draining was necessary nor was there a requirement for extensive corduroying. They did have to be wide enough through timbered areas and sidehill cutting to permit the passage of double teams, however. In addition, winter sled roads had to have the proper grade for fairly heavy loads, and most of the tree stumps and surface inequalities had to be removed to provide a fairly even surface. Some stretches of winter sled roads had been so well built, in fact, that they even permitted light-wheeled traffic in the summer. Lastly, the dog team and pack trail construction was the least expensive to build. It differed from that of the winter sled road in that it was narrower and had steeper grades and more surface unevenness. By 1907 the Alaska Road Commission had completed about

166 miles of wagon road; 384 miles of winter sled road; 242 miles of dog team and pack trail; 382 miles of flagged winter trail and built three river bridges and installed three ferries. The following table shows, in detail, the wide regional distribution of work accomplished as of 1907.

The Board had to cope with wide variations in construction costs in various regions of Alaska. During the 1907 season, for example, the cost of labor had ranged from \$2.50 to \$5.00 per day. Board was provided and subsistence costs ranged from slightly more than \$0.50 per day in southeastern Alaska to \$3.00 per day in the Interior. The higher expenses reflected the inadequate transportation system: southeastern Alaska, for example, could rely on competitive and cheap ocean freight rates. Similarly, wages differed significantly, again reflecting the cost of living in the different regions. Superintendents, locating engineers, foremen, and assistant foremen received anywhere from \$150 per month to \$10 or more per day. The cost of hiring work animals also varied greatly ranging from \$10 per day for a four-horse team including feed to \$13 per day for a single horse and no feed. Not surprisingly under these circumstances and with the added diversity in climatic, timber, and soil conditions, mileage costs of construction ranged from a low of \$100 to a high of several thousands of dollars per mile. And although considerable economy had been achieved with the purchase of four road machines, each drawn by a team of six to eight horses and used in ditching and sidehill grading, it still cost an average of approximately \$2,200 for each mile of wagon road built. Winter sled roads cost \$250 and pack trails \$100 per mile.³⁰

The Board a Smoothly Working Organization in 1907

By 1907 the Board had become a smoothly working organization, but as with any growing entity emerging complexities called for clarifying directives. Thus in circular No. 2 issued May 6, 1907, it stated that superintendents of districts and disbursing agents of the Board were required "to furnish bonds for the faithful performance of their

DISTRIBUTION OF WORK AND MILEAGE COMPLETED DURING SEASON

Wagon Roads

Name	Construct- ed and im- proved to Nov. 1, 1906	Construct- ed Nov. 1 1906 to Oct. 1, 1907	Total con- structed and im- proved	Length previously construct- ed im- proved year
	Miles	Miles	Miles	Miles
Portage road.....	2.00	1.96	3.96	0.31
Haines-Pleasant Camp.....	3.04	9.00	12.04	-----
Valdez-Copper Center.....	-----	.71	.71	-----
Gilmore-Summit.....	6.00	-----	6.00	-----
Summit-Cleary.....	4.73	a1.33	a6.06	-----
Summit-Fairbanks.....	9.22	a1.33	a10.55	-----
Fox-Dome.....	6.88	a1.00	a7.88	-----
Ridge-Vault.....	-----	a1.50	a1.50	-----
Siding-Esther.....	-----	a6.00	a6.00	-----
Rampart-Big Minook.....	4.25	2.00	6.25	1.00
Eagle-O'Brien.....	-----	8.75	8.75	-----
Circle-Birch.....	-----	9.50	9.50	-----
East Fork-Council.....	31.00	-----	31.00	-----
Nome-Fort Davis.....	2.10	-----	2.10	-----
Nome-Dexter.....	7.00	3.00	19.00	-----
Anvil-Glacier.....	-----	.80	.80	-----
Penny River.....	-----	.80	.80	-----
Cripple River.....	-----	.80	.80	-----
Deering-Ininachuck.....	-----	.75	.75	-----
Candle Creek.....	-----	2.00	2.00	-----
Mile 35, Sunrise-Hope.....	-----	37.00	37.00	-----
Bear Creek.....	-----	1.50	1.50	-----
Total.....	76.22	89.73	165.95	1.31

a Estimated: reports not yet received

b Does not include 65 miles sled road from Washburn to Donleys, replaced by new Delta Cut-off.

DISTRIBUTION OF WORK AND MILEAGE COMPLETED DURING SEASON (CONTINUED)

Sled Roads

No.	Name	Construct- ed and im- proved to Nov. 1, 1906	Construct- ed Nov. 1 1906 to Oct. 1, 1907	Total con- structed and im- proved	Length previously construct- ed im- proved year
	Valdez-Copper Center.....	24.75	-----	24.75	5.75
4a	Marshall Pass.....	.75	-----	.75	-----
6	Copper Center Delta.....	6.00	43.00	43.00	7.25
6a	Delta River.....	25.00	.50	25.00	-----
5b	Delta Cut-off.....	-----	52.00	52.00	-----
5	Fairbanks-Washburn.....	62.00	-----	62.00	62.00
5a	Washburn-Tenderfoot.....	4.00	15.00	19.00	4.00
16	Cleary-Birch Creek.....	-----	b34.00	b34.00	-----
17	Fairbanks-Hot Springs.....	-----	b48.00	b48.00	-----
18	Hot Springs-Fort Gibbon...	-----	34.00	34.00	-----
11	Eagle-O'Brien.....	-----	7.25	7.25	-----
22	Eagle-Seventymile.....	-----	15.00	15.00	-----
34	Canyon Creek-Walkers Fork.	-----	2.50	2.50	-----
11a	Jack Wade-Steel Creek.....	9.90	-----	9.90	-----
	Total.....	132.40	251.25	383.65	79.00

Trails

4	Valdez-Copper Center.....	2.00	-----	2.00	-----
6	Copper Center-Delta.....	74.00	-----	74.00	6.00
(5)	Washburn to McCarty.....	30.00	-----	30.00	-----
16	Cleary-Birch Creek.....	-----	a30.00	a30.00	-----
19	Cut-offs on Yukon.....	-----	36.50	36.50	-----
35	Nome -Unalakleet.....	-----	52.00	52.00	-----
	Unalakleet-Kaltag.....	17.00	-----	17.00	-----
	Total.....	123.00	118.50	241.50	6.00

a Estimated: reports not yet received.

b Does not include 65 miles sled road from Washburn to Doneleys, replaced by new Delta Cut-off.

c Footnote 29

duties, when deemed necessary by the Board of Road Commissioners." The bonding, however, was not to be charged against the salaries of such employees but was to be paid from Board funds. A day later, circular No. 3 instructed superintendents of districts and foremen in charge of working parties to notify all employees that the Board did assume responsibility for "injuries or sickness of men so employed." The Board modified this statement, however, by adding that in case of serious illness or injury through unavoidable accident it would procure a surgeon or physician without charge in order to prevent loss of life. If necessary, it also would transport victims, free of charge, to the nearest suitable medical or hospital facility.³¹

On May 8, circular No. 4 regulated pay periods and No. 5 specified that all roads and trails located, constructed and maintained by the Board were to be 60 feet wide, 30 feet on each side of the center line except in special cases where a lesser width might be employed. There was to be no encroachment on this 60 feet of right-of-way unless the Board had granted prior authority.³²

Richardson Lobbies Successfully for Special Appropriations

In the meantime, Richardson continued to lobby successfully for special congressional appropriations. For the fiscal years 1908 through 1911, Congress provided \$244,857.18 (1908), \$236,674.97 (1909), \$237,498.50 (1910), and \$100,000 (1911). Together with monies from the Alaska Fund, this gave the board budgets for those years as follows:³³

<u>1908</u>	<u>1909</u>	<u>1910</u>	<u>1911</u>
\$365,629.90	\$383,646.89	\$340,396.79	\$266,777.95

1911 Annual Report

In 1911 the Board reported that a total of 759 miles of wagon roads, 507 miles of winter sled roads, and 576 miles of pack trails had been built. Additionally, every year the Board had staked several hundred miles of winter trails over treeless and exposed sections of the territory for the guidance and safety of travelers during storms.

It also had continued its program of constructing bridges and installing ferries. The Board once again called attention to its wagon roads and explained that this designation had been applied in a restricted sense in Alaska, and they certainly did not meet the standards of those found in the contiguous United States. Alaska's wagon roads, the Board explained, were designed to be good country roads capable of accommodating year-round traffic of considerable tonnage. They had been located with appropriate grades, been crowned, ditched, and drained, and corduroyed or planked where necessary. Wherever soil quality permitted, ordinary graded earth roads were built. In areas with poor soil conditions, where an ordinary earth road would not support the traffic, the board had put down a light corduroy of small spruce trees covered with several inches of earth. In fact, most of the wagon road mileage constructed consisted merely of such roads and therefore rutted badly during prolonged periods of rain. While the Board had worked in most sections of the territory, it had constructed the best system of local roads in the Fairbanks and Nome mining districts. This had been accomplished, in part, because of the substantial financial assistance local residents had rendered.

Congressional Legislation

In 1904 Congress had passed legislation that required all able-bodied Alaska males between the ages of eighteen and fifty who resided outside incorporated towns to work two days each year on the public roads or, failing to do so, furnish a substitute or pay eight dollars in cash. Gradually, the court commissioners had made the law effective, and by 1911 it had yielded the equivalent of approximately \$100,000 in labor and money payments. In fact, roads were in such good shape in the Fairbanks mining district in the summer months that automobiles carried both passengers and freight between the town and the creeks.³⁴

Board Plans Based on Population

By 1910 census records showed that Alaska's interior, principally Fairbanks and the Tanana Valley, had a total population of 13,064 topped only by a population of 15,216 in southeastern Alaska. The Board members agreed that it was of the utmost importance to connect this thriving mining district with the coast at Valdez. Construction of the Valdez-Fairbanks wagon road would continue on a priority basis. Already, more than half the total wagon road mileage in the territory had been constructed along this route. A branch had been added by building some 90 miles inland at Willow Creek and from there to Chitina on the Copper River and Northwestern Railroad, which connected with Cordova. In short, the Board could point to substantial accomplishments in 1911. Its system of wagon roads, winter sled roads, and pack trails had reduced the expense of moving freight, made possible speedy and regular mail service to interior and northwestern Alaska, and increased the safety of travel in general.³⁵

FOOTNOTES

1. Dumas Malone, ed., Dictionary of American Biography, vol. 15 (New York: Charles Scribner's Sons, 1935, p. 576.
Richardson was promoted to Captain on April 26, 1898; to Major on April 7, 1904; Lieutenant Colonel in 1908; and Colonel in 1914; and left Alaska in 1917, after he became a Brigadier General in the National Army. In March 1918, Richardson assumed command of the 78th Infantry Brigade, 39th Division and arrived overseas at Brest, where, on September 3, in time to take part in the closing battles of World War I. Next he commanded the American Forces at Murmansk in northern Russia, arriving there early in April 1919. In October he returned to the United States, and with the mustering out of the National Army he was returned to the rank of Colonel and retired on October 31, 1920. He died in Washington on May 20, 1929, at sixty-nine years of age.
2. 1905 Report of the Board of Road Commissioners, pp. 4-5.
3. Richardson to the Military Secretary of the Army, May 25, 1905, R. F. 94, Records of the Adjutant General's Office, 1780's to 1917, AGO Doc. File, various files pertaining to Alaska, N.A.
4. Ibid.
5. Judge-Advocate General to the Acting Secretary of War, June 15, 1905, RG 94, Records of the Adjutant General's Office, 1780's to 1917, AGO Doc. File, various files pertaining to Alaska, N.A.
6. Ibid., pp. 7-8.
7. Ibid., pp. 10-11.
8. Ibid., pp. 13-14.
9. 1905 Report of the Board of Road Commissioners, pp. 15-17.
10. Ibid., pp. 15-19.
11. Ibid., pp. 23-27.
12. Ibid., pp. 29-30, 44-45.
13. Richardson to Major General F. S. Ainsworth, October 18, 1905, Confidential, R. G. 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.

14. Ibid.
15. Richardson to Major General F. C. Ainsworth, October 24, 1905, R.G. 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska.
16. 34 Stat. 192.
17. War Department, Report of the Board of Road Commissioners for Alaska, 1913, (Washington: GPO, 1914), p. 8.
18. Board of Road Commissioners, Report upon the Construction and Maintenance of Military and Post Roads, Bridges, and Trails, Alaska, 1906 (Washington: GPO 1907), pp. 61, 2-3.
19. Ibid., pp. 3-6.
20. Ibid., P. 8.
21. Ibid., P. 9.
22. Ibid., pp. 20-21.
23. Ibid., pp. 10, 60.
24. Ibid., pp. 10-11.
25. "Road Building in Alaska," Alaska-Yukon Magazine, March 1907, pp. 20-21.
26. Report of the Board of Road Commissioners for Alaska to the Secretary of War, 1907, in Annual Reports, War Department, Fiscal Year Ended June 30, 1907 (Washington: GPO, 1907), pp. 5-6;"Ed. S. Orr & Company's Stage Line," Alaska-Yukon Magazine, June 1909, P. 190.
27. 1907 Report of the Board of Road Commissions for Alaska, p. 6.
28. Ibid., pp. 7-8.
29. Ibid., pp. 10, 9.
30. Ibid., pp. 11-15.
31. Circulars No. 2 and 3, May 6 and 7, 1907, RG 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.
32. Circulars No. 4 and 5, May 8 and July 10, 1907, RG 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.

33. U.S. Department of the Interior; Office of the Territories, Alaska Road Commission, Annual Report for the Fiscal Year Ended June 30, 1956 (Juneau, Alaska: August 31, 1956), p. 43.
34. Sidney Charles, "Progress of Road Building in Alaska," Alaska-Yukon Magazine, January 1911, pp. 38-40.
35. George W. Rogers and Richard A. Cooley, Alaska's Population and Economy: Regional Growth, Development, and Future Outlook, Vol. II, Statistical Handbook (College, Alaska: University of Alaska, Institute of Business, Economic, and Government Research, 1963), p. 28; Sidney Charles, "Progress of Road Building in Alaska," Alaska-Yukon Magazine, January 1911, pp. 38-40.

CHAPTER THREE

WILDS P. RICHARDSON AND JAMES WICKERSHAM

It was not surprising that Richardson was called upon by members of the executive and legislative branches of the federal establishment for advice on matters affecting the North. At the end of the construction season each year, the War Department recalled him to Washington where he served in various capacities between November and April. In the course of his work Richardson came into contact with many influential lawmakers and bureaucrats, and over the years he made friends in high offices.

Richardson had known James Wickersham for a considerable period of time, first as a federal judge and then as Alaska's newly elected delegate to Congress. Wickersham took his seat in the House of Representatives in March of 1909. While running for the office, he had promised territorial voters that he would get through Congress a bill allowing them to elect their own legislature and also granting them a greater degree of home rule. As promised, the new delegate submitted his measure on June 7, 1909. It was referred to the House Committee on Territories, of which he was a member, for hearings and consideration. Unfortunately for Alaskan hopes, however, the new president, who had served as governor-general at Manila in the Philippine Islands, favored the creation of a government similar to that with which he had worked in the Islands. Ex-Governors Wilford Hoggatt and Walter E. Clark as well as Major Richardson supported the president's plan, as did numerous federal bureaucrats and lobbyists for corporate interests with financial investments in the Territory. If successful, Taft's scheme would have placed Alaska under the control of the Bureau of Insular Affairs in the War Department.¹

Conflict Develops Between the Two Men

Wickersham violently opposed the president's plan and quickly attacked those who supported it. He was particularly annoyed with

Richardson because he thought that the Major had played a major part in drafting the offending legislation. It was not long before the two men had become implacable enemies. In early 1910, for example, the delegate complained to the Secretary of War that, contrary to presidential orders issued the previous year directing territorial officers to spend their time at their duty stations rather than in the nation's capital, Richardson had "arrogated to himself the duty of controlling general legislation for Alaska in a way which I decidedly resent." Richardson backed the creation of an Alaska Railway Commission which, Wickersham charged, would give away valuable coal lands to the Alaska Syndicate, a combination of the J. P. Morgan and Guggenheim fortunes. In Alaska, the principal mining venture of this organization consisted of the Kennecott copper mine. In order to tap this deposit it had begun construction of the Copper River and Northwestern Railway. It controlled steamship transportation and a major part of the salmon canning industry. Most importantly, the delegate had early clashed with the Alaska Syndicate and subsequently run on an antisyndicate platform in his first campaign.²

Richardson Supports Beveridge Bill

Then there was the major's support of the Beveridge bill, which provided for the appointment of a legislative council of nine members with broad powers of legislation. There would be an Attorney General, a Commissioner of the Interior, a Commissioner of Education and Health, and a Commissioner of Mines, who, together with the governor and four other persons appointed by the president, made up the legislative council. Beveridge had introduced his bill on January 18, 1910, but Wickersham had not learned of it until the next day. He immediately requested a hearing before the Senate Committee on Territories. In his testimony the delegate argued vehemently against the measure, and he and Richardson exchanged sharp words. After leaving the committee room on January 20, Wickersham related that Richardson met him in the corridor and in "an angry tone he threatened me for what I had said

before the Committee of the Senate about his connection with these bills and said that only his position as a Major in the Army, and my position as a Delegate in Congress protected me."

Wickersham rejected the whole scheme but was particularly offended by one provision of the measure which allowed that one or more of the commissioner positions could be filled by Army officers. If an officer should be appointed Commissioner of the Interior, he would simultaneously also be the chairman of the Board of Road Commissioners for Alaska. The delegate feared that Richardson had included this section so as to become the Commissioner of the Interior, a member of the Legislative Council, and the Alaska Railway Commission and thereby make himself a very powerful individual indeed, becoming "the dispenser of franchises, privileges, and concessions of the public resources of Alaska." Wickersham accused Richardson of favoring the Alaska Syndicate, thereby betraying the trust of the miners, businessmen, newspapers, and most Alaska residents opposed to placing control of the Territory's resources "into the hands of an appointive Military Commission" of the Alaska Syndicate. Wickersham claimed to represent all the people of Alaska, "excepting only one or two big interests which hope thus to control the great undeveloped resources of the Territory, as well as its government, through the channel."³

Wickersham not only protested the major's conduct to his superiors, he also asked that the officer be sent back to Alaska to perform the duties of his job instead of lobbying in favor of legislation which the delegate opposed as being "inimical to the interests of the people of that Territory." In fact, it seemed as if Wickersham's animosity toward Richardson had gotten the better of him and clouded his judgment. The Major, as alleged, was not an Alaska territorial officer subject to the supervision of the Secretary of the Interior, but rather served under the direction of the Secretary of War, who had ordered him to Washington. Richardson, however, denied any lobbying for the Alaska Railway Commission. He stated that he had merely been asked to supply some ideas involving coal lands and that he had done. In fact, the so-called bill was merely a rough draft. Richardson stated that he

"would not have done even that much had I not been authorized by the President, when Secretary of War, to follow up the railroad developments in the Territory, and keep him advised as to the feasibility and necessity of aid by the Government in such construction." The allegation that Richardson was in large part responsible for the Beveridge bill was pure nonsense. The Major stated, however, that "my connection with such a proposed government would not do any more injury to Alaska than Mr. Wickersham's presence here as a Delegate; nor do I think I would have a smaller percentage of the whole peoples' support."⁴ Richardson told his military superiors that the delegate had received a mere 3,802 votes out of a total of 9,625 cast in the last election, divided among five candidates. The major disclaimed any connections with the Alaska Syndicate and in turn accused the delegate of making statements "wholly false as to fact, malignant in motive, and unwarranted from what he knows of my work in the Territory and from my past relations with himself." After considering all the facts, the Secretary of War rejected the delegate's complaints and held that since Wickersham had made the remarks to which Richardson had objected before a Senate committee rather than on the floor of the House under his privilege as a member of that body, the Major had acted properly under his rights and privileges as a citizen.⁵

Wickersham Persists in his Quarrel with Richardson

Wickersham, however, was a contentious and scrappy individual and not to be deterred in his quest for substantially reducing Richardson's influence with the executive branch and Congress. He drew up a long list of allegations and complaints designed to demonstrate Richardson's long history of lobbying before Congress. The delegate used selective passages from various hearings to implicate and discredit Richardson. As early as 1904, for example, even before taking up his road work, the officer had offered to come to Washington "to lay the facts before the Secretary of War and before the proper committees of Congress." As a result of this offer, Richardson had "been ordered by the Secretary to

report to Washington in order to go before the committees and represent the needs of Alaska." Senator Knute Nelson, one of the members of the Senate subcommittee which had visited Alaska in 1903 where he had become acquainted with Richardson, praised the latter for his great assistance in getting special appropriations from the Military Committees for the Alaska road work. In fact, Nelson had stated, "He and I have frequently conferred about Alaskan matters . . . and I have found him very helpful. He has given me lots of valuable information about Alaska; and I think he has been very helpful in securing not only appropriations but other legislation." In his very lengthy indictment of Richardson, the delegate cited innumerable alleged wrongdoings and finally reiterated his demand that the Secretary of War remove the major from Washington.⁶

Wickersham was unfair in his continuing attacks on Richardson, but they did serve to gain the attention of Alaskan newspapers and citizens and focus them on the inadequacies of the Beveridge bill. And although Richardson had, in fact, made several recommendations which had been incorporated in the draft legislation, it had been President Taft who had proposed the peculiar provisions of the Beveridge bill. On December 11, 1909, the president had stated that

Senator Beveridge is willing to father such a bill, and I am anxious to have it embody the features that I suggested. The truth is that what you might do is to take the Philippine Act of 1902 and go through it and strike out the things that are peculiarly applicable to the Philippines and insert those things that you may know from Richardson or otherwise in reference to Alaska. When you have it, send it over to me and I will send it to Senator Beveridge and he will shape it with his knowledge of existing conditions in Alaska and introduce it, and I will see what I can do to help it through.⁷

Wickersham's Dislike of Richardson Increases

In the meantime, Wickersham's dislike of Richardson increased, and he became almost paranoid about the latter's intentions. To a constituent he suggested that the Major assisted "his friends the Guggenheims to defeat me for reelection. I shall expect you to offset the Major's in-

fluence. . . and assist me to be reelected for the purpose of defeating his appointive military legislative bill with the Major at the head of it to control Alaska in the interests of the big corporations." The delegate concluded that "we have got to fight to protect the Territory from this band of grafters....."8

Wickersham's Hopes

What Wickersham clearly hoped was that his continued barrages against Richardson, tainting him with allegations of ties to the Alaska Syndicate, would eventually ruin his military career by making him so controversial that the Army would decide to replace him. In a public speech in Fairbanks, Wickersham continued his harangue against the President of the Board of Road Commissioners for Alaska. He asserted that the Major had "assisted in drafting the Beveridge bill, so that he might be appointed in charge of the railroad board" and that "the bill was plainly intended for the benefit of Major Richardson, and the fattest job was for the Major." Not only was Richardson self-serving, Wickersham charged but a coward as well because although there had been two foreign wars since he had been in Alaska, he had served in neither. What Wickersham did not know was that Richardson had applied for duty in the Philippine Islands in 1899 while stationed at Fort Egbert, Alaska, but had been refused because the Army needed him in the north. It was perhaps an editorial in the Fairbanks Daily Times which accurately summarized Wickersham's vendetta: "And now comes a politician, who, having been elected to attend to the representation of Alaska in Congress, abuses his position to vent a petty spite upon Major Richardson."9

Richardson learned of the delegate's unremitting attacks against him while working at Kaltag on the Yukon River. He was desperate and helpless because he did not command the attention of the newspapers like the delegate did. He reiterated that he had merely followed orders when providing background information for the Beveridge bill. "His outrageous assault upon me," the Major stated, "was unjustified by any single act of mine, official or personal, toward himself or the people of Alaska. It

was as unexpected as it was vindictive and malevolent and it is now continued. . . with no restraint of moral responsibility, respect for the truth, or sentiment of common decency."¹⁰

Wickersham gained reelection in 1910 after having waged a campaign in which he criticized the absentee-owned fisheries for not paying their share of taxes to the Territory, assailing the Alaska Syndicate, and attacking President Taft's scheme for governing Alaska and advocating his version of home rule for the North.

The Misfortunes of Lieutenant Sam C. Orchard

The delegate had not forgotten Richardson and the Board of Road Commissioners for Alaska. In the summer of 1911 he received information from constituents which informed him of a local rumor that Lieutenant Sam C. Orchard, the disbursing officer of the Board, was short in his account. In fact, one of Wickersham's informants labeled Orchard an "embezzler to the extent of \$17,000" from the Road Commission Fund. Another told about the Lieutenant's "heavy drinking for the last three years and his spending large sums of money in politics attempting to defeat my [Wickersham's] election last August." And although his informants had no factual information which might throw light on the situation, Wickersham asserted that as a public official it was his responsibility to bring this information to the attention of the War Department so that an investigation might be undertaken. The delegate was happy when he learned that such a probe already was underway because the War Department had received similar information earlier. By October 1911, a court martial had been convened, and Orchard was ordered under guard to Fort Lawton, Washington, to await the actions of the higher authorities.¹¹

Who was this First Lieutenant Samuel Chandler Orchard? He was born on August 31, 1868, in Fayette County, Texas, and received a commission as a First Lieutenant in the First Texas Volunteer Infantry on May 14, 1898. He served as inspector of a rifle range and as a quartermaster but did not participate in any of the battles during the Spanish-American War. On

April 18, 1899, Orchard was honorably mustered out but was reluctant to return to a wholesale grain and hay business. He had taken a liking to the military life and applied for an appointment in the regular Army but failed his examination on August 17, 1901, in San Antonio, Texas. Despite this, the review board recommended that he be considered eligible for appointment. The Army commissioned him a second lieutenant on November 7, 1901, retroactive to February 2, 1901. Orchard served at Fort Sam Houston, Texas, at the Presidio in San Francisco, California, and at Fort Thomas, Kentucky, where he performed the duties of battalion quartermaster, headed the commissary, and was in charge of the prisoners. In May 1904 the Army ordered him to Fort Liscum at Valdez, Alaska. From July 1, 1904, to March 1, 1905, Orchard supervised the construction of public buildings at the Fort and then was appointed disbursing officer for the newly created Board of Road Commissioners for Alaska.

Efficiency reports in subsequent years by his superior, Major Richardson, rated Orchard highly. In 1906, for example, he stated that Orchard's attention to duty and his professional zeal were excellent and that he seemed to have a good business ability. In 1908 he again remarked that Orchard had shown a special fitness for detail in the pay department as disbursing officer for the Board of Road Commissioners for Alaska. In 1910 Richardson again gave his subordinate high marks, noting that he was qualified for his position, should be entrusted with important duties and had performed his responsibilities as disbursing officer well.

Orchard's World Collapses

In 1911, Sam Orchard's world suddenly collapsed around him when the Army convened a general court martial for his trial on charges of embezzlement at Fort Wm. H. Seward, about one hundred miles north of Juneau near Haines Mission on Lynn Canal. At Orchard's request, the court martial adjourned for ten days to enable him to prepare his defense. Orchard's civilian lawyer, J. M. Cobb, had asked for a postponement of the trial for at least 30 days to enable him to hire an expert

accountant and have the latter examine "the great mass of papers, vouchers and documents on file in the Road Commission's office" which would enable him to prepare the defense. This was denied, however, and the court martial reconvened in Valdez in early October, 1911.¹²

Richardson was acutely embarrassed about the scandal, coming as it did on top of Wickersham's relentless criticism of his organization and of himself. This case, he reasoned, would only furnish the delegate with further ammunition against the Board of Road Commissioners for Alaska. What made matters worse, in Richardson's eyes, was that Orchard told friends that all of his troubles had arisen because the president of the Board had "turned against him and that it was due to politics." Then, according to Richardson, instead of preparing his defense, the accused and his civilian attorney proceeded to try their case in advance on the streets of Haines, Skagway, Juneau, Cordova, and Valdez, contending that an innocent man was being persecuted and that they possessed the evidence to show it. Additionally, the two made threats and insinuations against the president of the Board and against Board employees who were compelled in the performance of their duty and under oath before the court to give testimony in the case.¹³

In the meantime, Orchard had made several sworn depositions. He stated that he had been a member of the Board of Road Commissioners for Alaska from April 15, 1905, to July 17, 1911, and was familiar with the details of the work carried on by the commission during this time period. In early 1907, he continued, the Board agreed to purchase all necessary supplies from the Northern Commercial Company at Eagle, Circle, and Tanana on the Yukon River. In return, the Northern Commercial Company agreed to furnish the funds for payment of the employees of the Board "at such stations and be reimbursed by United States depository checks, sent to the headquarters office of the company at San Francisco." Orchard added that bids were called for, but that the Board knew that only the Northern Commercial Company was capable of advancing funds to the Board of Road Commissioners for Alaska. The agreement with the Northern Commercial Company had been made by members of the Board before Orchard had been informed, but as secretary of that organization he drafted the

terms. In the latter part of 1907 the Board expanded the agreement with the Northern Commercial Company and charged the latter with performing the banking business for the Board in Fairbanks.¹⁴

Orchard Accuses Richardson

Orchard also accused Richardson of involving himself actively in partisan politics. In the summer of 1910, Richardson supported the candidacy of Ed S. Orr for delegate to Congress. Orr was an employee as well as business associate of the Northern Commercial Company, the Katala Company, and "other allied corporations in said district." Orchard swore that "he had [the] authority of the Secretary of War to use every resource within his power" to defeat the reelection efforts of Delegate James Wickersham. Orchard continued that Richardson frequented saloons, drank heavily and campaigned for Orr. On several occasions Orchard reminded the president of the Board that such conduct was unbecoming for an Army officer -- but to no avail. In fact, on one occasion Richardson stated that he would help defeat Wickersham even "if he had to drink his heart's blood."¹⁵

A number of Valdez citizens testified that members of the military court martial had been observed in various stages of public drunkenness. Colonel Richardson had often participated in these drinking bouts, and he and members of the court, most inappropriately, had publicly discussed the merits of the Orchard case. In one instance, members of the military court dined in one of the restaurants in Valdez. During the dinner one of the officers loudly observed that "why, of course, he [Orchard] is guilty." Another replied that there was "nothing in the evidence so far to justify the assertion," whereupon the first speaker observed that "it doesn't make any difference about the evidence. He is guilty, for it would be impossible to lose that amount of money, or to be mistaken to that extent."¹⁶

Board Kept No Books

During the court martial it developed that the Board actually kept

no books. Its accounting system consisted of checks and vouchers. The office retained duplicates of the vouchers and check stubs. The original vouchers and checks were sent to Washington to the Auditor's Department. If the checks drawn and the vouchers forwarded corresponded, the auditors approved the accounts. The War Department deposited the funds Congress appropriated in the U.S. Depository in Seattle to the credit of the disbursing officer of the Board of Road Commissioners for Alaska. Because Alaska had insufficient banking facilities, the War Department had authorized the disbursing officer to draw money upon checks and retain it in his personal possession to be accounted for as cash. From 1905 until 1910 no inspector ever examined Orchard's accounts, although expenditures during this period amounted to more than \$1.5 million. In May 1909 an Army auditor inspected Orchard's accounts, closing his examination on May 28, 1910. He found that the accounts were correct to a cent.¹⁷

Sidney L. Carter, Chief Clerk Of The Alaska Road Commission

In 1909 one Sidney L. Carter became the chief clerk of the Board. The government decided to prosecute Orchard on the basis of the evidence supplied by Carter and Richardson. Carter and the Board's superintendents were allowed to draw checks on the Northern Commercial Company where they were carried as an overdraft, and then the U.S. Depository in Seattle reimbursed the Northern Commercial Company or the particular bank doing business with the Alaska Road Commission.¹⁸

Wickersham and His Affidavits

In the spring of 1911 Delegate Wickersham received affidavits alleging that the Alaska Road Commission superintendents along the Yukon stole money from the organization. Wickersham presented these affidavits to the War Department which, in turn, informed Richardson of the charges. On his way back to Alaska, the president met Carter in Seattle and Richardson informed Carter of the allegations. Carter thereupon apparently charged Orchard with embezzling funds. Both men arrived in Valdez in

April, 1911, but did not inform Orchard of their suspicions until May 14 of that year. Then they accused Orchard of having embezzled approximately \$12,500 which should have been paid to the Northern Commercial Company in 1909. Orchard denied the accusations and demanded an inspection. Richardson, however, urged his subordinate to try and straighten up the matter and suggested that Carter be asked to find out where there was any shortage. Richardson further persuaded Orchard to make good any shortages until a full investigation of the accounts could be made, ostensibly to prevent official charges being brought against Orchard. Thereupon Orchard wired the Northern Commercial Company asking that he be given time to find the mistake and that, in the meantime, he "would pay any shortage that was found to exist." That was a foolish move on Orchard's part because it seemed like an admission of guilt. In June, 1911, an inspector arrived in Valdez and shortly thereafter a general court martial was appointed.¹⁹

Orchard's Lawyer, J. M. Cobb, Disenchanted With Military Justice

Orchard's lawyer, J. M. Cobb, quickly became disenchanted with military justice. Cobb had seen "a great deal of political courts" during his fourteen years residency in Alaska, courts whose decisions were entirely controlled by matters extraneous to the record. He exaggerated for effect, however, when he stated that he had never seen "anything which was as scandalously misconducted" as the court which tried Orchard. Cobb had gained the impression that the members of the court martial from the very beginning held the opinion that the case was a fight between Richardson and the accused. Throughout the trial that aspect of the case was publicly discussed, and various members of the court martial stated publicly that Richardson "was the biggest man in Alaska and that he had the strongest pull with the president of any army officer." Most members of the court drank and caroused with Richardson almost every night during the trial. In fact, one morning in early October during the introduction of evidence Captain Simonds, a member of the court martial, "fell out of his seat in a drunken stupor" forcing a court recess until he could be revived.¹⁹

Simonds, an alcoholic, had been carousing with Richardson the night before until 4:00 in the morning.

Wickersham Delighted at Richardson's Discomfiture

Wickersham, of course, was delighted at the discomfiture of Richardson, and in his Alaska Day speech in Fairbanks on October 18 he reminded his listeners that nearly two million dollars had "been spent on public roads in the territory of Alaska; and yet they say you can't get over to Valdez in an automobile." Even worse, the delegate continued, "your newspapers don't tell you that they have prosecuted Sam Orchard. . . down at Valdez and Haines for the embezzlement of \$17,000 that you paid into the Alaska Road Fund. They don't tell you how that money has been wasted, embezzled, and thrown away." In comparison, the Canadian government had expended \$140,000 to build a perfectly good road, some 340 miles in length, between Whitehorse and Dawson. It only cost \$10,000 annually to maintain, and the Canadians ran automobiles over it. In contrast with the Board of Road Commissioners for Alaska, the Canadians had not wasted their funds. "They didn't build three and four parallel roads. The road business up there wasn't ruled by incompetency as it is here." The Board should not receive another dollar, Wickersham declared, and instead the funds should be entrusted to men "who will go out there and build roads and who will not draw blue prints and maps."²⁰

Court Martial Finds Orchard Guilty

In the meantime, the court martial found Orchard guilty of having embezzled \$16,731.28 and sentenced him to be dismissed from the Army, imposed a fine in the amount of the embezzled funds, and directed that he be imprisoned for five years at hard labor. President Taft reviewed Orchard's sentence and reduced it to two years imprisonment at hard labor because of the time Orchard already had spent in solitary confinement at Fort Lawton, Washington. Protesting his innocence, he commenced his prison term at the federal penitentiary at Leavenworth, Kansas.²¹

In retrospect, the evidence suggests that the court martial did not render an impartial judgment. Orchard became a victim of the lax book-keeping procedures the Alaska Road Commission employed.

Richardson To Be Relieved Of His Duties

But before the court martial had reached its verdict in February, 1912, the beleaguered Richardson received notification from the Secretary of War that he would be relieved of his duties not later than November 1 of that year. Secretary of War Henry L. Stimson informed Richardson that the department had adopted a new policy designed to return to duty army officers who had been on special assignments for four or more years and that the reassignment was not connected to his troubles in Alaska.

Richardson was mortified by this latest turn of events because it would appear to vindicate his detractors. He hastily explained to his superiors that his relief "would naturally give rise to conclusions in certain quarters as to the integrity of my work in Alaska, where I have spent the best years of my life, unjustified by the facts, and which constitute a grave reflection upon me professionally." He reminded his superiors that the president himself had initially directed his appointment as presiding officer of the Board, presumably because of his previous experience in Alaska. "The duty came to me unsought," he asserted, "and, as I foresaw, fraught with many difficulties of climatic and local conditions entirely out of the ordinary....." Because of insufficient funds, the board had been unable to respond fully to the transportation needs of "a restless and impatient population" and had been subjected to some harsh criticism. Delegate Wickersham had seized upon this criticism "to bolster up in part an unwarranted and malevolent attack, for political purposes. . . aimed directly at myself, but indirectly and persistent since, in the effort to discredit the War Department and Administration generally in the Territory." There also was the fact that two of the three officers on the Board had changed within the last year, and Richardson, therefore, provided the much needed continuity to implement the construction plans of the War Department in Alaska. Lastly,

service in the North had "never been in any respect a 'fancy duty!" With few exceptions it had been as severe as could be imposed in the field or in campaigns outside of actual war. "If not always health-destroying, it had often been heartbreaking and has called for the full resourcefulness and the best spirit and courage, moral as well as physical, of which the officer or soldier is capable."²²

Richardson's eloquent appeal was successful, for President Taft intervened and directed his Secretary of War to exclude Richardson from the newly adopted policy of rotation. The president stated that he was sufficiently familiar with the lieutenant colonel's services in the North "to realize that it is to the advantage of the country, especially of Alaska" that outweighs any advantage to the Army" in sending him back to his command, to have him on duty in that new territory with which he is familiar from one end to the other...."²³

Orchard Appeal Unsuccessful

While Richardson successfully battled to retain his duty assignment, more than four hundred supporters of Orchard signed a pardon petition in Valdez, and his father and wife appealed to the Secretary of War for clemency -- all to no avail. In July, Orchard appealed to his father to use every political means available to gain a commutation of his sentence from the president. Orchard was bitter, claiming that if "I can get to my papers for 60 days I am sure I can show the proper parties up in such light that the president will be forced to act" on the commutation appeal. He was convinced that "Richardson has brought all the influence possible to bear to keep me here until he leaves Alaska" And although Orchard became eligible for parole in October 1912, Secretary Stimson refused to sign the necessary papers, and Orchard presumably served out his two-year term at Leavenworth.²⁴

Difficult Years for Richardson

The years 1911 and 1912 had been difficult times for Richardson.

His 1912 annual report was brief. He explained that the Board of Road Commissioners for Alaska had expanded its work continuously and had included new projects each year, some in remote sections of Alaska and not on established mail routes. And although Congress had appropriated \$125,000 for the work, the money did not become available until late August of that year. Fortunately for the continuation of the Board's work, the governor of Alaska had transferred \$80,000 for road work, which had accumulated in the reserve of the school portion of the Alaska Fund. This, together with the usual receipts from the Alaska Fund, allowed construction to go forward.²⁵

And there was much work which needed to be accomplished. One project involved improvements to the Chitina-Fairbanks road, a route capable of accommodating slow wagon traffic. For example, four horses could haul from three to four thousand pounds about twenty miles per day at any time during the summer. And although there were no impassable stretches, some of the streams and creeks caused inconveniences, delays, and sometimes danger when crossing during high water, breakup in the spring, and when the ice formed in the fall. A number of streams required bridges. The one across the Klutina River, constructed in 1900 for a pack trail, needed to be replaced. A ferry crossed the Gulkana River but it was not an entirely satisfactory arrangement because of the great variation in the depth and current of the river. Greer Creek was usually fordable, and piling for a bridge had been driven; Richardson hoped to complete the superstructure during the 1912 construction season. The Delta River was fordable, and so usually were the two glacier streams. The latter, however, were dangerous because of their swift currents and large boulders in their stream beds. Jarvis Creek was fordable, while the Tanana and Salcha Rivers were crossed by ferries, as was the Pile Driver Slough. Richardson intended to bridge all of these streams and rivers, except the formidable Tanana, as soon as funds became available. He also planned to have a completed roadway sixteen feet wide, crowned and with side ditches and culverts. Funds did not permit covering the road with gravel so the natural soil had to suffice.²⁶

By June 30, 1911, the Board had constructed the following mileages of wagon roads, sled roads, and trails:²⁷

Route No.	Name	WAGON ROADS		COST			Laborer's daily wage	Remarks
		Miles const	Total	Maint.	Total const.	Const. per mile		
1	Prince of Wales Island Portage	3.9	\$31,161.20	\$300.00	\$30,861.20	\$7,915.00	\$2.50	Includes 29 miles of plank road. Construction in very heavy timber, extremely wet soil and under adverse weather conditions.
2	Juneau - Eagle Creek	6.2	19,855.28		19,855.28	3,205.00	2.50	Heavy timber, -- includes three bridges.
3	Haines - Pleasant Camp	47.5	123,140.78	3,187.07	119,953.71	2,525.00	2.50	
27	Deering - Inmachuck	1.0	4,672.55		4,672.55	4,672.00	5.00	
32B	Iditarod-Flat Creek	0.6	2,980.88		2,980.88	4,967.00	6.00	
4B	Valdez - Ernestine	65.0	172,277.46	14,154.68	158,122.78	2,431.00	3.00	
11A	Eagle-O'Brien Creek	17.0	59,814.52	963.25	58,851.27	3,460.00	5.00	
9	Rampart-Big Minook	6.5	17,788.26		17,788.26	2,739.00	5.00	

Decreasing costs per mile through a total of 25 routes which are wholly or partly wagon roads.

A total of 800.2 miles of wagon roads have been constructed at a total cost, including all office and other expenses of whatever nature, and including maintenance, of \$1,634,960.14, or \$2,043.20 per mile.

Route No.	Name	SLED ROADS		COST			Laborer's daily wage	Remarks
		Miles const	Total	Maint.	Total const.	Const. per mile		
6A	Willow Creek - Tonsina River	24.0	\$16,071.33		\$16,071.33	\$670.00	\$3.00	More elaborate construction than usual for this class because of projected development to wagon road. Heavy timber.
9	Rampart-Big Minook (Minook-Glen Section)	19.5	12,460.00		12,460.00	639.00	5.00	
24	Mt. 29 A.N.R.R. - Moose Pass	24.0	6,551.65		6,551.65	273.00	2.50	Heavy timber. Wet soil. Partly corduroy.
11C	Steel Creek - Jack Wade Creek	9.9	5,051.63		5,051.63	510.00	5.00	
11B	O'Brien Creek - Forty Mile	30.0	14,035.19		14,035.19	468.00	5.00	
5	Fairbanks - Fort Gibbon	160.0	62,911.81	4,470.83	54,440.98	365.00	5.00	
4A	Donnelly-Washburn	55.0	20,069.85	3,108.11	16,881.74	307.00	5.00	
23B	Yukon - Chandler	75.0	21,175.35		21,175.35	282.00	5.00	

Decreasing values.

A total of 534 miles of sled road have been constructed at a total cost, including all office and other expenses of whatever nature and including maintenance, of \$104,474.76, or \$195.65 per mile.

Route No.	Name	TRAILS		COST			Laborer's daily wage	Remarks
		Miles const.	Total	Maint.	Total const.	Const. per mile		
1	Prince of Wales Island	7.0	\$8,261.00		\$8,261.00	\$1,180.00	\$2.50	Very heavy timber. Wet soil requiring large amount corduroy. Adverse weather conditions during construction.
2	Juneau-Eagle Creek	23.8	9,095.00		9,095.00	382.00	2.50	Heavy timber.
20A	Knik - Susitna	5.5	2,051.17		2,051.17	373.00	3.00	(Cost of location charged against mileage constructed. When the routes are completed the cost per mile will be largely reduced.)
20B	Susitna-Rainy Pass	26.6	5,700.08		5,700.08	214.00	3.00	
19	Kern Creek - Knik	44.8	8,841.80		8,841.80	197.00	3.00	
23A	Chatanika-Yukon	35.0	2,140.95		2,140.95	61.00	5.00	
18	Kaitag - Solomon	248.0	13,588.53		13,588.53	55.00	5.00	
Decreasing values								

A total of 1,557 miles of trail have been constructed at a total cost, including all office and other expenses of whatever nature and including maintenance, of \$130,454.98, or \$83.80 per mile.

Board's Accomplishments Impressive

Undoubtedly, the Board's accomplishments from 1905 to 1911 had been impressive. Yet, in a country as large as Alaska they seemed miniscule. Early in 1912, journalist J. J. Underwood declared that there were two artificial barriers preventing large-scale settlement of the territory: 1) no township surveys; 2) the lack of transportation facilities, to enable Alaskan products to reach markets. Underwood echoed Richardson when he proposed that the federal government underwrite the construction of a railroad from tidewater to the Interior, and that Congress appropriate substantial sums to build roads, "especially in the interior country." Once this was done, he predicted, thousands of emigrants, "millions perhaps, - Scandinavians, Germans, Italians, Slavonians, Spaniards" would rush to the wilderness of Alaska "to make productive fertile valleys and plains of that northern Land of Promise; building their towns and villages, creating their own prosperous ranches and farms, as their compatriots have done in Minnesota, Iowa, and other states...." Then his imagination ran away with him. These prospective Alaskans, he predicted, would leave the "fetid atmosphere of the sweatshops of New York and Philadelphia" and give up their struggles "for a half-starved subsistence in the slums of Chicago and Boston" and leave the toil in "the furnace rooms of the steel mills of Bethlehem and Pittsburg" in order to "live in the free and open country of immeasurable distances, of exhilarating temperate

atmosphere, of rushing mighty rivers and majestic mountains," and rear their children in an environment "calculated to make them a race of vigorous, happy, and contented people." But before this could happen, Alaska needed a transportation network. Once a railroad to the Interior had been built, proper aids to navigation installed, and roads and trails stretched across the country in every direction, Underwood predicted "that part of Alaska which lies south of the Yukon will not be a wilderness but an empire."²⁸

The Wickersham-Richardson Quarrel Continues

While Underwood spun dreams of a future Alaska, Wickersham prepared to assault Richardson. In March 1912 the delegate presented a long list of complaints about the activities of the Board to Henry L. Stimson, the Secretary of War. Together with these complaints, Wickersham furnished numerous affidavits of disgruntled citizens harshly criticizing Richardson and his organization. The delegate pointed out that between 1905 and January 1, 1912, the Board had expended \$1,419,631.78 from Congressional appropriations and \$838,455.18 from the Alaska Fund, for a total of \$2,258,086.96.²⁹

In Wickersham's view, but little had been accomplished for all these expenditures. In fact, "some of the government roads in Alaska are a disgrace to the nation" . . . consisting of a "strip of mud, roots and rocks, unfit for the use of man or beast, and positively ruinous, both to a man's body and soul." Wickersham suspected that the Board had probably spent the better part of two million dollars on the Valdez-Fairbanks road, and yet it remained merely an earthen structure which deteriorated significantly and became nearly impassable during long periods of wet weather.³⁰

Wickersham continued that the Board always answered criticism by pointing out that it had constructed a much greater mileage than the Canadians and that accounted for the greatly increased total dollar amount. The delegate demolished that argument to his satisfaction. The Board, in addition to wagon roads, built winter sled roads, trails,

and temporarily staked winter trails. The latter, he observed, were not roads at all but consisted of the "unmarked wilderness over the natural surface" on which roadhouse keepers, miners, mail carriers, and "in some few instances the board, have set a few poles to keep the weary 'musher' from losing his way. There is no road, no trail - but only a pole set up here and there as a guide." Wickersham felt it was a sham that the board included this "mileage" in its annual report, for it was merely "padding" to inflate the figures.³¹

He dismissed the trails as merely "a more cunning claim of more figures to increase the official statement of mileage." It was easy to increase the mileage from year to year by spending a few dollars on trails blazed by the miners and then add the whole of the trail mileage to the official figures. Winter sled roads offered "just as many chances for fine literary efforts on a minimum of good road work" as did trails. Anything level enough to hold snow and where the brush was not too thick nor the stumps too high qualified as a winter sled road, the delegate asserted.³²

In summary, the delegate charged that the \$2,258,086.96 devoted to the construction of wagon roads, bridges and trails in the North had "been wasted, embezzled, and taken by two big mercantile companies, unfairly and without reasonable value." Richardson had not embezzled any of that for he was an honest man - merely incompetent. Richardson had no "money sense" in that he blindly trusted two big mercantile firms in Alaska, the Northern Commercial Company and the S. Blum and Company to manage the road monies for him. These two firms, in turn, had established a system resulting in "incompetency, waste, failure in the management of the road work, and profit to themselves." In short, the Board had expended in excess of two million dollars and had nothing "permanent or satisfactory to show for it."³³

Wickersham asked Stimson to change the personnel of the Board and particularly relieve Richardson of his duties for "his habits and incompetency have wrecked the plan of road building in Alaska" and in his stead appoint an officer who was "both temperate and competent" to accomplish the desired goals. With a veiled threat, the delegate

stated that he anticipated that the War Department desired "to correct this situation as agreeably as possible" and that he, therefore, would not publicize his charges.³⁴

Richardson Defends Himself

Stimson informed Richardson of the charges, and the latter's first impulse was to tell the Secretary that Wickersham's allegations did not "merit the dignity of an extended reply....." But reply he did, and in detail, refuting all of Wickersham's charges. Richardson was particularly incensed with Lieutenant Orchard's affidavit accusing him of working against Wickersham's election. The delegate had included the affidavit in the materials he sent to Secretary Stimson and Richardson flatly stated that Orchard's affidavit was "an absolute and unqualified falsehood." In fact, Richardson had called Orchard into his office sometime before the election and told him not to engage in any type of political activity, and "gave preemptory orders throughout the territory to this effect....." Richardson considered Wickersham's repeated attacks against him "as a personal matter engaged in by him for reasons unknown" to him and had tried to deal with it without in any way injuring the interests of the public service with which he was entrusted.³⁵

Richardson continued that the delegate had ignored the fact that the Board could only distribute a relatively small amount of money "over a great stretch of country with widely separated settlements in the endeavor to give passable routes and meet the immediate needs" instead of expending all monies for short, but perfect roads. Richardson reminded the Secretary that in 1911 there was expended an average of \$46.70 per square mile in the contiguous states for road construction - but only 45¢ per square mile had been available in Alaska. Furthermore, taking into account the high Alaskan labor costs, climate, and vast distances it was easy to complain about the Board for its failure to provide good roads "for a pittance of a few cents per square mile."³⁶

Richardson stated that Wickersham's allegations were unsupported "by any evidence worthy of the name" and merely added

"another chapter to the attack which he has been waging upon me for two years, and which is nothing short of inhuman. It has disclosed to me a character the moral quality of which was heretofore utterly beyond the horizon of my experience, a character which would apparently without hesitation destroy, if possible, the good name and reputation of any man whom he thought in the smallest degree in the way of his own plans, regardless of any obligation to truth or sentiment of fair dealing between men."³⁷

FOOTNOTES

1. Nichols, Alaska, pp. 24-25; Evangeline Atwood, Frontier Politics: Alaska's James Wickersham (Portland, Oregon: Binford & Mort, 1979), p. 220.
2. Naske, Statehood, pp. 26-27.
3. Wickersham to Secretary of War J. M. Dickinson, January 2, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
4. Ibid.
5. Richardson to Chief of Staff, January 27, 1910, Secretary of War J. M. Dickinson to Wickersham, January 29, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
6. Wickersham to Secretary of War J. M. Dickinson, February 12, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
7. Confidential Memorandum for the Secretary of War, February 17, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
8. Wickersham to Martin Gateley, May 20, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
9. Alaska Citizen, July 23, 1910; Fairbanks Daily Times, July 27, 1910.
10. Richardson to Fairbanks Daily Times, August 7, 1910, file Richardson Wilds P., General Correspondence, Adjutant General's Office, R. G. 94, N.A.
11. Wickersham to Secretary of War Henry L. Stimson, July 6, 1911, Major General Arthur Murray to Wickersham, July 11, 1911, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.; Atwood, Wickersham, pp. 226-234.
12. J. M. Cobb to Judge L. G. Denman, November 8, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
13. Richardson to Adjutant General, October 23, 1911, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.

14. Sworn deposition by Sam C. Orchard, October 6, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
15. Ibid.
16. Sworn depositions by George W. Nelson, E. A. Amundson, November 8, 1911, Alice Neice, November 17, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
17. J. M. Cobb to L. G. Denman, November 11, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
18. Ibid.
19. Ibid.
20. The Daily Alaska Dispatch, December 23, 1911.
21. War Department, General Orders No. 4, February 17, 1912, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
22. Richardson to Adjutant General, February 9, 1912, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
23. Secretary of War to Richardson, January 31, 1912, February 16, 1912, Richardson to Adjutant General, February 9, 1912, President to Secretary of War, March 25, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
24. Valdez Miner, April 7, 1912; John Orchard to Henry L. Stimson, Secretary of War, February 19, 1912, Lola M. Orchard to Henry L. Stimson, Secretary of War, April 25, 1912, Henry L. Stimson, Secretary of War, to John Orchard, June 28, 1912, Sam C. Orchard to John Orchard, July 14, 1912, Lola M. Orchard to Henry L. Stimson, Secretary of War, November 14, 1912, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
25. War Department, Report of the Board of Road Commissioners for Alaska, 1912 (Washington: GPO 1912), pp. 5-6.
26. Memorandum of the proposed improvement of the road from Chitina to Fairbanks, Alaska, December 7, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.

27. Memo to the President of the Board from 1st Lieutenant Glen E. Edgerton, Engineer Officer, Corps of Engineers, January 22, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File various files pertaining to Alaska, R.G. 94, N.A.
28. J. J. Underwood, "Population for Alaska awaits Transportation Facilities," Alaska-Yukon Magazine, February 1912, pp. 20-27.
29. Wickersham to Stimson, March 26, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files relating to Alaska, R. G. 94, N.A.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Ibid.
35. Richardson to Stimson, April 15, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
36. Ibid.
37. Ibid.

CHAPTER FOUR

THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1912-1917

As expected, Stimson ordered a thorough inspection of the work of the Board and entrusted Lieutenant Colonel Thomas H. Rees with the task. The Colonel arrived in Nome on July 2, 1912, and accompanied by Lieutenant Glen E. Edgerton, the engineering officer of the Board, began a two month's tour of Alaska. Rees noted the difficulties encountered when constructing roads over terrain underlain by permafrost, and "the fact that roads have been built which carry heavy traction engines and heavily loaded trailers, as well as 6-horse teams with heavy loads, at a cost of about \$8,600 per mile (including maintenance for six years) is a very creditable showing." Rees found the Nome office in excellent condition, headed by Superintendent R. F. Hoffmark, who readily produced all called-for records, reports, vouchers and accounts. He also maintained a thorough system of cost accounting. In conversations with businessmen, miners, and travelers who did not know Rees, all commended the work of the Board and the results it accomplished. The only criticism the Colonel encountered was that the work did not go far enough "as nearly everyone knew of a road that should be built to a locality in which he was interested."¹

Rees next traveled to St. Michael where he met Bishop P. T. Rowe of the Episcopal Diocese of Alaska. The Bishop traveled constantly to all inhabited parts of Alaska, and therefore, was thoroughly familiar with the roads and trails and with the work of the Board. Rowe highly praised Richardson who was his personal friend and frequent travel companion.²

Lack of time prevented Rees from visiting the Innoko region or the new mining camps near Ruby. Both regions, Rees found, well illustrated a major difficulty constantly facing the Board. A new strike caused a stampede and immediately there were demands for supplies to support the community. In order to transport needed goods, miners and freighters opened trails. Soon the stampeders demanded that the Board build roads leading to the new camps. Often, however, the strikes became quickly

exhausted and the camps dwindled and disappeared. Only rarely did the camps develop into permanent settlements, and the Board did not want to expend funds for roads to certain ghost towns. If roads were not promptly built to all the new camps, however, the Board was "censured for inactivity and dilatoriness." If it did build roads to camps which promised permanency but were finally abandoned, the Board was charged with building useless roads which "lead nowhere although the demand may have been insistent and well founded when the road was built."³

From St. Michael, Rees traveled to Tanana where he talked with William A. Gilmore who opposed Wickersham in the race for delegate to Congress. Gilmore, although disapproving of the Board method for conducting road construction, still believed that the work was well done and honestly conducted. Questioned about Richardson, he stated that he had met him several times and was impressed with the man. According to Gilmore, Richardson had never engaged in any political activity. In fact, "at a recent conversation Colonel Richardson had withdrawn from a group of men when the talk turned to political matters and declined to discuss the subject."⁴

From Tanana, Rees moved to Fairbanks where he found the roads leading to the mining areas of Fox, Cleary, Chatanika, Ester Dome and adjacent creeks in excellent condition and suitable for automobile traffic. The Fairbanks office, under the direction of John Zug, was well run and all documentation in excellent shape. Interviews with various Fairbanks citizens elicited only praise for the work the Board performed. From Fairbanks, Rees traveled to Valdez with a side trip to Chitina in a two-horse buckboard. It took him fourteen and one-half days to cover the distance of 460 miles. Rees found the road of uneven quality, but there was no place where a wagon could not move forward steadily and without delay. Rees considered the construction of the road a tremendous undertaking, and the results accomplished in the short time and with the limited funds nothing but remarkable. The road traversed a rugged wilderness with very few inhabitants between the terminal points. The traveler encountered river bottoms, marshes, steep bluffs, mountains, glaciers, rivers and gorges in alternating succession. Rees observed

that supplying this effort was very difficult, the working season short, and labor costs very high. The Board had been correct in opening a passable road for the whole distance instead of trying to complete only a portion. In the latter instance, the road would have been useless for years to come. Richardson had been successful in constructing a good winter road and a passable summer road. Rees found the Valdez office to be in excellent shape, just like the others, and the superintendent of the district, J. H. Ingram, to be a thoroughly practical man with great experience and "a happy faculty of handling men and getting a large amount of work out of them."⁵

Rees next went to Seward, and stopped at Cordova, Juneau and Ketchikan on his return to Seattle. At all stops he inquired into the specific allegations made by Delegate Wickersham but found "very little evidence either in support or denial of those statements." In fact, except in a couple of cases, nobody had ever heard of the incidents Wickersham had cited. Rees concluded that the delegate's allegations were without foundation. Specifically, Alaska Road Commission funds had not been wasted, embezzled, or taken by the two big mercantile companies unfairly and without reasonable value. These two companies did not dominate, control, or dictate to the Alaska Road Commission. No companies had any monopolies in furnishing supplies to the ARC but rather there had been fair competition. Roads and trails had been built where most needed, and none had been constructed to favor special interests. In fact, many special requests had been turned down. The system of purchases and disbursement in use had been devised to meet the unusual Alaskan circumstances of great distances, poor communications, isolated locations where work was performed, and the physical impossibility of sending all bills and vouchers to the disbursing officer in Valdez and sending back checks in payment in one season. Defalcations that did occur were discovered as soon as the accounts relating to them balanced - and this was all any organization could have done. The Alaska Road Commission, contrary to Wickersham, did not pad the mileage in its annual reports nor make any misleading statements. Furthermore, the roads built by the ARC compared favorably with those constructed in the

Yukon Territory, both in quality and cost. Rees did not see any completed roads which could be called "a strip of mud, roots and rocks," although on roads under construction that description did apply for limited time periods.⁶

Rees concluded that Colonel Richardson loved Alaska and its people and was imbued with its spirit of romance and sentiment. Rees found him to be a frank, generous, cordial and companionable individual who was able to win the friendship and loyalty of different classes of people he met. Rees had "never known another man so universally liked, esteemed and respected as he is in Alaska. His whole thought, energy and attention are given to the interests and development of Alaska without fear or favor. He is a conscientious, honorable and able man."⁷ Richardson was pleased with the investigation and its results, for it vindicated his honor and showed Wickersham to have been untruthful and vindictive. But the Colonel also knew that Wickersham would not abandon his efforts to force him from office.

1912 Poor Construction Season

Adding to his many troubles, Richardson had to conclude that 1912 had been a very poor construction season because excessive rains had caused considerable damage to the Fairbanks - Valdez wagon road, especially the stretch along the Tanana and Delta Rivers. Richardson stated that "the resources of the Board have been taxed to keep the road to the interior open and passable, and at times it has seemed in danger of utter destruction." The Copper River and Northwestern Railway, the only other outlet to the ocean, had been damaged severely and forced to suspend traffic for several weeks. Richardson reiterated that the Board had petitions for road construction in its files which, conservatively estimated, would require expenditures of approximately \$1,600,000. The Board was not allowed, however, to submit an estimate for funds to meet such demands unless allowed by law to do so. In past years the appropriations, which had supplemented the Alaska Fund and had been carried as a charge against the support of the Army, now became limited to only such

sums as absolutely necessary to maintain and repair the existing military and post roads.⁸

By June 30 the Board had spent \$317,303.72 of the total \$317,646.59 that was available and built the following additional mileage:

Wagon roads	18 miles
Winter sled roads	52 miles
Trails	32 miles

The Board had also allotted \$5,000 to begin construction of an approximately eighty-mile winter trail from Fairbanks to Chena Hot Springs and staked about 450 miles of trails for winter travel only. In addition, the Board undertook the following important new projects during the season: Wagon roads of 3.1 miles from Juneau to Sheep Creek; 5 miles from Douglas to Gastineau Channel; a 10 mile extension from Circle City to Central House; sled roads of 29 miles from Ruby to Long Creek; and a 12 mile extension from Moose Pass to the Kenai Peninsula.⁹

Wickersham and Alaska's Second Organic Act

The year 1912 was an eventful one for Delegate Wickersham as well. In hearings held in 1910 on the Beveridge bill, it had soon become evident that there was strong opposition to the president's plan. After some political maneuvering the administration had abandoned its proposal. The defeat was in no small part due to Wickersham's skillful use of the conservation issue to obtain support for Alaska home rule. The delegate pointed out that the resources of Alaska should be used for the benefit of the entire country. Yet, so far, the Territory had been exploited by a few large, absentee-controlled corporations, such as the monopolies which harvested the fur seals and salmon and mined the copper deposits. Home rule, Wickersham asserted, would allow proper utilization of Alaska's wealth.¹⁰

Wickersham's home-rule scheme gained substantial support in 1911 from the legislatures of Washington and Oregon and commercial associations

of those states. The senators and representatives from these areas were instructed to vote for Alaska home rule. Democratic presidential aspirants, such as Woodrow Wilson, Oscar Underwood, and William Jennings Bryan, were pledged to support the home-rule plank of their party. In this favorable atmosphere, hearings on Wickersham's home-rule bill began in the spring of 1911 before the House Committee on Territories, and by late summer of 1911 the passage of the Wickersham measure seemed reasonably assured.

In a special message to Congress on February 2, 1912, President Taft dealt extensively with Alaska. He urged Congress to enact legislation which would help the Territory develop its resources. On April 24, 1912 the House unanimously passed Wickersham's elective legislative assembly bill, and on July 24, 1912, the Senate passed the delegate's measure in essentially the same form in which its author had drafted it. On August 24, 1912 the president signed the Wickersham measure into law. The Organic Act of 1912 gave Alaska a Senate of eight members and a House of 16 to be chosen equally from the four judicial divisions. Although limited in powers, the legislature could nevertheless deal effectively with a wide variety of matters.¹¹

The First Territorial Legislature and Roads

The first territorial legislature met in Juneau early in 1913, and among other matters, it dealt with road construction. It repealed the road-tax law of April 27, 1904, which had required two days labor from each able-bodied male resident on public roads or the payment of eight dollars. In its stead it enacted a substitute, levying a flat tax of four dollars inside as well as outside incorporated towns. While in force, a substantial amount of work had been accomplished on local projects under the 1904 road-tax law, but there never had been any coordination between projects nor planning of any kind. In some districts, superintendents of the Board of Road Commissioners for Alaska had supervised the work, although never formally charged with the authority or

responsibility for handling it generally.¹²

The Second Territorial Legislature and Roads

In 1915 the Territorial legislature created road districts that corresponded with judicial divisions and provided for an elected road commissioner for each district. Each commissioner was to receive as compensation five percent of all money expended by him. And although each road commissioner could appoint two assistants as inspectors, the legislature made no provisions for their compensation. To pay for the work, the lawmakers appropriated seventy-five percent of forest revenues for this purpose.¹³

The Third Territorial Legislature and Roads

In 1917 the Territorial legislature once again dealt with road matters. It appropriated \$20,000 for shelter cabins, to be expended under the general supervision of the governor of Alaska by the road commissioners, who were to receive five percent of this fund for their services. It also created the Territorial Board of Road Commissioners and instructed it to submit estimates for the construction of essential road work. Within each road district it created a divisional board, consisting of an elected chairman (receiving an annual salary of \$2,000) and two other members to be appointed by the territorial board (receiving expenses when working). Each divisional board was required to submit an annual report to the territorial board. The legislature also appropriated \$400,000 for the biennium, to be equally divided between the four road districts.¹⁴ The work of the Territorial legislature in the transportation field indicated that it would soon develop some sort of relationship with the Board of Road Commissioners for Alaska.

Wickersham's Renewed Efforts Against Richardson

In the spring of 1913 the delegate renewed his offensive against

Richardson. Disappointed that a War Department investigation had exonerated his foe, Wickersham now turned to Secretary of the Interior Franklin K. Lane. The delegate pointed out that Richardson, assigned to special duty in Alaska, had been absent from his command almost continually for fourteen years; appointed president of the Board of Road Commissioners for Alaska in 1905, he had performed that special duty for eight years. Such long continued assignments, Wickersham told Lane, violated the law which called for frequent rotations. Even worse, Richardson spent six months each year in the capital lobbying for increased appropriations "for his alleged dirt roads in Alaska and in assisting the big interests, the Guggenheim-Sloss interests, to secure a firmer grip on the resources of Alaska." Richardson spent the summers in the North where he traveled "by easy routes from point to point" enjoying the hospitality of his friends. In election, or odd-numbered years, Wickersham continued, Richardson repaid his corporate friends and Mr. Taft by engaging in political work from Ketchikan to Nome at public expense. The delegate stated that Richardson had successfully aided twice in securing the delegates to the Republican National Convention for Taft. More offensive, in 1908, 1910 and 1912 Richardson had helped the "stand-pat Guggenheim Republican candidates in their efforts to defeat me." That was a long list of offenses, but perhaps "the meanest thing I ever knew him to do..." was to assist the Bureau of Insular Affairs in drafting the "infamous Beveridge bill which was intended to get Mr. Taft to appoint a legislative council over Alaska...." Richardson was to have been a council member, and all nine men on the council, Wickersham charged, "were to be the friends, agents or attorneys of the Morgan-Guggenheim Alaska Syndicate," the delegate's arch enemy. The Beveridge bill, which fortunately failed, was the "most infamous attempt ever made in American history to loot a great territory and Richardson was to be the principal in the attempted grand larceny of national wealth." Wickersham also reminded the secretary of the Lieutenant Orchard scandal, and suggested that in addition to the \$16,000 Orchard had embezzled, many thousands more were hidden by technically correct accounts. In fact, Wickersham wrote in his best purple prose, "drunkenness, debauchery and embezzlement have oozed

from this shameful waste of public funds in Alaska." Much to the delegate's disgust, however, the War Department had protected Richardson and "maintained him in incompetent control under the powerful influence of the selfish interests engaged in monopolizing the resources of our unhappy country." Perhaps, Wickersham suggested, a new administration could right these wrongs.¹⁵

Richardson Defends Himself

Secretary Lane knew nothing about the controversies surrounding the Board of Road Commissioners for Alaska and therefore transmitted the delegate's complaints to the War Department. Once again, Richardson had to defend himself. He refuted each one of Wickersham's allegations, concluding that despite repeated accusations that Board funds had been wasted for years, Wickersham had not submitted any evidence supporting "such a reckless and unjust statement." Richardson concluded that the work accomplished with the available funds clearly contradicted Wickersham's accusations.¹⁶

The Alaska Railroad

While the two men quarreled, the administration's attitude toward Alaska changed. Even before the passage of Wickersham's home rule bill, President Taft had sent a special message to Congress on February 2, 1912, asking for government construction and ownership of an Alaska railroad. In fact, Wickersham's home rule bill had carried a Taft rider, (section 18), authorizing the president to appoint a commission to study and recommend those Alaska railroad routes that would best develop the territory's resources for the use of all Americans. Taft appointed an Alaska Railroad Commission, consisting of an Army, Navy, and civilian engineer in addition to Alfred H. Brooks, an old Alaska hand of the U.S. Geological Survey. The commission left Seattle on September 10, 1912 bound for Alaska and handed their finished report to the president on January 20, 1913.

A variety of railroad bills was introduced in Congress. In early

1914 both houses passed an Alaska Railroad measure, which President Woodrow Wilson signed into law on March 12, 1914. Essentially, the act empowered the president to choose the location and authorize construction of a railroad or railroads connecting at least one Pacific port with the great interior rivers and one or more coal fields. There were two restrictions on the president's authority. One limited the two aggregate mileages to one thousand, and the other authorized a maximum expenditure of thirty-five million dollars. After the president had chosen a route, construction of the Alaska Railroad, connecting Seward at tidewater with Fairbanks in the interior for a distance of 470 miles, began in April 1915. It was completed in 1923 at a cost nearly twice that of the original authorization.¹⁷

Alaska Road Commission Eight-Year Progress Assessment

While the railroad boom engaged the attentions of northern residents, the Board of Road Commissioners for Alaska continued its construction and maintenance work but also took the time to assess the work it had accomplished since 1905. Between the latter year and 1913, Congress had appropriated a total of \$1,375,000 for the "construction and maintenance of military and post roads, bridges, and trails" in Alaska. The Alaska Fund had yielded \$1,160,829.62 in that time span, for a total of \$2,535,829.62 from both sources. With those funds, the Board had constructed and maintained the following mileage of roads and trails:

Wagon road	862 miles
Winter sled roads	617 miles
Trail	2,167 miles

The cost per mile, including maintenance and all expenditures by the Board, had mounted to:

Wagon road	\$2,489.68
Winter sled road	\$ 278.80
Trail	90.44

Also, at different times since 1905, the towns of Fairbanks, Nome, Cordova, as well as some of the large mining companies had made cash donations of approximately \$20,000 to aid the work of the Board.¹⁸

During its eight years of existence, the Board had accomplished much, although the mileage constructed so far constituted only the very beginning of a proper transportation system for Alaska. The Board considered the 419-mile-long wagon road from Valdez to Fairbanks, including the Willow Creek-Chitina branch, to be its most important achievement so far. With an average expenditure of about \$1,500 per mile, the Board thought it could be improved to the standards of a fair automobile road. In fact, during the late summer of 1913, the Board had sent a three-quarter ton field truck "of the type being experimented with by the Quartermaster and Medical Corps of the Army" on a round trip from Valdez to Fairbanks. The vehicle left Valdez on July 28 and returned on August 19, after having made a side trip to Chitina. The truck had covered 922 miles, making about 50 miles per day. In some instances, it had to be helped through soft spots on steep grades, but overall the trip had been successful.

The Board also had prepared an estimate of what it would cost to complete a system of roads and trails for Alaska that would meet traffic needs 10 years in the future, namely:

Maintenance of present roads	\$1,250,000
Completion of projects on which work has already started and maintenance after completion	\$1,420,000
Projects approved but on which no construction has been undertaken	\$2,780,000
Projects not yet of importance but will become so as other roads are constructed	<u>\$1,800,000</u>
TOTAL	\$7,250,000

Additionally, the Board considered the matter of railroad construction but concluded that Alaska needed wagon roads first. While disavowing any intent to discourage railroad construction, the board nevertheless

pointed out that

after several years of careful observation and study of the land transportation conditions and of the natural inducements to development and settlement which exist, is convinced that no rapid or general development will follow the construction of trunk lines of railroad into the interior unless preceded or accompanied by the construction of numerous wagon roads and trails as feeders, and even then the development will be slow.¹⁹

The Report of the Board of Road Commissioners for Alaska for 1914

In 1914 the Board reported that Congress had appropriated \$155,000 but that \$54,787.83 had been spent to build a dike around Valdez in order to protect the terminals and buildings of the military cable and telegraph system from glacial floods. The Alaska Fund had yielded \$170,688.37. There just had not been enough money to construct much additional road and trail mileage since nearly all of the funds were required for the repair and maintenance of the existing system. In fact, Board president Richardson cautioned that "this will become practically a fixed condition from year to year, with the amount of mileage now required to be maintained unless some provision shall be made for increasing the fund to take care of new projects."²⁰

Wickersham Attacks Richardson Once Again

Different communities throughout Alaska presented meritorious projects to the Board every year for which there just were not any funds. The City of Fairbanks, for example, had unsuccessfully petitioned the Board to build a bridge across the Chena River which divided the city. It then had contacted the Secretary of War and asked for help. Delegate Wickersham also was informed of the request. The delegate quickly fixed the blame for unaccomplished work. It was simple. Richardson just did not ask for enough money in his annual budget presentations. For the fiscal year ending June 30, 1916, Richardson, through the War

Department, had requested a mere \$125,000. "Instead of asking for \$750,000, as Richardson has always talked to you about, "Wickersham stated,

he only asked for a piddling amount, and then he comes to Alaska and lies to you people by saying that he cannot get the appropriation he asks for. The truth is that he makes no effort to secure any appropriation except merely to keep the work going from year to year and to keep up his commission. He does not want to build the bridge across the slough at Fairbanks and never will build it until the Northern Commercial Company tells him to. You know and I know and everybody else knows that Richardson and his Road Commission is under the control of the Northern Commercial Company.....²¹

Wickersham did not mention that since 1913 the Board of Road Commissioners for Alaska was authorized only to submit estimates necessary to maintain the existing road system. The War Department had made this ruling because the special congressional funds for Alaskan road work had always been charged against the general financial support of the Army.

Richardson Replies to Wickersham

Richardson soon enough heard of the delegate's allegations. On November 25, 1913 he had submitted a special report on the needs for work in Alaska to the War Department and accompanied it with a request for a supplemental appropriation for \$750,000. He had not been encouraged by the Department, however, but told Alaskans during the summer of 1914 that he still hoped Congress would consider the request favorably. That had not happened. Calling him a liar and the Board under the control of the Northern Commercial Company was totally unjustified. Richardson stated, and indeed it was Wickersham who

is a purposeful and malignant liar himself and depends upon his position as a member of Congress to escape the just results of any defamatory attack he may choose to make. His entire letter is without justification in any existing facts and is perhaps what one might expect from a scurrilous, political blatherskite, permanently afflicted with about every phase of mental perversion and a complete moral idiocy.²²

Wickersham Outraged

It now was Wickersham's turn to be outraged. After persecuting Richardson for years, he now found the latter's remarks "so ungentlemanly and abusive in its character as not to deserve reply...." But reply he did, and in great detail at that. Basically, Wickersham's complaint was that Richardson seemingly never had

a very clear conception of the duties of the delegate from Alaska whose rights you have always treated as of minor importance, while you have always magnified those of your own position and assumed to extend them to cover those of a representative in Congress. It is often difficult to tell from your acts whether you or the delegate is the representative from Alaska.²³

Wickersham lengthily lectured Richardson on the differences between their respective duties and prerogatives. What particularly bothered the Delegate was the fact that Richardson always spent the winters in Washington and was on good terms with many members of Congress and the executive branch. Wickersham furthermore was convinced that Richardson had always lobbied "in opposition to his [the delegate's] efforts to procure better legislation for Alaska, and both in Alaska and Washington you have threatened, abused, cursed, and otherwise harassed and impeded him in the performance of his duty." Wickersham once again recounted a long list of grievances, real or imagined, which he harbored against Richardson, including meddling in Alaskan local politics, favoritism toward the Northern Commercial Company and various other large economic interests, and incompetency in conducting the work of building roads and trails, bridges, and ferries. In conclusion, Wickersham reminded Richardson that it was the delegate's right and duty to protect the interests of Alaskans

from your viciously incompetent mismanagement of the road fund, and if you think you can prevent it by threats and profanity you are greatly mistaken. If you could be taught to appreciate your position . . . to give more attention to the building of roads . . . and less to politics, to use less liquor and more temperature language . . . to let your road work out by bids to contractors and draw your checks on a government depository, to compel your foremen to work more and play poker and pangini less--then you might get to the point where the people would have some confidence in you and less disgust at your failure.²⁴

Doubtlessly, Wickersham disliked Richardson so intensely because he saw in him a competitor for power and influence, and he did not forgive him for having championed President Taft's scheme for a military government for the Territory. In addition, the colonel had a power base in Alaska through his control of a sizable payroll. The delegate, rightly or wrongly, was convinced that Richardson used his territorial powers to hurt him politically. The colonel was convinced that Wickersham was out to wreck his military career. By 1916 the rift between the two men was beyond repair.

Early in 1916, Richardson again requested a supplemental appropriation of \$500,000 for 1917 in order to finish the Valdez-Chitina-Fairbanks military road and continue work on the Ruby-Long Creek Road (Figure 3). The two antagonists appeared before the House Committee on Military Affairs on April 11, 1916 and requested the extra money. Wickersham argued that it was high time for the Board to finish its work in Alaska, while Richardson maintained that the Army, which had done much of the pioneer work in opening American frontiers, was doing the same thing in Alaska. "What has been accomplished in Alaska," the Colonel stated, "is creditable to the Army and can only be appreciated fully by those familiar with the conditions prior to 1898 or who can picture the present condition if the Army work did not exist." Committee members listened attentively but did not make any promises.²⁵

A year later, Wickersham had changed his mind about the requested supplemental appropriation and noted that he had been "working up an assault on the appropriation carried in the Military Appropriation Bill of \$500,000 for the Alaska Board of Road Commissioners...." He did not want to go on record as opposing the money, so he asked a colleague from Ohio to make the point of order against the item. "I intend to put every obstacle in the way of the Board and hope finally to drive it out of existence. I feel fully justified in doing it for it seems the only way to protect the 'Alaska Fund' and prevent the Board from wasting it also." The next day his colleague, as agreed upon, raised the point of order, claiming that the money was not authorized by any previous law. The Speaker of the House sustained the objection, "and out went the

\$500,000 appropriation for the support of Colonel Richardson's wagon road work in Alaska." Wickersham recalled that he "sat quietly in my seat and heard the fight without saying a word. The Congressional Record of this date contains the record of the beginning of the end of the Alaska Board of Road Commissioners--a proper end." On February 25 the Delegate noted that Richardson had been busy telegraphing friends in Alaska, telling them that "I killed his appropriation and I am getting telegrams urging appropriation." Wickersham contacted his Alaskan friends and told them to look at the Congressional Record, which proved that he had not objected to the appropriation. Privately, he remarked that "it is necessary to the freedom and development of Alaska that this appropriation be fully and finally beaten, so we may be rid of Richardson and his domination, and I intend to see that it is done be the consequences good or bad to me.²⁶ Much to the delegate's chagrin, however, the Senate restored the \$500,000. Richardson had won the fiscal battle.

Records of the Board of Road Commissioners for Alaska Destroyed

In the meantime, a devastating fire swept through Valdez, partially destroying the town, and also burning the headquarters building of the Board. It destroyed the office equipment and all files. The organization recovered quickly, however, moved to Juneau and into new quarters, and resumed its work.

Request for Trail Staking in Western Alaska

Not surprisingly, the Board continued to receive more requests for trail and road construction than it could possibly accomplish with its limited budget. For example, in May 1916, Harry H. Brown, a warden of the Alaska Fisheries Service of the U.S. Bureau of Fisheries, appealed to the Board to put up trail markings for winter travel on the Alaska Peninsula and the Bristol Bay region. Not a single marking defined any trail in western Alaska, a wilderness region where travelers went for many miles without encountering either white or native dwellings. And

although travelers generally knew the general direction where they wanted to go they often lost the indistinct trail and wandered around for days before finding it again. Brown recounted the experiences of several government employees during the past winter. Mrs. Corinne Call, the school teacher at Dillingham, and Mrs. H. J. Paulsen, the wife of the U.S. Deputy Marshal in the town, had departed for Koggiung during the Christmas season together with three Eskimo girls and two Eskimo guides. More than a week later the party arrived at Billy Hurley's trading post far up on the Nushagak River. The guides had lost their way. There were many similar occurrences, Brown continued, all supporting his plea for marked trails.²⁷

Western Alaska possessed a difficult geography, Brown stated. The vast tundras were intersected by creeks, ravines, and rivers, and dotted with myriad small lakes, all resembling one another. One had to be an expert pathfinder to make a trip without losing time and adding miles to the journey. In the summer everyone traveled by boat since the tundra had become impassable. In the winter conditions were reversed. All water bodies froze solidly, and the frozen tundra now supported the weight of travelers and dog teams. Brown then suggested that competent trail guides determine their course, and that all wilderness trails be marked with stakes not more than one quarter mile apart. These stakes should stand at least eight feet above the tundra and be painted a brilliant color, making them brightly visible in a snowy landscape. At curves or angles in the trail, or at points where barriers restricted a traveler's vision, the stakes should have pointers enabling individuals on the trail to place the approximate location of the succeeding stakes instantly. Such a program of marking would be relatively inexpensive, Brown thought, and make winter travel "vastly more comfortable and safe," increase the number of travelers and make "the monotony and isolation of this region during winter . . . more endurable."

The Board Stakes Dillingham-Koggiung Trail

A few months later the Board responded to the request by re-

leasing proposals for bids to stake completely the approximately sixty-mile-long main trail from Dillingham to Koggiung. Colonel Richardson followed Brown's proposal in trail staking in most particulars, but instead of painting the markers directed that they have a red flag or streamer conspicuously displayed on top. Richardson pointed out, however, that limited Board funds allowed only the staking of heavily traveled main trails. And since it was too expensive to send a Board foreman to oversee the work, he asked that Dillingham appoint an individual "who will volunteer without compensation to oversee the work and . . . see the same is substantially and well done."²⁹ The Commission let the contract and the Dillingham to Koggiung trail was staked.

Reconnaissance and Construction, Iliamna Bay to Iliamna Lake

In 1916, the Board dispatched John Zug, an assistant engineer, to examine the route from the head of Iliamna Bay to Iliamna village. Zug reported that the approximately twelve mile long road was needed to make the Iliamna Lake region accessible from Iliamna Bay, saving travelers the long trip by way of Dutch Harbor. He estimated that the contemplated low-standard wagon road could be built for about \$8,000 by following the existing trail. The Board decided to spend the money for the project, and at the end of July, 1917, P. Cooper, a Board foreman, together with seven laborers, a cook and about three and one half tons of supplies and tools arrived at A.C. Point, Iliamna Bay. From there, the outfit had to be transferred to the head of the Bay in two small skiffs, a distance of about two miles. It was a laborious process since the men could only make one round trip on each tide because of the extensive mud flats at the head of the Bay. It took six tides to move the supplies and tools, and from there the men had to carry the outfit for another two miles on their backs to the first campsite. At the end of the 1917 season, the crew had constructed 9.5 miles of road, leaving another 1.5 miles to reach the village. W. G. Fenton, the new foreman who had replaced Cooper in August, observed that the best route to reach Iliamna Lake crossed the river at the village and from there wound through low, rolling hills

providing a solid roadbed, while the Pile Bay harbor provided an ideal anchorage for small craft. Another two miles of road needed to be constructed to reach Iliamna River at a point accessible to launches coming from Bristol Bay, and another five miles to reach Pile Bay on Iliamna Lake. In view of insufficient funds, the Board decided to finish only the remaining two miles to the Iliamna River, particularly since two larger and three smaller bridges had to be constructed with the remaining funds.³⁰

Request for Wagon Road from Talkeetna to Iron Creek

While the outlying districts asked for trail staking and road construction, the railroad construction boom revived mining activities along the route. Early in 1917, W. A. Monroe, a citizen of Spokane, Washington, and the spokesman for a group of surveyors, enlisted the help of C. C. Dill, a member of the House of Representatives, in his quest to have the Board first build a trail and then a wagon road from Talkeetna on the government railroad to the group's mineral claims on Iron Creek, a distance of approximately forty miles. Monroe was satisfied that the group's six locations, the Copper Queen, the Copper King, East View, and the Springer and Talkeetna Groups would produce handsomely once properly developed and would supply important tonnage to the railroad. Representative Dill conferred with Richardson about the request, but was told only that the Board would consider the request. Richardson warned, however, that "the demands upon the Board are far in excess of what . . . [it] is able to accomplish with the funds available and new projects are coming up continually which have to take their turn for consideration." A few days later, seventy-two miners, prospectors, and citizens of the Talkeetna mining district petitioned Richardson to build the wagon road to Iron Creek to help open up the valuable copper deposits. Richardson promised to consider the request. He told Congressmen from Washington that the Board intended to make substantial improvements in the Matanuska District, but reminded them that this depended on the military appropriation bill to come before the extra session of Congress.³¹ In essence, Richardson told

the Washington House delegation that the Board would happily satisfy constituents' requests - but that this depended on help with the appropriation bill.

Reconnaissance in the Matanuska and Susitna Valleys

Richardson knew that railroad construction had brought an influx of job seekers as well as prospectors and miners into the Matanuska and Susitna valleys. As early as 1916, therefore, he had directed Assistant Engineer John Zug to examine conditions in the areas adjacent to the new government railroad. Zug spent the summer battling mosquitoes, enduring wind and rain as well as enjoying warm, bright and, sunny days, and after three months submitted his report. He found only three districts sufficiently developed to "produce any considerable immediate traffic and demand for roads." The first was the Willow Creek Mining District, served by the Knik-Willow Creek road, the second the Cache Creek Mining District, and the third the farming region of the Matanuska Valley. Existing roads and trails partially served all of them, but considerable improvement was required to permit heavy traffic and lower freight rates. A portion of Zug's report follows:³²

3. The Willow Creek Mining District is now served by the Knik-Willow Creek Road (Route 35). This road has been cut down by long usage so that the general level is in many places below that of the adjacent ground and in wet weather the holes become filled with mud and water. In dry weather it is possible to haul good sized loads over it at a cost of \$60 per ton. Improvement of the road will probably reduce this rate to \$20 per ton and perhaps \$15. The main line of the railway crosses the road at mile 14 1/2 and most of the freight will probably be hauled from this point as soon as the road is in operation. The road requires widening out, ditching, and surfacing. The material from the ditches will probably be sufficient to fill the low spots and gravel for surfacing is accessible at convenient points all along the line. The traffic over the road is heavy and constant throughout the summer. Definite information as to the quantity of it has not yet been received. The expense of putting this road in first class condition will probably average at least \$1000 per mile. In addition an extension of about four miles is desired on the upper end and it will probably be necessary to rebuild the bridge over the Little Susitna. The total amount required will be about \$25,000.

4. The Cache Creek Mining District is not directly tributary to the railroad at present except at Anchorage. All travel and traffic into it goes by water to McDougall on the Yentna River. thence across country by trail to the Kahiltna River and thence by a very rough pack trail in summer and in winter via the Kahiltna River to the mouth of Cache Creek and thence up the Creek. The improvement of summer travel conditions is covered by my report of July 19, 1916. Subsequent development of this district may require the construction of another road some time in the future to obtain more direct communication with the railroad either at Talkeetna or some point further north.
5. The farming district of the Matanuska valley lies between the branch line of the railway extending to the coal fields and the Willow Creek Road. In general it embraces two townships viz Nos. 17 and 18 North, Ranges 1 & 2 East Seward Meridian. It covers about half of the four townships and within the limits of this area consisting of about 72 square miles. The soil is extremely fertile. Beyond these limits it is not so good. Most of the available and accessible land is occupied and considerable clearing has been done and improvements made. There are two general routes of travel through the district. One road extends in a general northwesterly direction from Matanuska to Wasilla Creek and thence northward to an old trail from Knik to Moose Creek. The other follows the valley of Wassilla Creek from a point on the main line of the railroad 4 miles west of Matanuska to an intersection with the first named road in Sec. 24 Twp. 18 N. R 1 E. Considerable clearing, grubbing and grading has already been done by the settlers on those roads. The general location of these roads is good and they serve the most improved portion of the valley. In addition to these roads wagon roads have been constructed by the Engineering Commission from Matanuska to the Willow Creek road and from Matanuska to Moose Creek approximately paralleling respectively the main line and the branch line of the railroad. An additional road is needed from Farmington four miles north of Matanuska through the center of township 18 to intercept the Willow Creek road at some convenient point north of mile 25. It is believed these roads will adequately serve the greater portion of the farming area of the Matanuska valley. They will aggregate about 24 miles in length and cost approximately \$1000 per mile. In addition the road from Farmington should be extended East across the railroad to Palmer's Canyon and a bridge built across the Matanuska river at this point. This will require about two miles of road and a bridge probably 450 feet long with a span of 75 to 100 feet across the channel. This will cost about \$8,000 additional.
6. The Engineering Commission has constructed about 60 miles of road at an aggregate cost of \$45,000. These roads parallel the railroad line in a general way, though in places they leave the line for considerable distances. They are only ordinary narrow,

cleared and grubbed roadway, without any elaborate construction. Considerable grading has been done where required and there are occasional stretches of corduroy. The roads are finished to a sufficient degree to serve their purpose in advancing the construction of the railway but not being ditched or surfaced will deteriorate rapidly and cost considerable for maintenance. They will probably keep them in sufficient repair for ordinary use until the end of the present season when they will probably not require them any longer for their own use. The maintenance of these roads in their present state will cost probably \$100 to \$150 per mile. The cost of their improvement will depend upon the character of roads the Board decides to maintain in this region. Except on the Willow Creek road it is not believed the traffic will be heavy enough to require surfacing. In most places in this district, gravel is close to the surface and the character of the soil is such that it drains readily. A statement of the cost of roads constructed by the Engineering Commission to June 30, 1916, is herewith.

7. It is believed an appropriation of \$75,000 will be sufficient to provide for the present needs of the district. Development has not proceeded much in advance of the railroad either on the main line or the branch line. One coal vein has been opened at Moose Creek and is producing regularly. The bunkers are connected with the railroad by a siding and the siding is reached by a tram line from the mine. It is expected the railroad will be so located as to serve the heart of the coal field but no doubt wagon roads will be needed at some later stage of development. It is probable that roads will also be needed along the main line as construction is advanced and it might be advisable to increase the above estimate to provide for this contingency.

Oliver A. Hall Pessimistic About Farming Potential

While Zug had given a fairly optimistic estimate of farming possibilities, Oliver A. Hall, the design engineer for the Board, visited the valley a year later and presented a more sober assessment. About 300 farms were surveyed and open for settlement in an area that began in Anchorage and included the land between the Knik-Willow Wagon Road and the railroad. Of the approximately 90,000 acres of agricultural land, no more than 200 acres were cleared and under cultivation in the Matanuska Valley, with perhaps another 100 acres adjacent to Anchorage and Old Knik. All else was covered with heavy growth of spruce and birch trees, and heavy undergrowth and moss covering the ground. It required heavy work to

clear, remove the moss and all the stumps before the soil could be plowed.

Hall related that the farms were homesteads of 320 acres, filed under the old Homestead Law. Some of these had been relinquished and relocated in units of 160 acres each under the new law. He estimated that each farm contained an average of about four acres of cleared and cultivated land. Land clearing cost anywhere from \$60 to \$200 per acre, with burning the cheapest method. But since it rained a great deal, little burning had been accomplished. Most farmers were old prospectors and miners. Hall talked with a number of these people who told him that they would gladly sell to the first buyer to enable them to go back to prospecting or mining. If offered enough money, some indicated a desire to go Outside and buy farms there.

Hall pointed out that the area had a short growing season, from about the middle of May to the end of August. During the last three years peas planted in several gardens in the area had frozen while in blossom, and potatoes never ripened and had to be harvested while the vines were still green and then cured in root cellars. Wild grass grew to a height of four to five feet, but because of the wet weather it was difficult to dry. It also seemed to be less nutritious than hay imported from the States. Residents claimed that it took about four times as much native hay than the imported product to feed stock. Furthermore, after each cutting wild grass grew back shorter and shorter. Some individuals experimented with wheat, oats and barley, and while these grains would not ripen they made good feed for horses and cows.

The area possessed deep, black rich loam, averaging in depth from six to eight feet at Palmer and tapering off to about eighteen to twenty-four inches ten miles to the north. Hall concluded that "were this land located in a more favorable climate it could be made into profitable farms." He admitted that it might be possible, "after a course of thorough experimentation," to raise certain crops to maturity. But that lay in the far future.³³

War Department Reviews Work of the Board and Richardson

While the Board of Road Commissioners attempted to respond to the many requests for road and trail construction, the War Department assigned Major General T. H. Bliss to review the work of the organization thoroughly and analyze the controversies between Delegate Wickersham and Colonel Richardson. Bliss summarized Richardson's military career, noting that he began his Alaska service in 1897. Because of his extensive northern experience and capable performance he became the logical choice for the appointment as senior member of the Board of Road Commissioners for Alaska in 1905. Throughout his service, superior officers had always praised him for his leadership abilities and resourcefulness. All went well apparently as the Board "plodded along with its work" until 1910. Neither the Board nor its members incurred any enmity or criticism. In January, 1910 Wickersham charged Richardson with lobbying Congress for several pieces of legislation, among them the legislative council measure, which the Delegate opposed. From that time onward problems between Wickersham and Richardson mounted. In response, the War Department had undertaken several investigations and always completely exonerated Richardson. At no time were Wickersham's attacks on the Colonel sustained by the record. Bliss believed, however, that these attacks on the Board and Richardson would continue, due in part to Alaska's geography and its demography. The Territory's population was widely scattered over a huge area; many people lived in the most inaccessible places, and their economic successes or failures depended upon gaining access to navigable streams or harbors on the seacoast. For this they needed roads and trails, and the construction of these "was about as difficult as can be conceived of." The Board never had an adequate budget to satisfy all requests fully; in fact it did not meet the demands of many at all. Given these facts, it should have been clear from the very beginning that "bitter struggle and rivalry would result from these conditions." Still, taking these factors into account, Bliss was amazed that Alaskans nearly universally praised the work of the Board.

Major General Bliss Recommends Transfer to Interior

Still, the War Department had to anticipate that attack on the Board would continue indefinitely into the future. The time, therefore, was right to transfer the responsibilities of the Board to the Department of the Interior, a civilian agency already engaged in building the Alaska Railroad.³⁴

Richardson Asks That Transfer Be Delayed

Richardson, although he concurred with the transfer plan, appealed to the Secretary of War to be allowed to complete Alaska's major road network, "contingent, of course upon any developments which may make my services more valuable elsewhere." Several factors were involved in Richardson's appeal. He felt that his personal reputation was at stake, although he tried to believe "that this is secondary to my sense of duty to the work and to the wishes of the Department." He had served nearly twenty years in Alaska, embracing "years that have necessarily deprived me of opportunity in other fields which perhaps might have offered more promise of honor and reward than did the work in Alaska." Richardson also pointed out that his suggestion to the Territorial Legislation to create a road organization capable of assuming the functions of the Board had been well received. The Colonel thought that it might be more appropriate for the Territory than the Department of the Interior to take over the duties of the Board. Furthermore, once such an organization existed it might become the recipient of federal funds which the Department of Agriculture dispensed to states and territories for the construction of post roads.³⁵

Renewed Criticism of the Board of Road Commissioners for Alaska

While the War Department pondered the transfer plan, the Anchorage Chamber of Commerce protested that the Board intended to spend the greater portion of its funds on the Valdez-Fairbanks road "necessity

for which no longer exists" once the railroad was completed. The Chamber boasted about 300 flourishing farms comprising some 90,000 acres which were isolated from markets because of the lack of wagon roads. The citizens had asked the Board to expend \$170,000 for the season's work, but had only been granted a pitiful \$25,000. The Chamber suggested that the Board arrange with the Department of the Interior to build wagon roads under the direction of the Alaska Engineering Commission. The Chamber, in truly booster fashion, demanded that immediate action be taken to restore equity and fairness. The Valdez Chamber of Commerce disagreed with the opinions of the Anchorage Chamber and pointed out that the Valdez-Fairbanks road did not parallel the government railroad, in fact it was the only road to the interior through American territory. Richardson was caught once again in a controversy. He pointed out that the Board had no responsibility in law to build feeder roads for the railroad. Furthermore, the Department of the Interior greatly publicized its railroad project and minimized the labors of the Board. Worse, many residents held the Board "responsible for any failure of the railroad to immediately fulfill the extravagant expectations concerning it, by charging that our Board refused or neglected to build the necessary wagon road feeders." In short, Richardson concluded, "I find myself playing a 'losing game' personally and for the Department, and I see no way of overcoming it." He therefore requested to be transferred to Washington as soon as he had completed the annual report.³⁶

Richardson Resigns

Soon thereafter the War Department promoted Richardson to the rank of brigadier general in the National Army. Wickersham was displeased, but then delighted when the new general resigned as president of the Board of Road Commissioners for Alaska on December 29, 1917 and left the Territory shortly thereafter to assume command of the 78th Infantry Brigade, 39th Division, then at Camp Beauregard, Louisiana. Richardson served with distinction in France and next commanded American forces at Murmansk, Siberia. He returned to the United States in October 1919,

and with the mustering out of the National Army he was returned to his permanent rank of Colonel and retired on October 31, 1920. For his distinguished leadership in Siberia the War Department awarded him the Distinguished Service Medal in April 1922. He died in May 1929 at the age of 68 at Walter Reed Army Hospital in Washington, D.C.³⁷

Wickersham retired from the delegateship in 1920 but reentered politics in 1930 and served another term as delegate. Anthony J. Dimond defeated him in the 1932 Democratic landslide and Wickersham died in Juneau at the age of 82 in October 1939. In his book Old Yukon, published in 1938, Wickersham paid tribute to his old nemesis, stating that "the Richardson Highway, from Valdez to Fairbanks, is a fitting monument to the first great road-builder in Alaska, General Wilds P. Richardson."³⁸

FOOTNOTES

1. Stimson to Brig. General W. H. Bixley, Chief of Engineers, U.S. Army, April 17, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.' Lieut. Col. Thomas H. Rees to Chief of Engineers, U.S. Army, March 26, 1913, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. War Department, Report of the Board of Road Commissioners for Alaska, 1912 (Washington: Government Printing Office, 1912), pp. 5-6.
9. Ibid., pp. 26, 7.
10. Naske, Statehood, p. 30.
11. Ibid., p. 31.
12. 33 Stats. 391; Session Laws of Alaska, 1913, Chap. 3, April 5, 1913.
13. Ibid., 1915, Chap. 27, April 28, 1915.
14. Ibid., 1917, Chap. 17, April 30, Chap. 36, May 3, Chap. 35, May 3, 1917.
15. Wickersham to Franklin K. Lane, April 11, 1913, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
16. Richardson to the Adjutant General, March 13, 1914, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.

17. William H. Wilson, Railroad in the Clouds: The Alaska Railroad in the Age of Steam, 1914-1945 (Boulder, Colorado: Pruett Publishing Company 1977), pp. 17-31.
18. War Department, Report of the Board of Road Commissioners for Alaska, 1913 (Washington: Government Printing Office, 1914), pp. 8-10.
19. Ibid., pp. 5-15.
20. Ibid., 1914, p. 5.
21. Wickersham to Wallace Cathcart, December 21, 1914, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
22. Wickersham to Wallace Cathcart, June 23, 1915, file Richardson, Wilds P., General correspondence, Adjutant General's Office, R.G. 94, N.A.
23. Wickersham to Richardson, July 29, 1915, file Richardson, Wilds P., General correspondence, Adjutant General's Office, R.G. 94, N.A.
24. Ibid.,
25. U.S. Congress, House, 64C., 1S., Roads and Trails in Alaska, Extracts from Hearings before the Committee on Military Affairs on the Bill Making Appropriations for the Support of the Army for the Fiscal Year 1917, Statements of James Wickersham and Colonel W. P. Richardson (Washington: Government Printing Office, 1916), pp. 3-16.
26. James Wickersham Diary, February 20, 21, 22, 25, 26, 1917, University of Alaska Archives, Fairbanks, Alaska.
27. Brown to Bureau of Fisheries, May 20, 1916, Alaska Road Commission, box 65637, R.G. 30, Federal Records Center, Seattle, Washington.
28. Ibid.
29. Richardson to Brown, August 17, 1916, Alaska Road Commission, box 65637, R.G. 30, Federal Records Center, Seattle, Washington.
30. Zug to Richardson, August 9, 1916, P. Coper to the Commission, August 16, 1917, Fenton to Commission, November 24, 1917, Fenton to A. Eide, Superintendent, A.R.C., February 17, 1918, Alaska Road Commission, Box 65479, R.G. 30, Federal Records Center, Seattle, Washington.

31. Monroe to Dill, January 9, 1917, Richardson to Dill, January 19, 1917, Citizens to Richardson, January 17, 1917, Richardson to Congressman Albert Johnson, March 17, 1917, Alaska Road Commission, box 65479, R.G. 30, Federal Records Center, Seattle, Washington.
32. Zug to Richardson, September 6, 1916, Alaska Road Commission, box 65479, R.G. 30, Federal Records Center, Seattle, Washington.
33. Hall to Richardson, August 10, 1917, Alaska Road Commission, R.G. 30, Federal Records Center, Seattle, Washington.
34. T. H. Bliss to Secretary of War, February 6, 1917, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
35. Richardson to Secretary of War, February 21, 1917, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc Files, various files pertaining to Alaska, R.G. 94, N.A.
36. Anchorage Chamber of Commerce to Secretary of War, June 9, 1917, Valdez Chamber of Commerce to Secretary of War, July 6, 1917, Richardson to Brigadier General H. P. McCain, August 10, 1917, Central Decimal Files, States and Territories, Alaska 602-611, Records of the Adjutant General's Office, 1917, R.G. 407, N.A.
37. Dumas Malone, ed., Dictionary of American Biography, Vol. 15, (New York: Charles Scribner's Sons, 1935), p. 576.
38. James Wickersham, Old Yukon' Tales-Trails- and Trials (Washington, D.C.: Washington Law Book Co., 1938), p. 474.

CHAPTER FIVE

A NEW ERA FOR THE ALASKA ROAD COMMISSION

The resignation of General Wilds P. Richardson on December 29, 1917, closed the pioneering period of the Board of Road Commissioners for Alaska. Richardson, president of the organization from its inception in 1905, had supervised the road and trail work with remarkable persistence and dedication. His administration did not go uncriticized--most notably by the Alaskan delegate to Congress, James Wickersham, whose continued fulminations have already been detailed--but his direction achieved outstanding results, and established the pattern for road developments for the following decades.

America's participation in World War I severed Richardson's connections with Alaska and disrupted the progress of road construction in the vast territory. While Richardson served with distinction in France and Siberia, his successor as Board President, Major William H. Waugh, had to carry on with sharply cut appropriations. Alaska's needs could not compete with the war.

Lack of Funding and Changing Conditions

While the war period of 1917-1920 was characterized by a lack of funding (appropriations were \$100,000 for each of the last two years of the war as opposed to the \$500,000 Richardson had received for each of the last two years of his tenure), other events signaled momentous changes and developments for the future. The advances continued despite the war. Numbers of automobiles using Alaskan roads increased dramatically, and created pressures for suitable highways. Simultaneously, there were great leaps forward in the development of mechanized equipment for road work. Taken together, the two developments mark the war period as one of great significance in its foreshadowing of events, despite the low ebb of funding for the era that separated pioneer from modern times.

Harold Eide's Journey

The journey of Harold Eide, a tough young Norwegian who traveled the entire route of the Valdez to Prudhoe Bay Corridor in a continuous journey, separates the pioneer from the modern period. A friend in California gave him a map of a supposed gold strike. The year was 1917, and most of the more productive placer mining areas in Alaska had been worked out. Eide was ready to go and find his luck, and from an article and a book he wrote in later years, we know a great deal about his trek. Eide did not know that Nome, Fairbanks, and other lesser centers of production were settling into a slow decline. Each year the Territory's population dwindled further; there was little incentive for a man to go north to try his fortune. But Eide was footloose and unattached, and his friend's discovery had been made in an area that had not drawn many prospectors. It was a region where no major strikes had ever been made -- the rugged, remote Brooks Range which divides the forest-clad hills of the interior from the treeless tundra of the Arctic coastlands.

The young man had done some prospecting in the North earlier, so he already had some experience. From Seattle he steamed north to Valdez, enjoying enroute some of the grandest scenery North America offers along the famed Inside Passage route.

Once in Valdez, which was half buried under its heavy winter snow cover, Eide completed his preparations. If he waited until June, he could take a passenger coach, but he could not afford it. He intended to ski over the Valdez trail to Fairbanks, then proceed north from the interior city. His pack weighed 110 pounds when it was complete with grub, gear, sleeping bag, and blankets. A bit heavy, he reflected, but nothing a sturdy son of Norway could not handle. What is a journey of over 1,000 miles, when, at the end, there was a pot of gold to be gathered? Thus fortified by his expectations, Eide shook hands with a few well-wishers, shouldered his burden, stepped into his skis, and set off.

Outside of Valdez, the snow was deep and loose, and the going was consequently slow. The skier sloughed into the narrow canyon that provided the opening into the interior, after taking a last look at Valdez,

huddled into the snow below. "No chance of losing the trail, for the steep timber-clad hills on either side hemmed me in like going through a tunnel."¹

After three days of strenuous effort, Eide reached Glennallen and stayed overnight in the roadhouse there. This was a treat and a reward he gave himself for the ardours of the initial hard-traveling days, and the camp making along the trail at night. The roadhouses along the trail offered all the comforts a weary traveler could desire. Nothing fancy -- but the basics: a bed, warm water for a wash, plain food and lots of it, and a drink for those who were so inclined. Eide was not inclined. Roadhouse comforts were not cheap, and the prospector could not indulge himself too often.

Pushing on the next morning, Eide had the trail to himself. He encountered no other travelers coming down from Fairbanks and therefore guesses that they were snowbound up the line. At East Trail Junction the roadhouse was jammed, with travelers bound north and south held up there, waiting for freshly fallen snow to pack so they could get a move on. Eide exchanged trail lore with the others, then moved on along his "lonely way." His way may have been lonely, but it was efficient, as his progress proved. From time to time he was able to overtake freighting sleds bound for Fairbanks and speed on ahead of them. Sometimes the sled drivers were in distress, with broken sled runners which had to be mended under difficult conditions. Overloading was the cause of this. "It was a case of being too greedy," considered Eide.

Isabel Pass provided the next obstacle. For one with time to enjoy it, the summit provided a spectacular view of snow covered rivers and mountainous grandeur. He stopped at Ivar's roadhouse, but there were not beds available. The proprietor's wife invited him to lay out his sleeping bag in the kitchen and he fell asleep "to the soft gurgling of the teakettle and the sweet smell of bread baking in the oven." Ivar was a keen dog handler, and was quite willing to exchange sound dogs for ailing ones for any freighters who had the need. On their return trip from Fairbanks, they would usually find that their foot-sore canines had been restored to health through rest and Ivar's care.

Some travelers tried to keep their spirits high despite the hardship of the trail. Soon after leaving Ivar's, Eide encountered a group of merry-makers. He had been skiing into the night because the full moon gave ample light when he came upon a party gathered around a roaring campfire. They were entertainers and were whooping it up with music, whiskey and good cheer. "A man was sitting on something that looked like a throne atop a sled, swinging a whiskey bottle in time to music furnished by three bewhiskered, drunk performers dancing on the snow and playing their instruments at the same time." The man on the chair was going to Fairbanks to become the town's painless dentist; the others were cabaret performers. "Right now none of them felt any pain," Eide remarked ruefully, and he moved beyond the group rather disdainfully.

When the skier reached the Tanana River he had his best day's run -- a good 45 miles. The temperature hovered at about twenty below as he moved up the Tanana and then followed the Chena River, a tributary along which the gold town of Fairbanks was located. The little settlement was a glad sight and its twinkling lights signaled the welcome end to the first half of his journey. "All things have to come to an end, even the Valdez Trail." He went into the Blue Fox Cafe and ate a hearty, well-deserved meal. Other diners there gathered around, assuming he was the mail carrier, and called for the latest gossip from Valdez.

After four days' rest, Eide was ready to set out for the North. The road to Livengood, about 80 miles northwest of Fairbanks, was good, because mining operations were being carried on at that camp all winter. On July 24, 1914, N. R. Hudson and Jay Livengood had discovered gold on Livengood Creek. Hundreds rushed to the camp during the winter of 1914-1915. From Livengood to Wiseman there was a good trail because traffic was maintained between the new and the older mining center. Wiseman was one of the two places within the Arctic Circle where mining had been carried on: the other was in the Chandalar country to the east.

His next halt was at Coldfoot, then called Slate Creek. Today it is the site of a pumping station for the Trans-Alaska Pipeline, but in 1917 it was a dying mining community. The traveler bought himself a handful of cigars and some chocolate bars "to chew on my lonesome journey."

From this point his journey would be lonesome indeed. There would be no other travelers and no roadhouses beyond nearby Wiseman, and it was there that Eide purchased the last provisions he would be able to buy. Beyond this he would have to supplement his diet with game meat. His pack load now weighed 150 pounds but he had to provide all the necessary food to sustain himself on the remainder of the trail. He even bought a couple of pounds of nails to be used in the construction of a log cabin once he reached his destination. He rested for two days in Wiseman, but remained reticent concerning his plans. It did not do to talk too much, and he arose early on the day of his departure so that he would not be observed. "It was not smart to let people in on any new discovery or there would be too much company."

Eight more days of travel brought him to the place indicated on the sketch map his friend had given him. He set to work building his cabin, completing it by the first of July. His goal was to prospect through the summer, then return to Wiseman before winter.

Through the remaining weeks of the short subarctic summer Eide covered a good deal of ground while looking for interesting quartz outcroppings. He walked into the foothills of the Brooks Range near Anaktuvuk Pass and passed some time with the caribou-hunting Eskimos who had established a hunting camp there. (A few years later the Eskimos were to establish a permanent community at the same site. It was a good place for a village because it lay astride the caribou migration route.) The Eskimos were not having any luck at hunting that day, so Eide gave them a hand with his trusty Krag rifle. He brought down two animals and kept a small portion of the meat for his own use. The Eskimos were getting ready to journey to Barrow by way of the upper Colville River, and Eide figured he had better get back to Wiseman. But first he wanted to have a look at the country beyond the pass, the area we now call the North Slope, and recognized as one of the most valuable oil regions in the world. Eide thought the country would be dull, flat, marshy, and unattractive, and was surprised at what his first glimpse revealed. "The view was so different from anything I had seen before, so beautiful, so intriguing, and so challenging to a young Viking, I just had to investigate it

further." Lyricism came easy to the spell-bound man: "The midnight sun, low over the horizon to the north, painted hundreds of little lakes into fantastic reddish gold. Slightly to the east, dozens of tiny fingers of water wiggled their way among the rocks to make the Sag River a contribution to the Arctic Ocean." Eide sat by his campfire fascinated, munching on caribou, and drinking in the view. "Caribou grazed nearby, unafraid of me. A couple of bears ambled past, down the slope toward the river, evidently bent on having fish for supper." He was no longer anxious to return to Wiseman. Instead he would cross the slope and have a look at the Arctic Ocean which was only 80 miles to the north.

Eide found the headwaters of the Sag River and began following its course to the sea. At first the going was good, the ground was firm and rocky, and the tall wind-blown grass was no impediment to his walk. The country seemed lush and prolific. Where, he mused, is the much discussed "desolate Arctic"? Everywhere there was wildlife within view - wolves, bears, caribou, foxes, and smaller animals. After camping overnight, he discovered his first hardship in overland travel. It was not anything very menacing, just water. Spongy ground, interterminal swamps, and a network of small and larger lakes that seemed as complex as a particularly devised maze. He was up to his rear end in water much of the time, and had to cross and recross streams whenever he spotted a grizzly bear along the banks. It was a cold, wet and fatiguing hike -- and the country appeared less attractive now. "I could feel the chill of wet clothes sticking to my body like the grip of death." That night he managed to find a little higher ground for a campsite. He got a brisk fire going, and soon his clothes were drying, coffee was brewing, and a caribou steak was sizzling in the pan. Things were looking up and there was even music -- self-produced on a harmonica he had carried with him all the way from Seattle. "The midnight sun spread its peace over the tundra with soothing colors of red and gold reflected on the ponds and river."

At the end of the next day, the young traveler reached his goal -- the Arctic coast. He blazed up a huge campfire to dry out his clothes, and by a remarkable coincidence, it attracted the attention of traders aboard a passing schooner. There were probably only about a half dozen

schooners navigating the entire arctic at the time, but Eide had the good luck to encounter one of them and got a ride to Barrow, and eventually to the outside. His odyssey had been concluded successfully; the Valdez-Prudhoe Trail had proved to be serviceable.

Eide's adventure of 1917 has been described at length here because it illustrates the condition of some of Alaska's roads and trails rather effectively. In 1917, Eide's mode of travel on the Valdez-Fairbanks Road was nearly unique. Off that major corridor to the interior, however, Alaskans were still accustomed to going by any means possible: on foot, by skis, by dog or horse-drawn sled, or by wagon.

The Coming of the Automobile

Although World War I did not touch Alaska greatly, those years were transitional ones in many respects. Regular automobile and truck traffic loomed just over the horizon. Soon it would be possible to travel in comfort in one's automobile or by hired motor vehicles all the way from Valdez to Circle. As for crossing the Brooks Range, well, who would want to do that? Most Alaskans were content to have the road end at Circle.

Developments in the road system that were accomplished from 1918 to 1924 met some of the expectations of Eide's fellow travelers. Certainly the automobiles increased in numbers. Yet progress seemed painfully slow in expanding the sparse network of roads suitable for wagons, much less mechanized vehicles. Most of the thin ribbons marked as summer or winter trails on the maps did not blossom into roads through the work of the Board of Road Commissioners in those years. In fact, if maps had accurately reflected the changing conditions, they would have shown the obliteration of many trails and the impassability of large sections of the roads. International events and the ravages of nature were the chief setbacks to the territory's road program.

In 1917, after the United States joined the European war, the American Army's highest priorities did not include the maintenance of Alaska's transportation system. Several years passed before cuts in appropriations were restored to pre-war levels.

A history of Alaska's roads, however, cannot be limited to considerations of the technology of the building and maintenance of surfaces, culverts, and bridges. Roads are as much an index of social change as they are of technological progress. Of all the changes in patterns of national life that occurred in the early decades of the twentieth century, none has been more dramatic and far-reaching in its results than the success of the automobile. Henry Ford's first automatic assembly lines started up in January of 1914, thereby determining the future of road transportation. Years before, when autos were still being made individually, Thomas Alva Edison announced that "the horse was doomed," but when Ford coupled his assembly methods with a five dollar daily wage for his workers, he initiated a sweeping social revolution.²

Against this background of transportation advances, it is interesting to review the perceptions of the Board of Road Commissioners for Alaska as the automobile revolution moved north at an ever-accelerating rate. Early mentions of the automobiles in the annual reports have a foreboding ring. At first glance it appears as if Board members felt themselves burdened enough with the formidable logistics of the territory's expanse and had reason to dread an innovation that threatened to add further to their heavy workload. Actually, the writers were paying lip service to duties to provide military routes. They also, however, had a responsibility to connect mining centers to the major river banks. Their reports cautiously denied any responsibility for the new social phenomenon: "The use of automobiles had not been encouraged by the Board, but the number of such vehicles in Alaska is growing rapidly from year to year."³ This cautious disclaimer of any intent to foster automobile use in 1918 had been made in earlier reports and was to be repeated, but the members were not really ignorant of events nor resistant to a clearly determined course of history. While the Board conceded that automobile use "has greatly increased the cost and difficulty of maintaining the roads," they also realized the "the value of quick transportation is recognized."⁴ Obviously the conscientious board understood its responsibilities: "It is hoped that sufficient funds may eventually be appropriated to permit the Board to undertake a general prospect for the

sufficiency of all the most important roads."⁵

Regular Automobile Travel Comes to Alaska

By 1918 automobile stages regularly used the Valdez-Fairbanks Road and the Willow Creek-Chitina branch during the summer months. Gravel surfacing and improvements in grading over the previous two years made the wagon road suitable for stage vehicles, but the Board did not claim to have produced a road suitable for use by private automobile drivers. "Much improvement in the way of surfacing will have to be done before these and similar roads throughout the territory can be claimed as automobile roads," admitted the Board.⁶

Road and trail statistics were fairly impressive. A total of 1,006 miles of wagon roads, 673 miles of sled roads, and 2,346 miles of trails had been constructed, "giving access to practically every developed portion of Alaska."⁷ Of course, much of the wagon road mileage had not been surfaced, but approximately 300 miles had at least been surfaced with gravel.

The Alaska Railroad

Another demand for increasing transportation facilities during the war period was not yet urgent in 1918, but its pressure cast a long shadow. The construction of the Alaska Railroad from Seward to Fairbanks was well underway. Conceivably, the railroad's use could reduce the traffic burden on the road, but it would also create demand for more roads elsewhere. Every community near the railroad route considered that the Board was obligated to provide a feeder wagon road to the railroad. Such feeder roads made economic sense, as the Board acknowledged, but after making an equitable allotment of budgeted funds to communities adjacent to the railroad, much remained to be done. "It is believed," the Board reported in 1918, "that the construction of the feeders constitutes a separate problem on which special provision should be made by appropriation or otherwise."⁸ Clearly the Board was not simply passing the buck to

Congress or other agencies in pointing out this problem. While Congress might be reluctant to provide a substantial increase in the road appropriation when railroad construction was requiring heavy funding, the need for feeder roads was a logical result of the railroad. Thus, in the short run, at least, the railroad promised to create more difficulties for the Board and its slender budget than it alleviated.

The Alaska Road Commission Mechanizes

Brighter prospectors of the 1918 Report were included in the "machinery and equipment" section. Machinery purchased in 1918 included:

- 2 tractors, 12-25 horsepower
- 1 road grader, 8 foot
- 3 road graders, 6 foot
- 4 road drags, 3 way
- 4 auto trucks, heavy⁹

In the previous season employees of the Board had tested two old tractors of the track-layer type on a hundred-mile stretch near Fairbanks and demonstrated the adaptability of these machines for pulling graders and drags. Improvements in the Valdez-Fairbanks Road fostered the potential value of tractors. By 1919 the engineers determined that ten percent of the road could be maintained with the aid of tractor power. The logistics were irrefutable and echoed Thomas Edison's forecast for the doom of horses. "At present each tractor is doing the work of eight horses, at a daily operating cost equal to the cost of feeding three horses."¹⁰ The test showed conclusively that the tractor had numerous operating advantages over horses which only worked nine months a year, but ate all year long. Additionally, the tractor required fewer men for operation; fewer men required fewer supplies. And a tractor's wide wheels performed like a roller in forming a hard and compact roadway. In 1919 the Board planned to double its machinery inventory.¹¹ Clearly, mechanization had arrived in Alaska.

One problem characteristic of the period was a scarcity of labor. In 1918 some work sections were understaffed by twenty to thirty percent. The availability of Native labor was beneficial. In 1918, the Board

employed some 40 Natives on the Valdez-Fairbanks Road alone, and the practice of hiring continued over the entire history of the Board of Road Commissioners for Alaska. As a cash benefit to the Native village economies, the seasonal hiring of Natives compared to the later employment of village labor by the Bureau of Land Management as forest fire fighters.

Annual Report

From a study of the Board's annual reports, a historian could summarize the superficial history of road and trail construction from 1918, but only in a shallow fashion. The established form of the document and the balance demanded by its purpose dictated a pattern of reporting. Reporters had to show pride in their actual accomplishments without diminishing the urgency of future needs. No overt deception was practiced in achieving such a balance. Roads and trails were never finished. Maintenance demands followed hard on the completion of any new construction. And in good years or bad, more money was always welcome, indeed needed.

But the historical record shows what the annual published report does not reveal. Extensive correspondence, masses of field diaries, and reconnaissance reports are rich in the detailed underpinnings of the laconic annual summaries. Such records speak of frustrations, triumphs, and much grueling drudgery by the road personnel.

The Death of Trader Richard Feltham

Consider the tragic story of Richard Feltham, a trader of McDougall who took a pack train of supplies into the Cache Creek Mining District (Susitna) where 30 small mining camps awaited provisioning. The trail was not good. Feltham had discovered that in May, 1917, when he lost his way, wandering around for 12 hours after losing sight of the trail signs before returning to McDougall without delivering his goods.¹²

Yet in June of that year he tried again. After several days, men

went to search for him. "In the neighborhood of the old Hungryman Camp evidences of the man to find the way were pitiful to see," wrote one rescuer.

Blazes on the trees running through the swamps in different directions showed plainly the vain efforts made to find a most obscure trail that would lead to Cache Creek. Finally, through the faithfulness of his pack horse, that was found standing in the trail with the saddle turned under him, attention was attracted to the man rolled in his blanket, about 50 feet off the trail. Stimulants aroused in him a recognition of his rescuers . . . but the effect was but temporary, and he died within a few hours.¹³

Tragedies can have meaning. To the miners of Cache Creek, the trader died because of the government's callousness and ingratitude. "The death of Dick Feltham," wrote one miner, "is grim evidence of the crying need of roads and trails in our district."¹⁴ Over 200 men "are striving to develop a country rich in natural resources but greatly handicapped by the lack of roads." How can legislators and other responsible officials "stand back and permit a continuation of such a condition that calls for the occasional sacrifice of a life given in an effort to develop a country"? For 12 years the miners had worked in the area. Now they cried in anguish: "We don't ask for boulevards and parks, but we want help in the construction of a plain, every-day dirt road that will guarantee to get us home to safety...and won't leave us to perish as it did poor Dick Feltham."¹⁵

Cache Creek miners had petitioned the Board of Road Commissioners in March, 1917, two months before Feltham's death. They had also petitioned the Territorial Legislature, asking their representatives to memorialize the Board of Road Commissioners. Eventually the miners got their road.¹⁶

John H. Joslin Reports

Other records reveal less dramatic episodes of road work. There is, for example, the work of John H. Joslin, the supervisor for the Circle road work during the summer of 1918. He established his first base camp at Birch Creek ferry in June. With four men, he repaired the road from

Circle to three miles below Miller House. "The work cost nearly double what I expected for several reasons, one of which was . . . the poor quality of men available." The war affected local manpower: "I found it nearly impossible to get or keep the most indifferent labor, and this is true of all interior Alaska I believe."¹⁷ Besides reporting to his supervisor on his ditch clearing and other work, Joslin made recommendations for regrading certain stretches and relocating others. And for want of anyone else on the spot more expert or impartial than he was, Joslin also advised on the district's long-range prospects: "Dredging and hydraulic operations . . . from all appearances will continue for many years, giving employment to about 200 people."¹⁸

The Cache Creek and Circle documents illustrate the prevailing attitude toward roads and trails. Local residents were optimistic, certain that a great economic future was the destiny of their region. Personnel of the Board of Road Commissioners had to beware of unsupported hopefulness, yet were dependent upon the information derived locally. The situation shows the uncertainty of the entire road and trail planning process, particularly in the mining regions of Alaska.

Predicting Mining Regions' Longevity Hazardous

Even in normal times, the prediction of a mining region's longevity was hazardous, and no one anticipated the impact of the war on gold mining, the chief industry of the interior. Early in the war, mining activities diminished because of the scarcity of labor. But the increased prices of equipment and rising pay scales were even more detrimental than the labor shortage. By war's end, mining had become unprofitable on any but the richest claims. The result was a sharp drop in production and a dwindling of population that continued until World War II construction prospects created a boom period again.

Improve Transportation to Spark Economic Revival

Alaskans were not immediately aware that the war had altered economic

and demographic conditions so severely. If mining and other industries were declining, there were a number of ways to spark a revival. Of these ways, the improvement of transportation headed the list. It was easy and sometimes reasonable for Alaskans to equate trail and road improvements with their economic survival. Indeed, in some regions, like the Chandalar District north of the Arctic Circle, beyond the reach of roads, good trails, or easily navigable rivers, a promising mining industry languished for lack of transportation. Even basic food provisioning was difficult for miners along the southern slope of the Brooks Range, but despite the area's remoteness approximately 200 men stampeded to the region in 1906. Some placer gold was produced, but a rosy, long range future was predicted for quartz mining. This, however, required more machinery, particularly a stamp mill to crush the quartz. Miners were given a trail of sorts in 1910, and invested in a giant Allis-Chalmers four-stamp mill which they shipped via the Yukon River to Beaver. From Beaver the distance to the mines was 115 miles, a long haul for a 28-ton machine.¹⁹

Sporadic attempts over the next 20 years to get the huge mill to the mines failed. Such equipment required a decent wagon road. Parts of the machinery were dismantled and reached their destination. Heavier parts were left along the trail. The mill was never placed in operation, and the quartz prospects of the region were not realized despite the investment of \$200,000 by William Sulzer, the mine's chief backer.

A reduction in freight rates was the chief argument for improved trails and roads. Accurate determinations of such saving were not easily gained, but it was reasonable to assume that all road improvements reduced freight rates. For many years the Board's annual reports featured figures gathered in 1913 which "indicated that the direct savings in cost of transportation of freight during that year due to the construction of roads by the Board was \$2,144,117."²⁰ But this money savings, reports affirmed, did not tell the whole story: "It is doubtful, however, if anything like that amount of freight would have been transported without the roads, and the indirect loss which would be occasioned by the restriction on output and development if the roads did not exist cannot easily be estimated."²¹

Automobile Triumphant

By 1919, the automobile revolution had occurred. It carried mail on 160 miles of the Richardson Road (in that year the Valdez-Fairbanks Road had been named for the Board's first president), from Chitina to Fairbanks. Other horse-drawn traffic diminished fast: "Approximately ninety percent of the traffic on the main wagon roads is handled by motor, which has greatly increased the cost of maintenance."²²

That the very triumph of the automobile and the road's capacity to handle it carried a stinger in its tail was ironic, but understandable. Greatly increased costs of road maintenance were due to the technological changes in transportation which had occurred and the success of road engineers in adapting to such changes.

The Board had not exaggerated the quality of Alaska's roads, conceding that their roads "would not be considered good wagon roads in most sections of the country."²³ Plainly, automobile drivers were using the roads despite their inadequacy because the vehicles saved a significant one-third the cost of horse-drawn traffic per ton per mile. Low-standard wagon roads might be hard on automobiles, but the cost of feeding one horse for a day had reached a prohibitively high rate of \$5.00. And the efficiency of animals remained what it had always been.

Horses and Tractors

The Board's mechanization progress lagged behind that of the public and freighters for a time. It only acquired one new tractor, a Truxton car unit, and two new road scrapers in 1919. But the continued reliance on older equipment and horses was necessary because of limited funds. Appropriations for 1919 had been slashed. Road repairs cost three times what they might have, because tractors could not be purchased to replace horses. A report on dragging summed up the efficiency of tractors:

In previous years it has been impossible to properly drag the many miles of road which are included in the section of each crew. When

dragging was attempted, the roadhouse bills at \$6 per day per man amounted to such a sum that it often became such an expensive operation that proper dragging was not practicable.

The three 12 to 25 horsepower tractors and three-way drags have proven a great success, one trip over the road being equivalent to as many as four trips of the old type horse-drawn drag.

The road between Fairbanks and Tenderfoot (75 miles) was maintained with two of these outfits last summer, and they were also used on road-grader work. Late in the summer a few trips were made by another tractor-drag unit operating between Tonsina and Willow Creek, 25 miles. This summer one of these units has been engaged all the time on dragging, none between Tonsina and Sourdough, 70 miles, and the other between Fairbanks and Salchaket, 35 miles. The third outfit has done very little dragging but is working very successfully south of McCarty, grading new road.

Attached to the maintenance unit is a trailer of sufficient size to carry supplies of all kinds, a tent, a small cook stove, provisions, and the bedding of the two operators who are thus enabled to pitch camp at the end of the day's run without incurring prohibitive roadhouse bills.

The average cost of the operation of these outfits was \$1.36 per mile dragged, and \$12.87 per day of eight hours. During last summer an average of nine miles were made per day, but this spring the average is being raised one mile. The average number of miles obtained from a gallon of distillate and gas is 0.77 miles, while the lubricating oil used averaged 98 miles per gallon.²⁴

The Board of Road Commissioners for Alaska bought equipment as it could in subsequent years, and enjoyed a windfall in surplus army equipment in 1920, including six two-ton trucks, six one-ton trucks, and six tractors.

Maintenance Costly

Nature set certain obstacles to cost effective road maintenance. For all its scenic attraction then and now, the first 18 miles of the Richardson Road out of Valdez (as already mentioned it was named after the Board's first president in 1919) consumed a large chunk of the budget year after year, and even in 1983 it still was expensive to maintain that stretch of road.

The Board expended nearly \$30,000 each year to maintain the picturesque mountainous part of the road that included Keystone Canyon. In

July, 1919, for example, floods near the canyon wiped out 15 miles of the steepest part of the Richardson Road. Seemingly year after year, torrential glacial streams did most of the damage during the spring and summer and kept crews busy throughout the season. A relocation of a 10 mile stretch of road would have eliminated much of the difficulty, but new construction funds were not available.

The 1919 report graphically described the flooding which occurred that summer:

Route 4B. Valdez-Ernestine Road (63 miles). -- three crews were engaged on this route throughout the entire season. During July and August the stream from Valdez Glacier destroyed one pile bridge in the vicinity of Valdez and threatened several others and the intervening road; the road on the alder flat, at the head of Keystone Canyon, was inundated and partially destroyed, necessitating a new location on the hillside. Bear Creek, in mile 18, filled its channel with 20 feet of boulders, gravel, and debris, washed out one of the bridge trusses, and destroyed both approaches, and at Beaver Dam, the Tsaina River inundated all of mile 42, including the sites of the road house and telegraph station. These destructive inroads by the rivers necessitated new location at a time when the crews were already busily engaged in important maintenance and river control. Due to the great scarcity of labor, the commanding officer at Fort Liscum detailed some 20 men for work on the washout in mile 18 and others for duty on the pile driver at Valdez. In the fall a section of mile 8 was destroyed, and a detour was constructed on the flat a short distance to the north. In all there was a considerable amount of new construction necessitated by washouts. As these sections of new road are all short and were built hurriedly with the object of keeping the road open, the location was not in all cases of the best. In fact, only a small portion of the summer's work can be considered of permanent value.²⁵

Nature often conspired to work against the Board's efforts, and often it proved difficult to convince members of Congress to appropriate larger sums of money for the work in Alaska. The Board, therefore, decided to present a comprehensive ten-year construction and maintenance program to Congress in 1920. It hoped that such a plan might effectively show Alaska's needs and convince Congress to appropriate the necessary funds.

FOOTNOTES

1. All the quotations in this section on Eide's journey are from his reminiscences entitled "I Hiked the Pipeline - in 1917," Alaska Magazine, September, 1974, pp. 12-13, 49, 51, 53.
2. Lloyd Marvin, Not so Long Ago (New York: Random House, 1949), pp. 222,342.
3. Board of Road Commissioners for Alaska, Annual Report of the Alaska Road Commission, Fiscal Year 1918, p. 1990. Here-after cited as Annual Report of the Alaska Road Commission and year.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid., 1989
9. Ibid., p. 3842
10. Ibid.
11. Ibid
12. Statement of Chas. R. Harris, R. G. 30, Federal Records Center, Seattle, Washington.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. John H. Joslin to Captain John Zug, October 25, 1914, R. G. 30, F.R.C., Seattle, Washington.
18. Ibid.
19. William Sulzer Papers, University of Alaska Archives, Fairbanks, Alaska; William R. Hunt, North of 53°: The Wild Days of the Alaska-Yukon Mining Frontier 1870-1914 (New York: MacMillan Publishing Co., Inc., 1974), pp. 233-239.

20. Annual Report of the Alaska Road Commission, Fiscal Year 1919, p. 2099.
21. Ibid.
22. Ibid.
23. Ibid., p. 3871.
24. Ibid., pp. 3872-73.
25. Ibid., pp. 3875-76.

CHAPTER SIX

THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1920 TO 1925

In 1920, the Board formalized the end of the war, and in fact, the entire period of its 16 year history, with the announcement of a comprehensive ten-year program. No more obvious sign of maturity could be offered than in formulating this long-range plan. The Board's plan was an affirmation of its belief in Alaska's eventual prosperity despite the hard times, and was also an expression of disdain for the practice of responding haphazardly to emergencies. Sound standards of engineering management dictated such a program; so did standards of political management. It was no longer enough for the Board to find satisfaction in keeping its limited mileage of roads and trails open and adding a few miles each year. The Board believed that despite Alaska's loss of population during the war, and the collapse of gold mining, the territory would recover, and a comprehensive road system would foster future growth. It is true that the Board had proposed a similar but less comprehensive road plan in 1913. It had recommended the expenditure of \$7,250,000 over the next 10 years. Through the year 1920 the amount actually appropriated, however, had totaled only \$1,645,000, a sum which did not even come close to reaching the proposed goals. Only thirty percent of the monies requested for the plan's first seven years had actually been received. Funding had lagged even before the war emergency, which had disrupted expectations even more severely. In fact, during the war large sections of the old system were not even kept in repair, and some sections even became impassable.

Board's Ten Year Program

The new planning proposal, however, was different. It represented the first real effort at long-range planning by the Board and its commitment to Alaska as well. For these, and the reasons stated above, it should be noted in full:

During the 16 years of this Board's existence, slightly over a thousand miles of road (besides much greater lengths of sled road and trails) have been constructed and maintained, with a cost of slightly over \$5,000,000. Two policies of this Board through all this period have shown the highest wisdom: first, that of building successively trail, sled road, and wagon road as the traffic along a communication line justified; second, building largely with local labor. These two policies assured building along sound lines, resulting in roads carrying traffic as soon as completed. To import labor to construct roads would make possible the building of roads away from centers of present or even prospective population and serving, when completed, only as a monument to the builder. The soundness of the Board's policy is further emphasized by a survey of roads now in use. Under no possible conception can any part of the present road and trail system possibly be abandoned.

The following sets forth a ten-year program that will carry forward substantially the reviving industries of this territory and will provide the government railroad with a generous contribution of traffic.

To prepare any program of road construction, both the topography of the region traversed, and the economic return expected must be studied. In topography alone, the glaciers, glacial streams, swamps, elevated snow-covered mountain ridges, frozen soil and dense vegetation offer obstacles of remarkable obstinacy. As to economic returns, the traffic existing and prospective must be estimated. The building of roads through known mineralized but undeveloped areas to reach developed areas is sought.

To be considered at the same time is the location of projected roads in relation to other lines of traffic -- that is, waterways, and railroads. In the present state of Alaska's development, it is unwise to parallel such lines of traffic with wagon roads. It is especially aimed to build as feeders and in a few cases to cross divides and link together existing lines of traffic. Roads planned upon such a conception will give the greatest return with a minimum of cost.

Almost of equal importance with the above considerations come the fitting of the program with the funds that are requested. This modest program can be constructed within the estimated cost and time. It would require only a draftsman's service to cover the map of Alaska with a network of roads that could not be constructed with any reasonable appropriation within less than 50 years. This estimate is therefore made with a view of being a realizable program with the funds and time reasonably available. This program of development covers that desired during the next 10 years, 1921 to 1930, inclusive. The new road mileage which is projected totals 700 miles. These roads are termed 1921 roads. This will call for a rate of construction of 70 miles per year. The cost of these roads to construct

and maintain through this period will average \$10,000 per mile. This cost is an average for all districts. The roads selected for construction during this period are along well-defined lines of travel which have received previous development as trails and sled roads and whose worth is unquestioned.

In the work proposed for the next 10 years, three classes of road building operations will be carried on. First, the new construction planned as arterial or feeder highways and totaling 700 miles for the period will be carried out. These roads will, in the main, follow old lines of development. These are described in detail below. Second, roads, termed development roads, the value or location of which is not yet fixed will be constructed from time to time with a limited apportionment of funds. A number of roads of this type are described hereafter. Construction of roads of this type provide the necessary flexibility to meet new conditions. At a later time, these development roads may develop into arterial roads. Third, the present road and trail system must be kept up. This requires an expenditure for maintenance which is estimated from past expenditures of the Board, to be \$200,000 per year. Detailed estimates of such maintenance is given below.

In presenting the program in detail, it is necessary to outline briefly the physical features of Alaska and the lines of communication already established. The portion of Alaska now under development naturally divides into the following districts:

1. Southeastern Alaska, embracing the island and coastal mainland east of the one hundred forty-first meridian. This district is served almost entirely by waterborne commerce and no new construction is planned under this program. The necessary short tributary roads to settlements not already constructed can be built as development roads.
2. Copper River Valley, embracing Cordova, Valdez, and Kennecott and served by the Copper River Railroad extending to the summit on the Fairbanks Road.
3. Susitna Valley, embracing the country traversed by the Government Railroad in the Susitna Valley, including Seward, Anchorage, and Matanuska. The Alaskan Peninsula and Kodiak Islands are closely attached in development to this district and are included therein.
4. The Kuskokwim, embracing the Lower Yukon Valley and the valley of the Kuskokwim west of the Alaska Range. This district is very meagerly provided with transportation facilities and most important projects of this program aim at relieving this situation.
5. Yukon District, including Fairbanks, and the Yukon and Tanana valleys. This region is of high importance for development,

as here must originate the most important tonnage for the Government Railroad.

6. Nome district, 1921 roads;

Project symbol	Name of Road	District	New construction Miles	Remarks
A	Talkeetna, Takotna, Ophir, Ruby	Susitna and Kuskokwim	280	This road reaches from Ruby, on the Yukon, through the most promising mining district of the Kuskokwim, through Mount McKinley Park, to Talkeetna on the Government Railroad. Sixty miles of this route are already under construction. The most promising mineralized region of the Upper Yentna Valley is reached.
B	Davidsons Landing Kugarok, Candle	Nome	135	This road runs from tidewater through the Kugarok mining district to Kotzebue Sound at Candle. It is of the highest importance for the further development of the Seward Peninsula.
C	Roosevelt, Glacier, Riley Creek	Yukon	75	This road connects the important Kantishna mining district with the head of navigation on the Kantishna River and with the Government Railroad at Rileys Creek.
D	Eagle 40-Mile Boundary	...do...	50	This road is an extension of an existing road and improvement of a sled road in the 40-mile mining district from Eagle. Connection will be made at the Alaska-Yukon Territory boundary with the Miller Creek Road to Dawson.

E	Chatanika, Miller House	...do...	80	This road connects two old road commission projects, enabling traffic to pass from Circle on the Yukon to the Fairbanks district and serving as a very important feeder to the Government Railroad.
F	Rampart, Hot Springs	...do...	21	This road joins two old projects connecting Rampart on the Yukon with Hot Springs on the Tanana.
G	Gulkana, Chistochena	Copper River	40	This road is an important tributary to the Fairbanks Trail, is a part of a future main artery road from the Copper River Valley to the Yukon at Eagle, and makes accessible the promising Slate Creek mining district.

Under development roads, the most important possible projects are noted below:

Alaskan Peninsula. -- Wide Bay-Oil Fields, 25 miles. Reaches from Tidewater at Wide Bay to the oil fields now being prospected near Cold Bay.

Kenai Peninsula. -- Kenai-Homer, 70 miles. This road, with the completion of the Kenai mile 29, will give a system of roads to the Kenai Peninsula reaching every district and making connection with the Government Railroad at mile 29.

Susitna Valley. -- Talkeetna-Iron Creek, 45 miles. This road will connect an important mining district in the Susitna Valley with the Government Railroad.

Copper River Valley. -- Abercrombie (Copper River R.R.) - Katalla, 45 miles. Makes accessible the Katalla oil field to the port of Cordova, and especially necessary in case a railroad extension is not made.

Katalla-Cape Yaketaga, 80 miles. Reaches a new oil field now being prospected and otherwise inaccessible for development.

Yukon Valley. -- Forty Mile to Tanana Crossing, 60 miles. An extension of the Eagle-Forty Mile Road passing through an important mining district and reaching the valley of Tanana.

Susitna Valley -- Government Railroad-Valdez Creek, 50 miles. This road makes accessible to the railroad the important Valdez Creek mining district. This district is now reached only by a 70 mile trail from Meiers on the Richardson Road.

Copper River Valley -- Nizina River to Nizina, 10 miles. This will include the Nizina River Bridge and make accessible the upper Chitina Valley to the Copper River Railroad.

Strelna to Kuskulana River, 16 miles. This includes the improvements of existing roads built by mining operators and makes accessible an important mining district in the upper Kuskulana Valley.

Chistochina-Chisana, 45 miles. This makes accessible the Chistochina Valley working to the road projected on this year's program from Gulkana to Chistochina.

Yukon Valley. -- McCarty to Forty Mile, 135 miles. This road would complete a through road from Dawson and Eagle to Fairbanks, and would pass through a very promising and undeveloped agricultural region in the upper Tanana Valley.

Circle to Fort Yukon, 80 miles. Makes accessible both winter and summer the important trading post of Fort Yukon. This settlement of 50 white and 500 natives is now reached by water in summer, and with difficulty over the ice on the Yukon in winter.

Chatanika-Livengood, 56 miles. This road makes accessible the important mineral developments around Livengood.

Beaver-Caro, 75 miles. Provides a line of traffic between the Chandalar mining district and the Yukon.

Fort Gibbon-Arctic City, 100 miles. Connects the valley of the Koyukuk with the Yukon Valley.

Eagle-Seventy Mile, 40 miles. Connects the Seventy Mile mining district with Eagle.

Nome District. -- Nome, Kugarok, 60 miles. Connects the Nome district with the Kugarok district and with the Davidson's Landing-Candle Road projected under this year's program.

Southeastern Alaska. -- Skagway-White Pass, 13.5 miles. This is an important international road, and by cooperative effort on the part of the Canadian Government would make travel by road from Skagway to White Horse possible.

Taku Landing-Boundary, 22 miles. This road, if prolonged by the Canadian Government, would permit travel from Juneau to Lake Atlin.¹

Public's Role in Planning

Before discussing the Board's accomplishments under its new plan, something more should be noted of the public's role in road planning. The Board of Road Commissioners was a division of the U. S. Army, and was not answerable to Alaskans, yet the Board did try to respond to the public it served.

Alaskans have never been shy about making demands on the federal government. When the proprietor of Circle Hot Springs, a much frequented resort, asked for a road, it was with a sense of outrage at its non-existence. As F. M. Leach explained to Alaska's Governor Thomas Riggs: "I am appealing to you for assistance in obtaining a road to the Circle Hot Springs, not as a favor, but out of justice to the people of this part of Alaska, and out of consideration for the development of the most permanent resources in the Territory."²

Leach went on to complain that the Board of Road Commissioners for Alaska built a wagon road from Circle to a point 2 1/2 miles below the Miller House -- a distance of 46 miles, at a cost of over \$100,000, yet failed in their promise to provide feeder roads to the side creeks and the Circle Hot Springs. Freighters and merchants had benefited from the road built and opposed the link to Circle Hot Springs, a region of immediate value to its agricultural products and future promise as a mining district.

Governor Riggs asked the Board members to consider Leach's request and they assigned John H. Joslin to make an investigation.³ Joslin reported on the self-serving nature of some of Leach's statements, and the absurdity of giving a priority to Leach's little-used road over the nearby Deadwood road, then under construction, or over needed repairs on the main Circle Road. Joslin did recommend a small allotment for Leach's needs, but the Board pleaded lack of funds and refused to help Leach.⁴

Similarly, residents of the Circle mining district petitioned the Board in 1922 for faster work on the Chatanika-Circle Road, citing the hardships imposed by the completion of the Alaska Railroad:

For the past 28 years this region has been a continuous producer of gold, one of the largest producing camps in Alaska. Its transportation accommodations have been by river boats to Circle, on the Yukon River, some 50 miles from the mines. These mines, already located, will be steady producers for 28 years more, under favorable conditions. But the completion of the railroad to Fairbanks and the extension of the White Pass Railway to the Mayo silver district, which has been announced, will eliminate the river traffic passing Circle. This, in all probability means that freight for this section of the river will be by an occasional boat, whenever tonnage will justify a trip, which will necessarily be at a higher tonnage rate than was charged when a regular line of boats passed Circle. Thus the railroad largely displacing the boats as freight carriers into the interior of Alaska works a decided hardship upon the residents of this district until an auto-truck road is completed some 80 miles from the end of the railroad at Chatanika to the Miller House. These conditions, we believe, justify us in asking consideration in the matter of road construction, even taking precedent over other sections of the interior of Alaska not adversely affected by the completion of the railroad. Therefore, we, the undersigned residents of the Circle District, most humbly pray that the Alaska Railroad Commission do everything within its power to hasten the completion of the auto-truck road from Chatanika to Miller House.⁵

The Board's superintendent for the Fairbanks district, Hawley W. Sterling, approved the petition and asked the Board to allot as much money as possible to the project.⁶ But Colonel James G. Steese, the new president of the Board, cautiously replied to the petitioners that "We have made as large an allotment as we can with our limited appropriation. Until Congress greatly increases our appropriation, it will not be possible to close this gap (the automobile road from Chatanika to Miller House) as rapidly as we should like to do so."⁹

And so it went, as the case histories show. Everyone suffered the frustrations of the reduced road appropriations, and the Board was just as ardent as the governor and residents in believing that good roads meant prosperity.

New Equipment

Some of the bleakness of 1921-1922 was dispelled by the gains in equipment. In 1922 new equipment included:

- 3 Ford Trucks
- 1 moving machine
- 1 tractor-drawn road grader
- 1 cylinder reboring machine

But the true equipment bonanza was in the acquisition of substantial quantities of surplus U.S. Army equipment, including 15 Dodge tractors, 6 White tractors, and 9 Holt tractors.

For the first time in its history the Board had enough equipment for work anywhere in Alaska. With some pride Board President Steese listed all the equipment owned in his 1922 report. He must have reflected upon the progress he could make if he had money enough to keep all the machinery going throughout the working season:

6 tractor-drawn road graders	5 winches
17 horse-drawn road graders	28 Dodge trucks
3 air compressors	10 Ford trucks
1 Bucyrus drag line	6 GMC trucks
2 hoisting engines	1 Gersix truck
4 pile drivers	4 Mack trucks
40 double-ender sleds	4 Packard trucks
3 jack hammers	2 Pierce Arrow trucks
6 radio outfits	2 White trucks
8 trailers	2 stone crushers
8 road rollers	7 transits
2 power saws	3 levels
2 car tractors	1 pile driver steam boiler
20 Holt tractors	1 power driven pump
3 Titan tractors	82 slip scrapers
1 Yukon tractor	10 wheel scrapers ⁹
70 wagons	

Progress in Ten Year Plan

By 1923 the Board reported on the progress of the 10 year plan which, in summary, had called for construction of 700 miles of feeder highways, mainly along existing routes, at an estimated cost of \$7,000,000; development roads on location to be determined at an estimated cost of \$1,000,000; and maintenance of existing road and trail system at an estimated cost of \$2,000,000. For the year 1921 some \$425,000 was appropriated rather than the \$1,200,000 requested; and for 1923 an appropriation increased to \$650,000 still fell far short of the \$1,500,000 requested. In summary, the Board had asked for \$3,655,000 and received \$1,540,000 or something over one-third.¹⁰

Such statistics indicated that in the third era of the Board of Road Commissioners for Alaska from 1920 did not differ from earlier times in that appropriations did not meet the hopes of planners. Whether the persistence of shortfall between expectations and realities should be marked with particular attention as an indictment of federal neglect is another matter.

On this overall question it should be noted that Alaskans throughout their history as a territorial possession believed themselves to be victims of their limited political influence in Washington, D.C.¹¹ Residents complained when the government did not provide the services available to other Americans. Complaints were very vociferous during the Gold Rush era when the federal government might perhaps have been excused for a tardy response to such a swift swelling of the population. Alaskans expected full mail service despite the awesome distances and scattered population of the land. They expected trails, roads, railroads, telegraphs, and police protection as well. To a great extent the federal government met the expectations of Alaskans with large expenditures of public monies, particularly after the Gold Rush. Whether the expenditures were reasonable under the circumstances cannot be measured here. Before insisting that the government might have spent more money on Alaska's roads, it might be necessary to find that given the other national priorities at a given time, it was obviously negligent of the government

to provide more funds. Whether such an assessment could actually be made, even after an intensive study, is unlikely. This conclusion is not an exercise in avoiding the question, but rather an expression of the question's complexity. How much money did the other western territories get for their roads when their development was at a comparable stage to Alaska's in 1920? Did Alaska deserve more because of its size, or less because of its small population and limited industry? Would Alaska have developed more rapidly if roads had been planned to foster economic development rather than being built once a district's activity made the need for roads urgent and feasible?

Funding Roads and Trails

Funding for roads and trails was not limited to the annual appropriations made to the Board. About forty percent of the total cost of the road and trail system came from the Alaska Fund, derived from federal trade and occupation taxes collected in Alaska. Furthermore, as already discussed earlier, the territorial Legislature had started to deal with road matters in its first session in 1913, and subsequently addressed the issue in most succeeding biennial sessions, and provided funds as well.

While the territorial government wrestled with Alaska's transportation system, the federal government acted in 1923 to insure some cooperation among the various agencies with programs in the territory. The completion of the Alaska Railroad that year had suggested a potential conflict between the Board and the Alaska Railroad, both in the transportation business. To prevent this, the railroad enabling legislation had provided for the assignment of the president and engineer officer of the Board of Road Commissioners to the two additional posts of chairman and chief engineer on the Alaska Engineering Commission, the body managing the Alaska Railroad.¹²

Road Construction and Railroad Management Merged

On March 26, 1923, Board President Steese became the chairman and Major John C. Gotwals assumed the post of chief engineer of the Alaskan Engineering Commission. This combined the road construction and railroad management. Steese obviously was very pleased with the new arrangement and its streamlining, "hourglass" efficiency, for he stated that

the practical results of the foregoing orders have been the development, without legislation but through executive order or interdepartmental or interbureau agreement of a practical working arrangement through which the facilities of all the services involved are used interchangeably. 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 conferences between different bureaus which formerly sometimes required papers to travel to Washington and back several times, matters are handled promptly upon the ground, or whether 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 activities involved in this arrangement: the construction, repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works now aggregating over 9,000 miles, and extending from open-all-the-year-round south coast ports to all inhabited parts of the Territory; Territorial roads, bridges, ferries, and trails throughout the Territory, covered by cooperative agreements; shelter cabins; Nizina River Bridge; Nome-Shelton Tramway (87 miles operated by cars drawn by dogs); Tolovana Tramway; Kaltag Portage Survey; Improvement of Nome Harbor; Improvement of Wrangell Narrows, Tolovana River, Yukon-Kuskokwim portage, English Bay, and Gastineau Channel and adjacent waters; the investigation of port facilities; the survey and design for a government dock at Juneau; 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 Mount McKinley National Park; construction, maintenance and operation of the Alaska Railroad from Seward to Fairbanks, 470-1/2 miles; railway spurs to the Eska, Jonesville, Chickaloon, and Healy River coal mines, 46 miles; from Fairbanks to the gold creeks as far as Chatanika, 39 miles narrow gauge; Moose Creek coal spur, 4-1/2 miles narrow gauge; also river boat service on the Tanana and Yukon Rivers between Nenana and Holy Cross, 750 miles, with through billing arrangements covering freight service from Seattle or Tacoma to points on the Yukon River and its principal tributaries between the International Boundary at Eagle and Bering Sea at St. Michael; also an agreement covering automobile service on the Richardson Highway from Fairbanks to Chitina and Valdez, 410 miles; also operates coal mines, hospitals, hotels, and commissaries.

The organization chart looks like an hourglass with the central office at the waist. All authorities and appropriations are gathered in from the four departments and six bureaus and then spread out again over the various jobs. Similarly the reports and vouchers are gathered up from the various outlying districts, vised, and then passed up to the various departments and bureaus under whose direction the particular work has been handled.¹³

By May of 1923, the railroad and the Board used each other's men, equipment, and supplies interchangeably. But because only the Congress could transfer the functions of the Board to the Department of the Interior where the railroad was located, the two organizations continued to be treated separately for accounting purposes.¹⁴

Merger Dissolves

Despite Steese's optimism, he was replaced as the railroad Chief after only six months in office, and the consolidated operations of the railroad and the Board functions ceased. The experiment had been unsuccessful because the railroad had too many problems which Steese and Gotwals had been unable to solve in their brief tenure. These included the railroad's rickety condition. Their predecessors had poured their appropriations into construction and reconstruction of the doddering Alaska Northern Railroad which comprised the first 70 odd miles out of Seward of the Alaska Railroad. They had also spent monies on general

economic development and operations. In short, much of the railroad construction had been makeshift and needed replacement, and there was not enough time and money to accomplish this. In the final analysis the railroad and the Board broke apart because Congress did not encourage a permanent merger.¹⁵

Finances

The Board once again operated on its own, and the financial summary of June 29, 1923, gives a full picture of the project funding for the 1919-1923 period:

FINANCIAL SUMMARY

Amount expended on all projects to June 30, 1923,
including receipts from sales, etc:

During fiscal years			
1905-1922	\$6,409,424.04		
Fiscal year 1923	619,869.62	\$7,029,293.66	
Alaska special fund			
fiscal year 1930-1922	277,885.60		
Alaska special fund			
fiscal year 1923	<u>121,212.87</u>	<u>399,098.47</u>	
			<u>7,428,392.13</u>
Total for new work	4,277,696.99		
Total for maintenance	<u>3,149,695.14</u>		
Total expended		7,428,392.13	
Balance available		<u>669,118.41</u>	
Grand total to be accounted for			<u>8,097,510.54</u>

Appropriations to June 30, 1923:

Construction and maintenance of military post roads, bridges and trails, Alaska		4,945,000.00
Wagon roads, bridges and trails		
Alaska fund	2,652,892.56	
Increase of Compensation, War Department		34,265.01
Receipts from sales, etc.	48,694.14	
Refunds to Alaska fund	3,187.18	
Refunds to War Department appropriations		2,120.49
Refunds to contributed funds	20.45	
Reimbursement from Navy Department		3,976.19
Sales, etc., to accrue to Alaska fund		7,276.50
Funds contributed by Territory of Alaska and towns, for public roads, bridges, trails and ferries, Alaska special fund		
	<u>399,078.02</u>	
Total		8,097,510.54

Fiscal year ending

June 30	1919	1920	1921	1922	1923
Expended for improvement and new work	\$114,829.11	\$185,190.66	\$432,243.90	\$236,251.91	\$314,195.39
Expended for maintenance	<u>184,195.15</u>	<u>173,410.59</u>	<u>234,545.28</u>	<u>446,995.77</u>	<u>425,887.10</u>
Total Expended	<u>299,024.26</u>	<u>358,601.25</u>	<u>666,789.08</u>	<u>683,247.68</u>	<u>740,082.49</u>
Appropriated by War Department Acts	100,000.00	100,000.00	350,000.00	425,000.00	1,115,000.00
Allotted from Alaska fund	52,372.31	124,991.96	218,237.10	173,029.19	3,398.23
Contributed by Territory of Alaska and Others		115,517.94	113,746.61	56,421.05	113,412.87
Increase of Compensation, War Department			940.00	4,322.09	28,857.72
Total	<u>152,372.31</u>	<u>340,510.90</u>	<u>682,923.71</u>	<u>658,772.33</u>	<u>1,291,668.82</u>

Increase of compensation, Military Establishment - Continued.

1921	\$940.00	
1922.....	4,322.09	
1923.....	<u>28,857.72</u>	
Total.....		<u>34,265.01</u>

Grand total, Federal funds..... 7,632,157.57

CONTRIBUTED FUNDS

(Act of Congress approved June 30, 1921, Alaska special fund)

1. By the Territory of Alaska:

Act of legislature approved Apr. 21, 1919 -		
Public roads, bridges, trails, and ferries -		
Fiscal year 1920.....	\$115,517.94	
1921.....	<u>85,746.61</u>	\$201,264.55

Approved May 7, 1921, roads, etc. -		
Fiscal year 1921.....	28,000.00	
1922.....	43,237.28	
1923 (includes \$20.45 refund).....	<u>88,533.33</u>	159,770.61

Approved May 5, 1921, Nizina River Bridge -		
Fiscal year 1922.....	5,000.00	
1923.....	<u>20,000.00</u>	25,000.00

Approved May 7, 1921, Shelter Cabins -		
Fiscal year 1922.....	6,500.00	
1923.....	<u>3,500.00</u>	<u>20,000.00</u>

Total territory..... 396,035.16

2. by others:

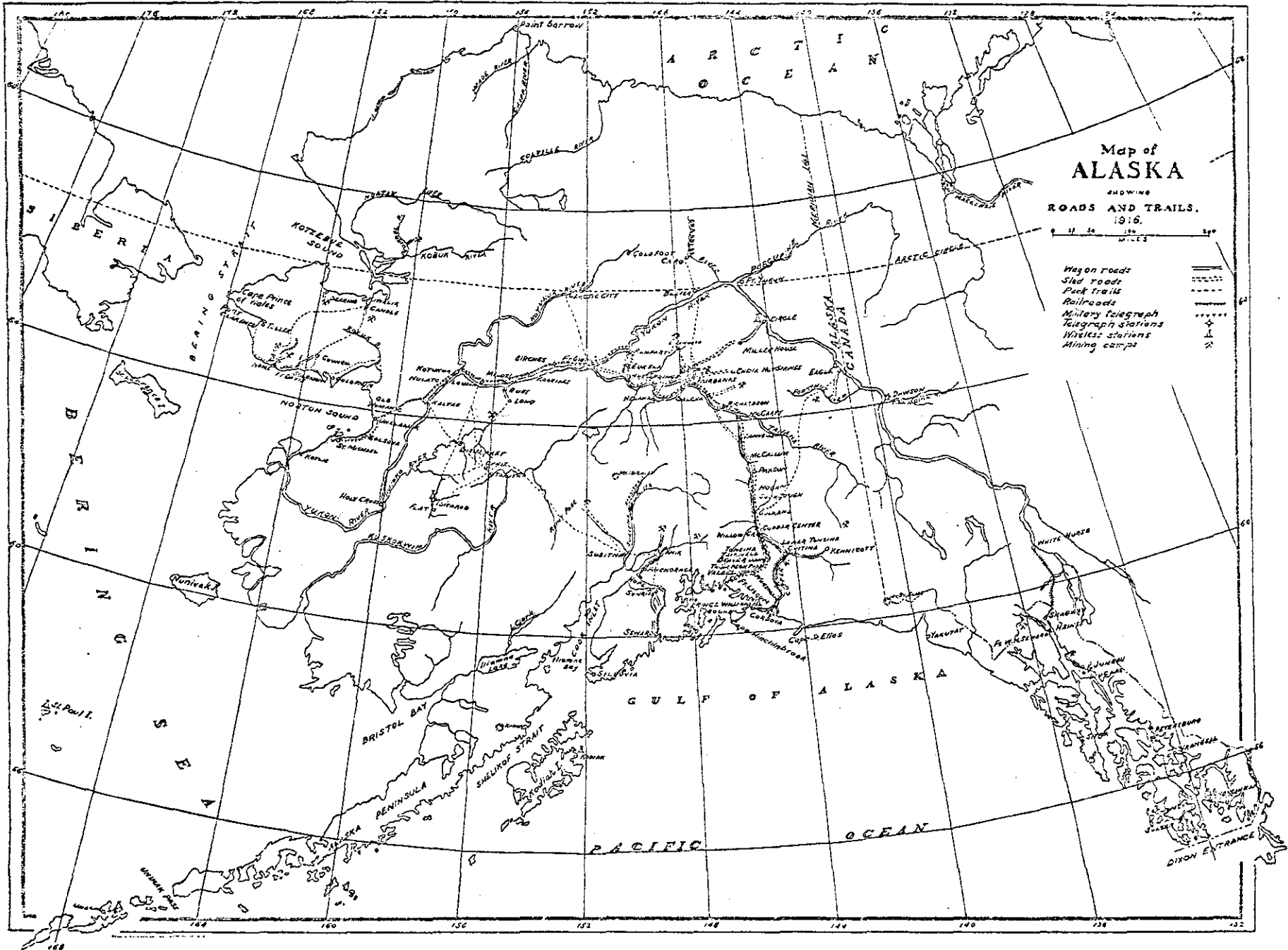
Fiscal year 1922 -		
City of Valdez.....	220.02	
City of Wrangell.....	500.00	
City of Sitka.....	500.00	
Alpine Club of Skagway.....	<u>463.75</u>	<u>1,683.77</u>

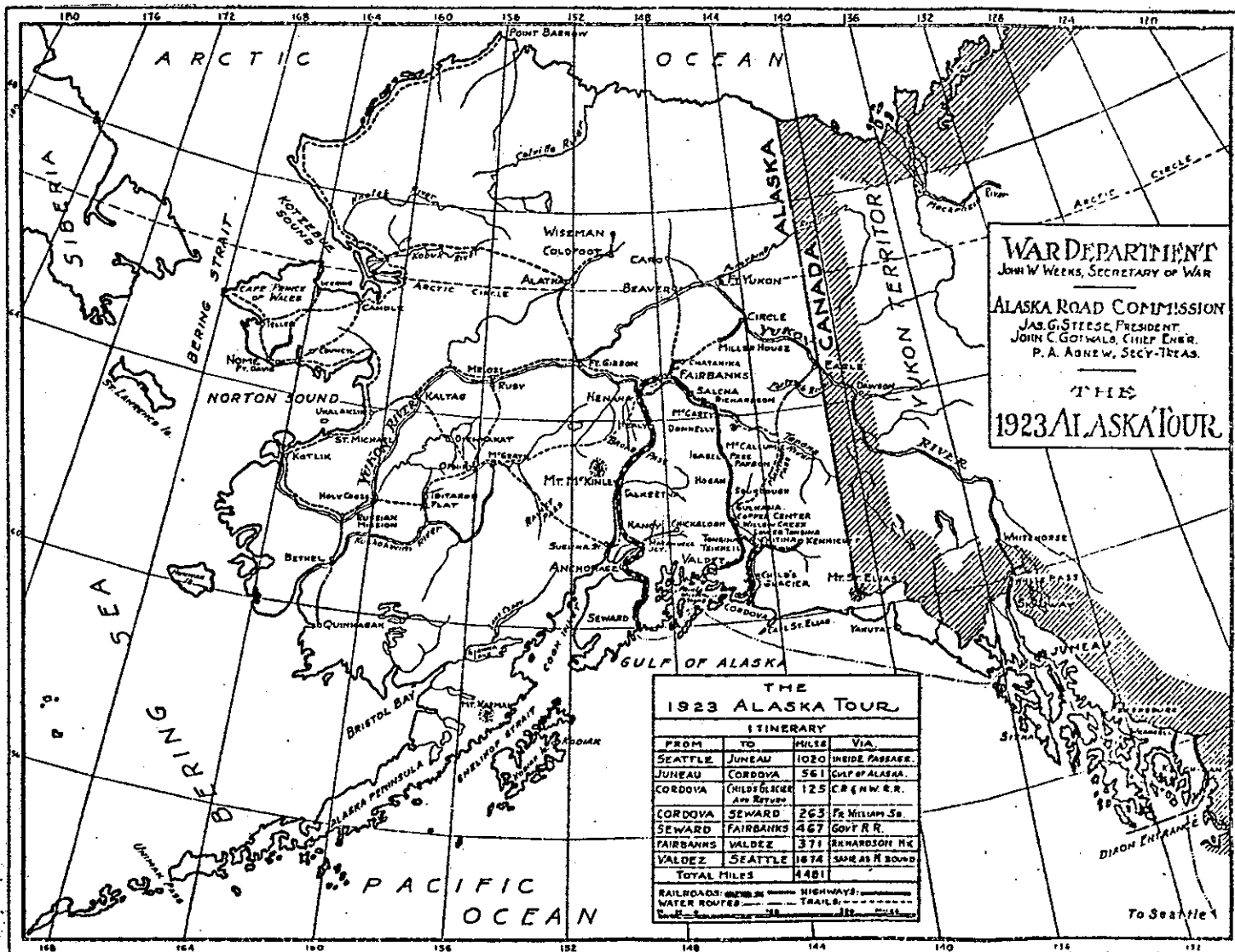
Fiscal year 1923:		
City of Valdez.....	601.83	
City of Juneau.....	<u>777.71</u>	<u>1,379.54</u>

Grand total, contributed funds..... 399,098.47¹⁶

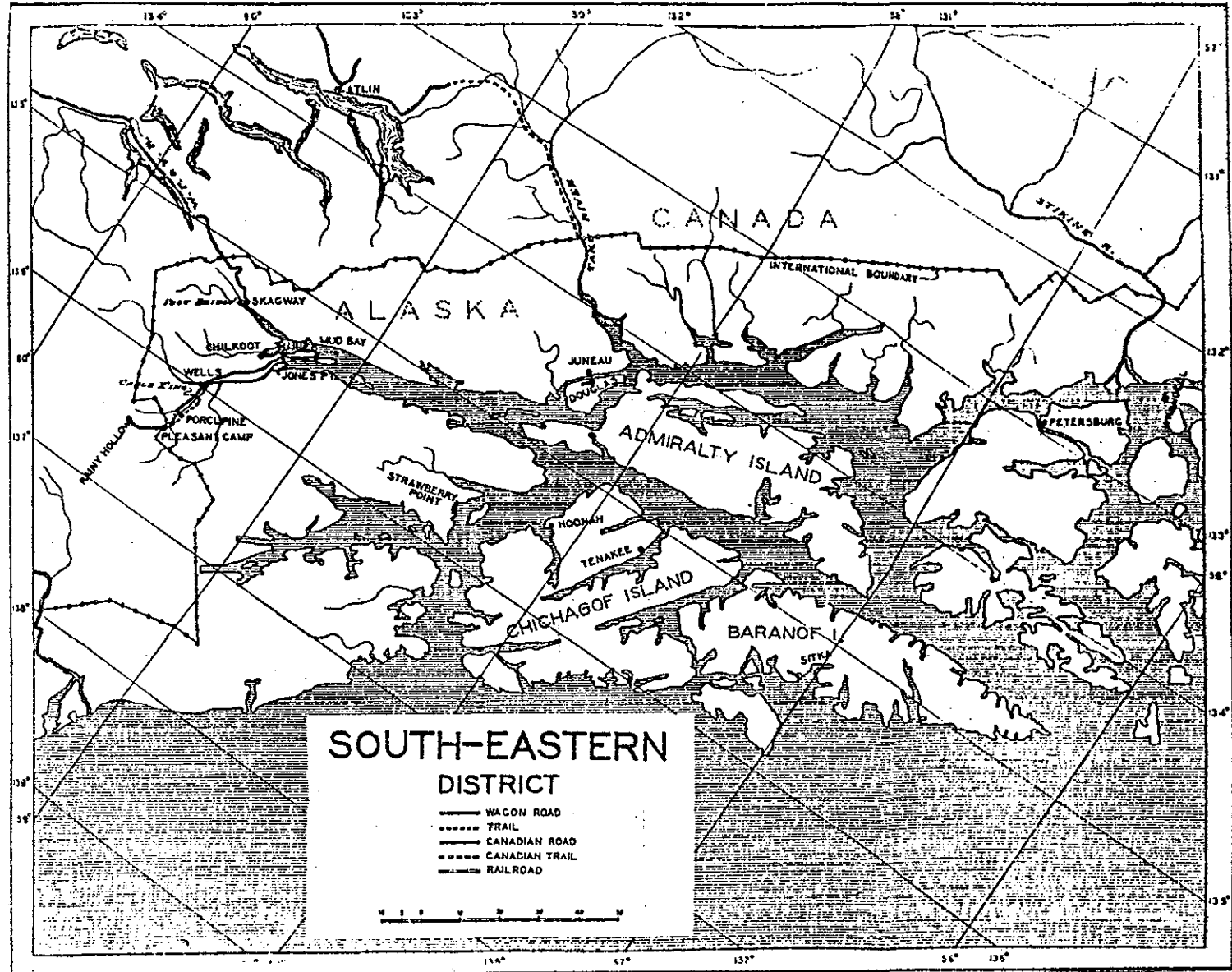
In 1923 the Board also published a large wall map which showed every trail and road in Alaska. This fine document remains the most valuable source of locating particular routes, although smaller-scale components.

of the overall map were published in the 1921 annual report and in other annual reports of the 1920's. For ready references the maps are included here.¹⁷

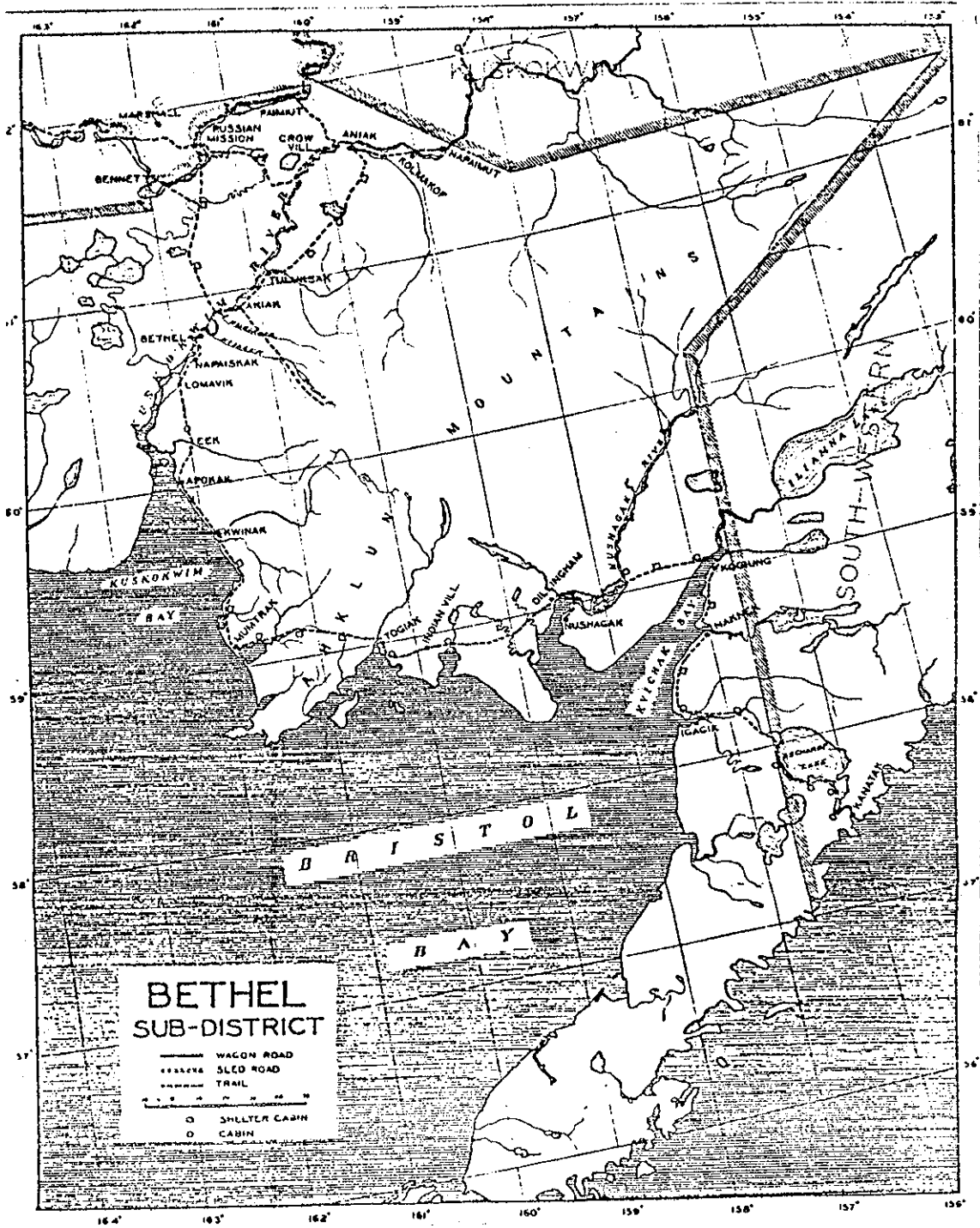




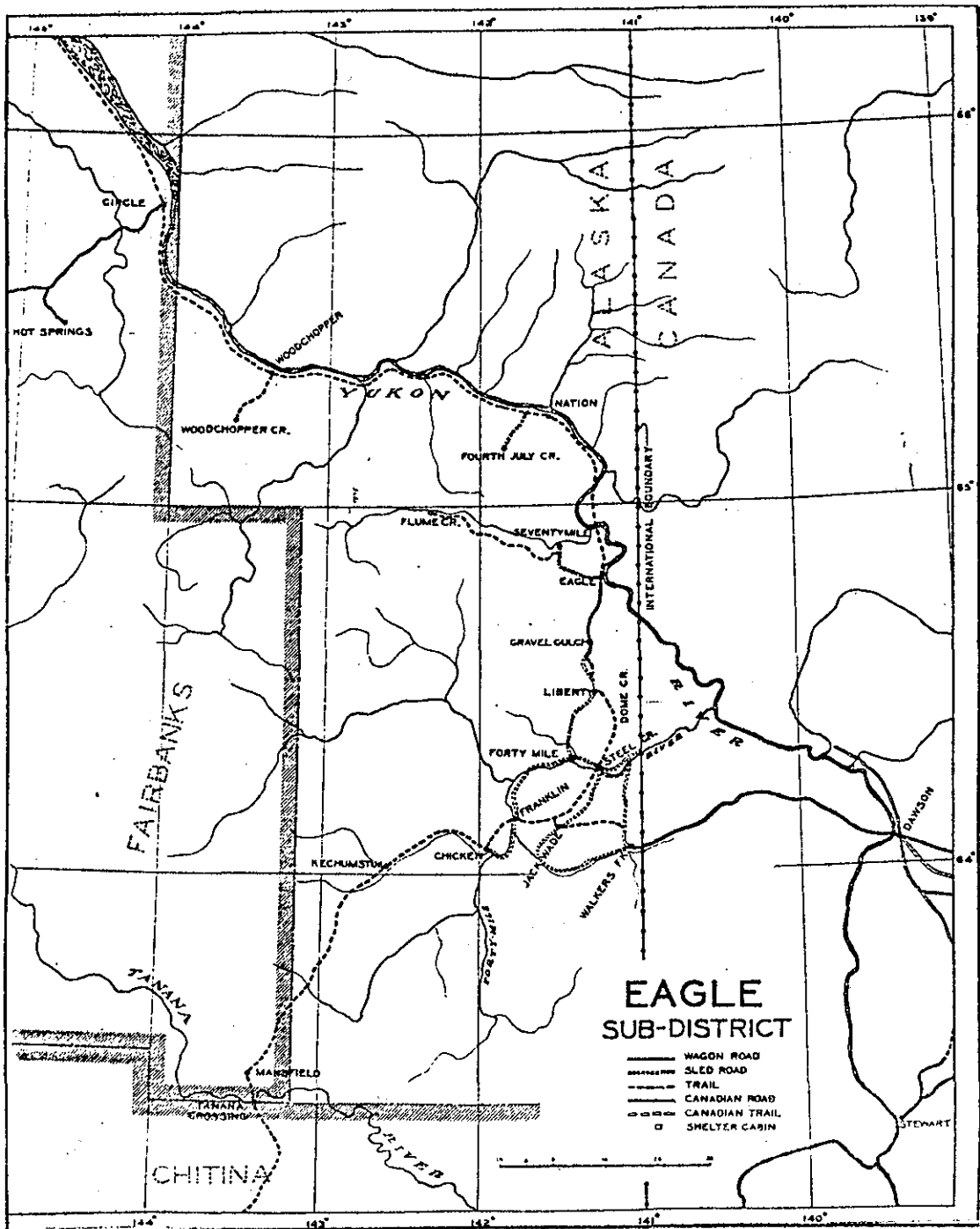
Reproduced from the 1923 Alaska Road Commission Annual Report.



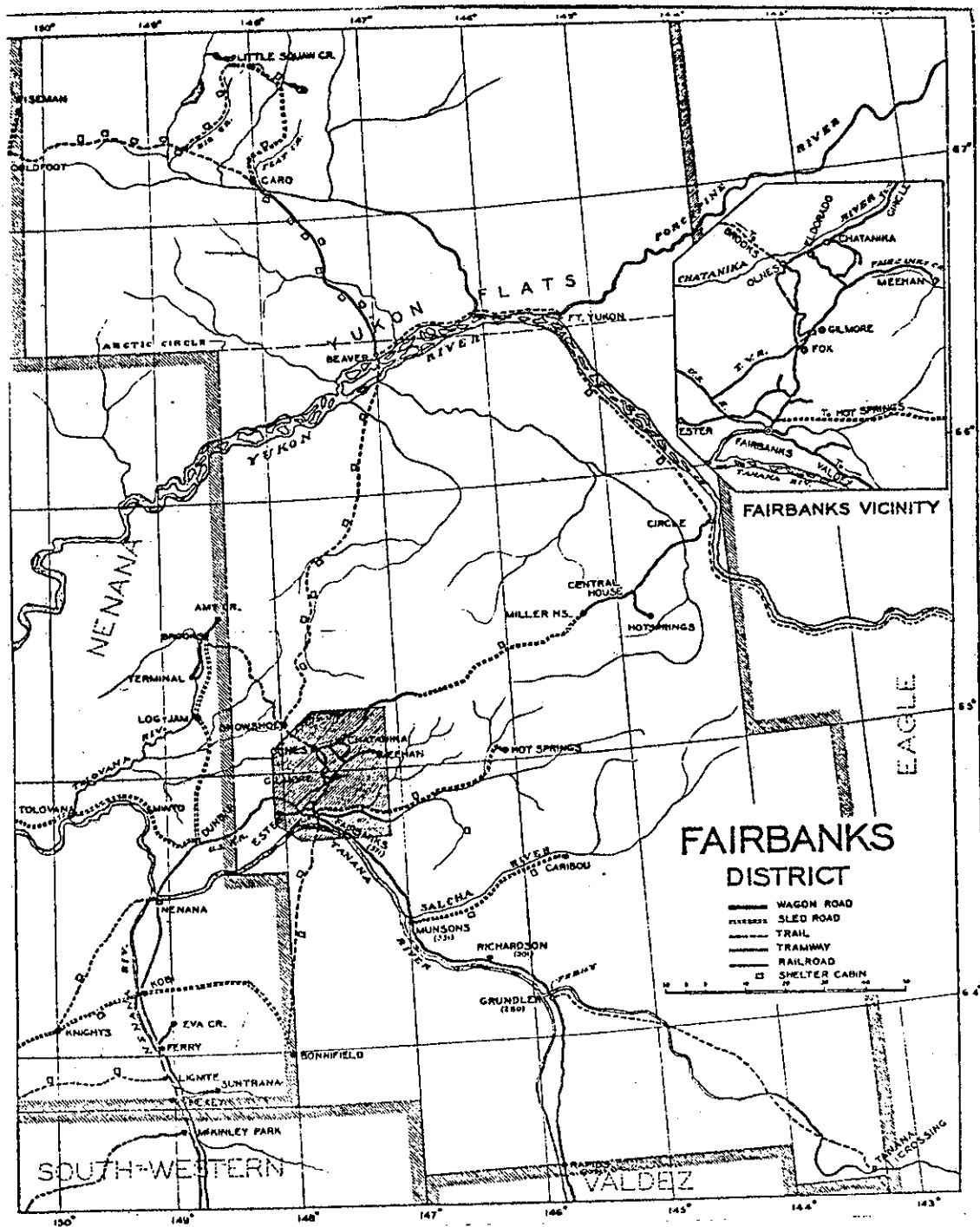
Reproduced from the 1923 Alaska Road Commission Annual Report.



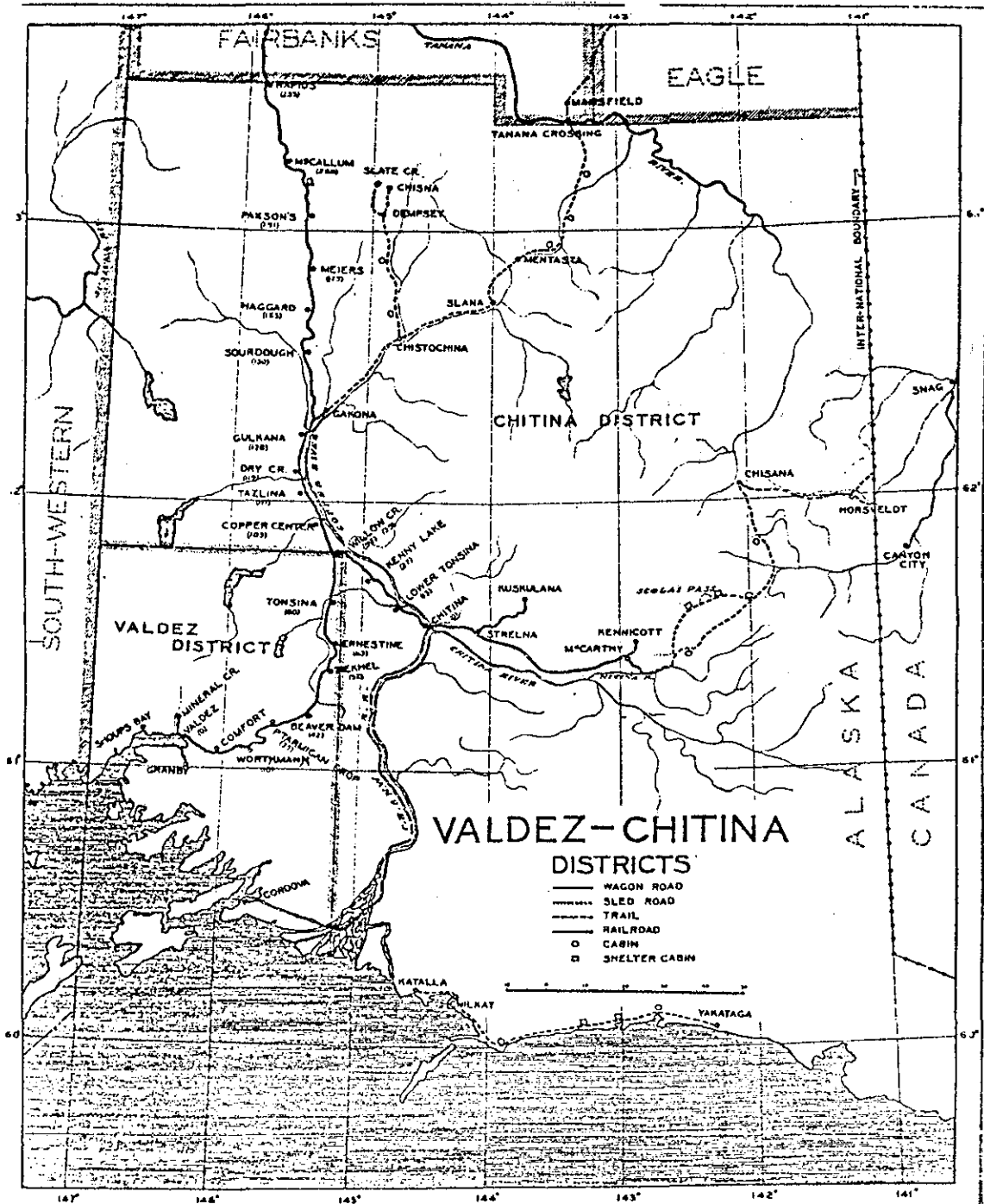
Reproduced from the 1923 Alaska Road Commission Annual Report.



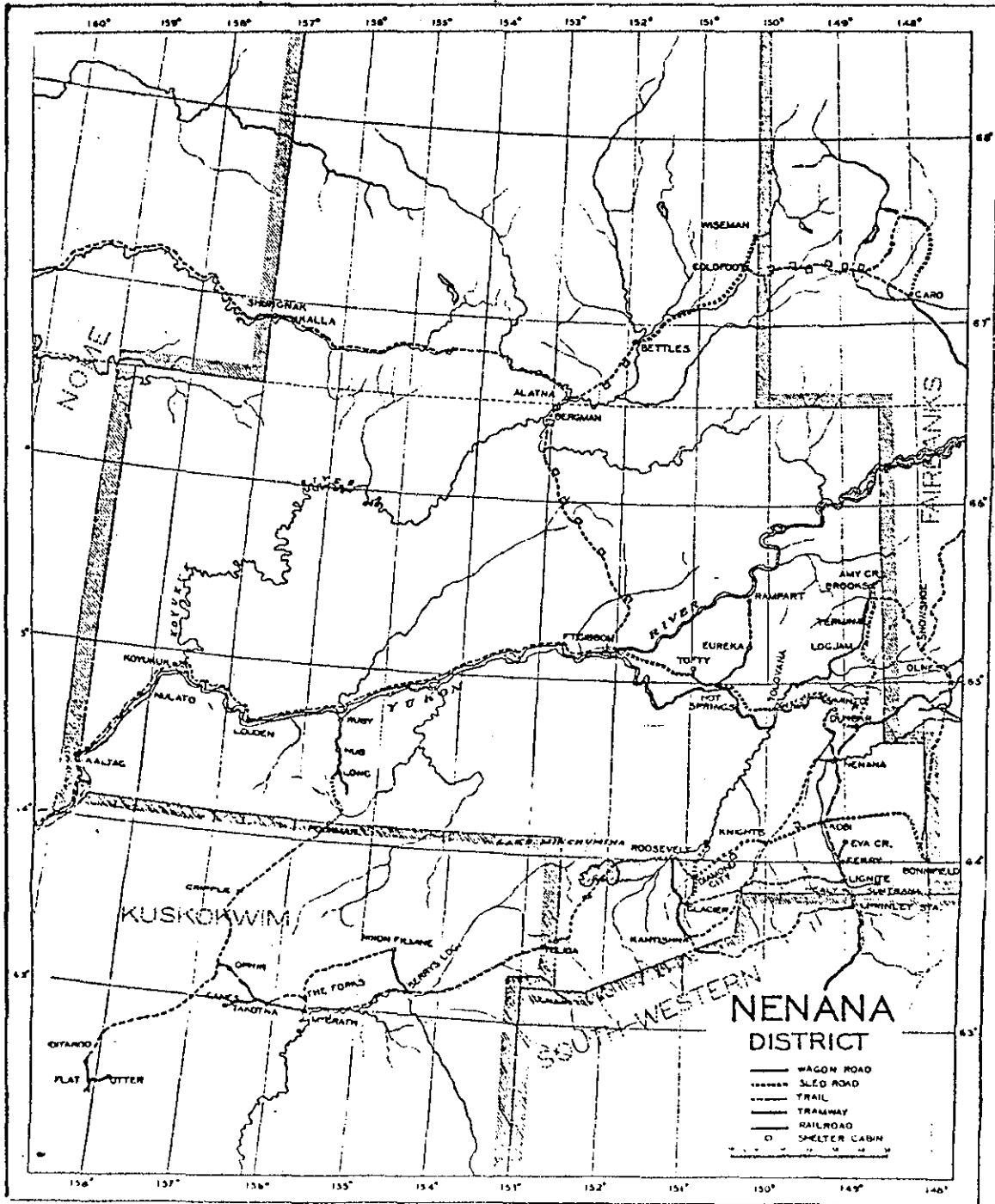
Reproduced from the 1923 Alaska Road Commission Annual Report.



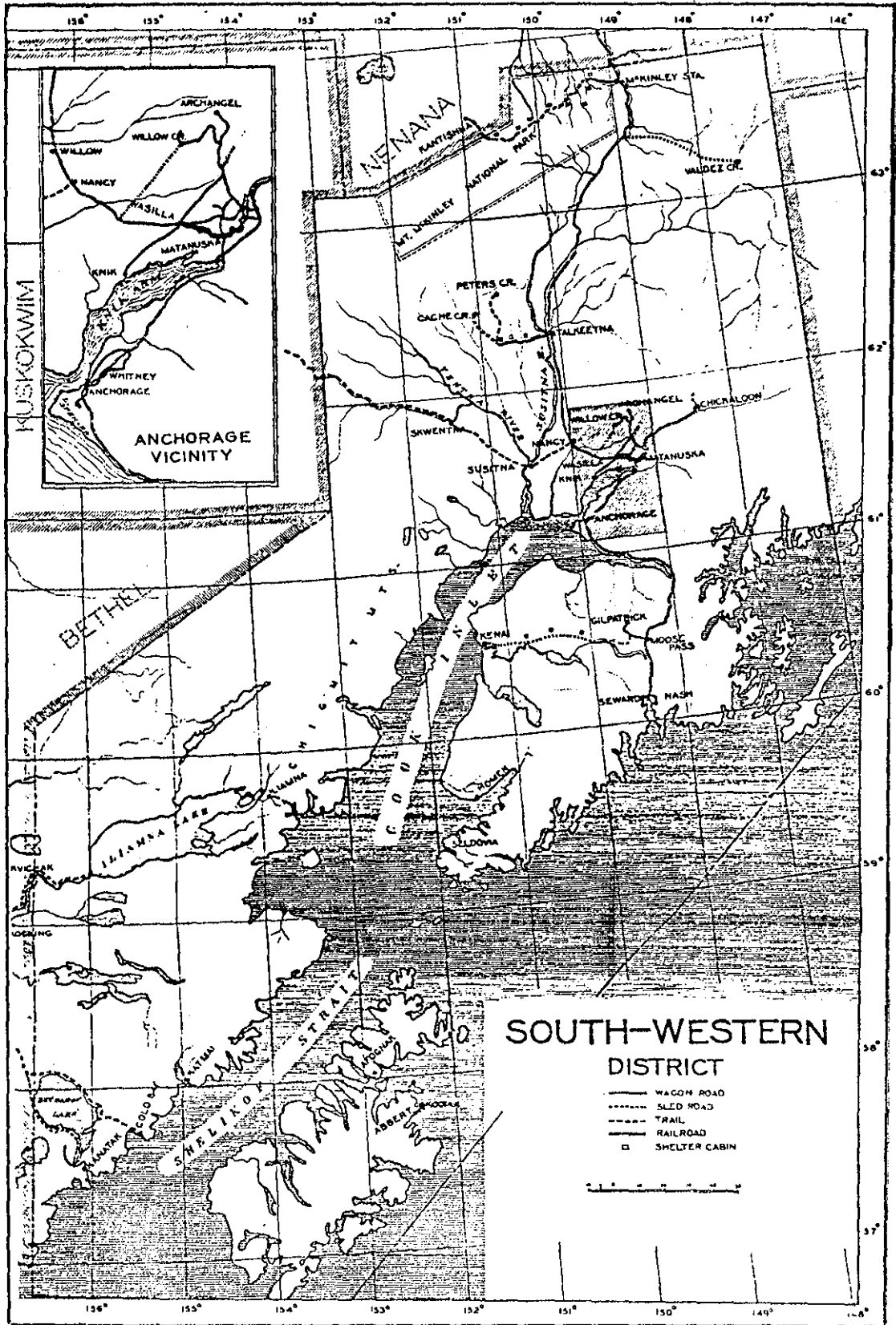
Reproduced from the 1923 Alaska Road Commission Annual Report.



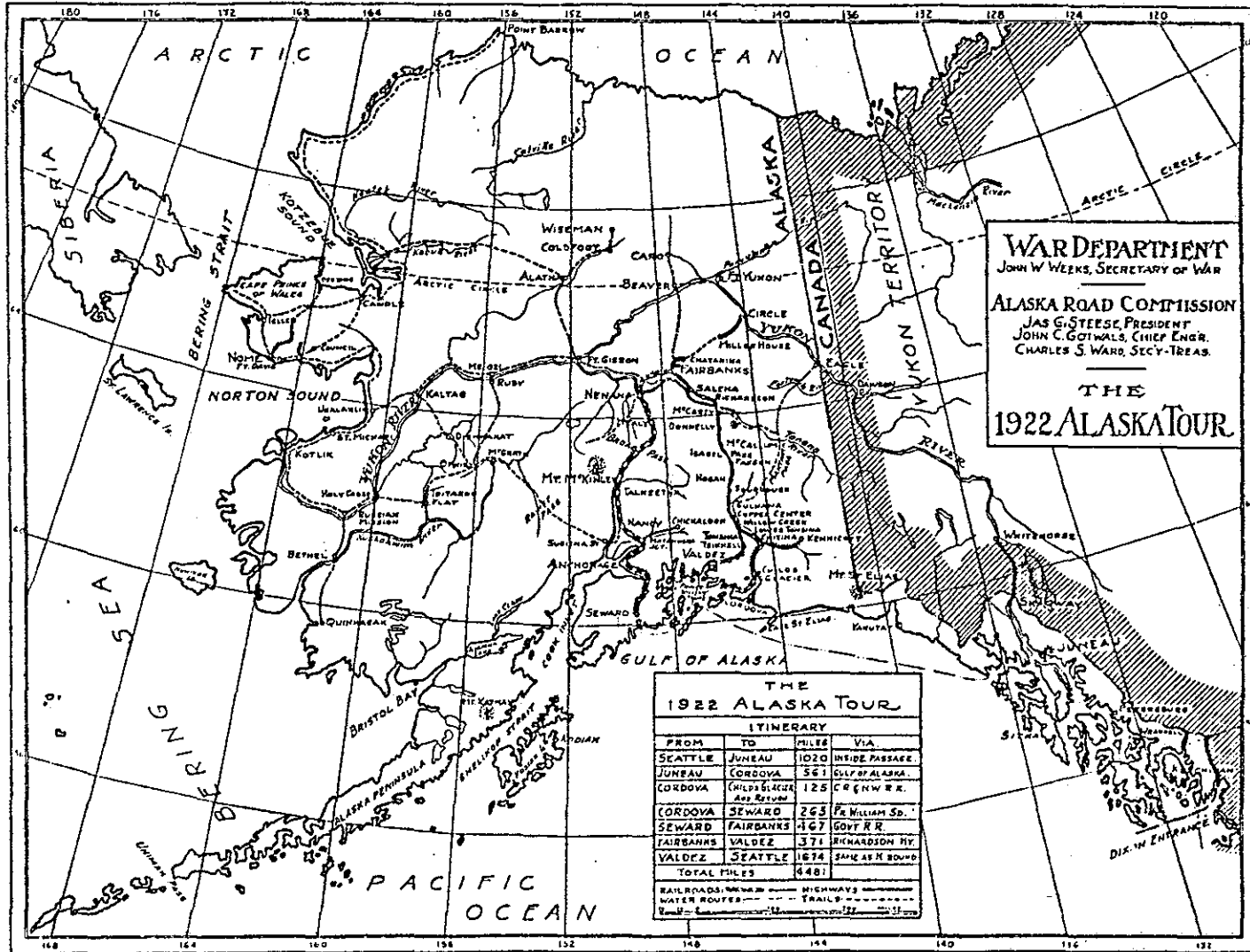
Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.

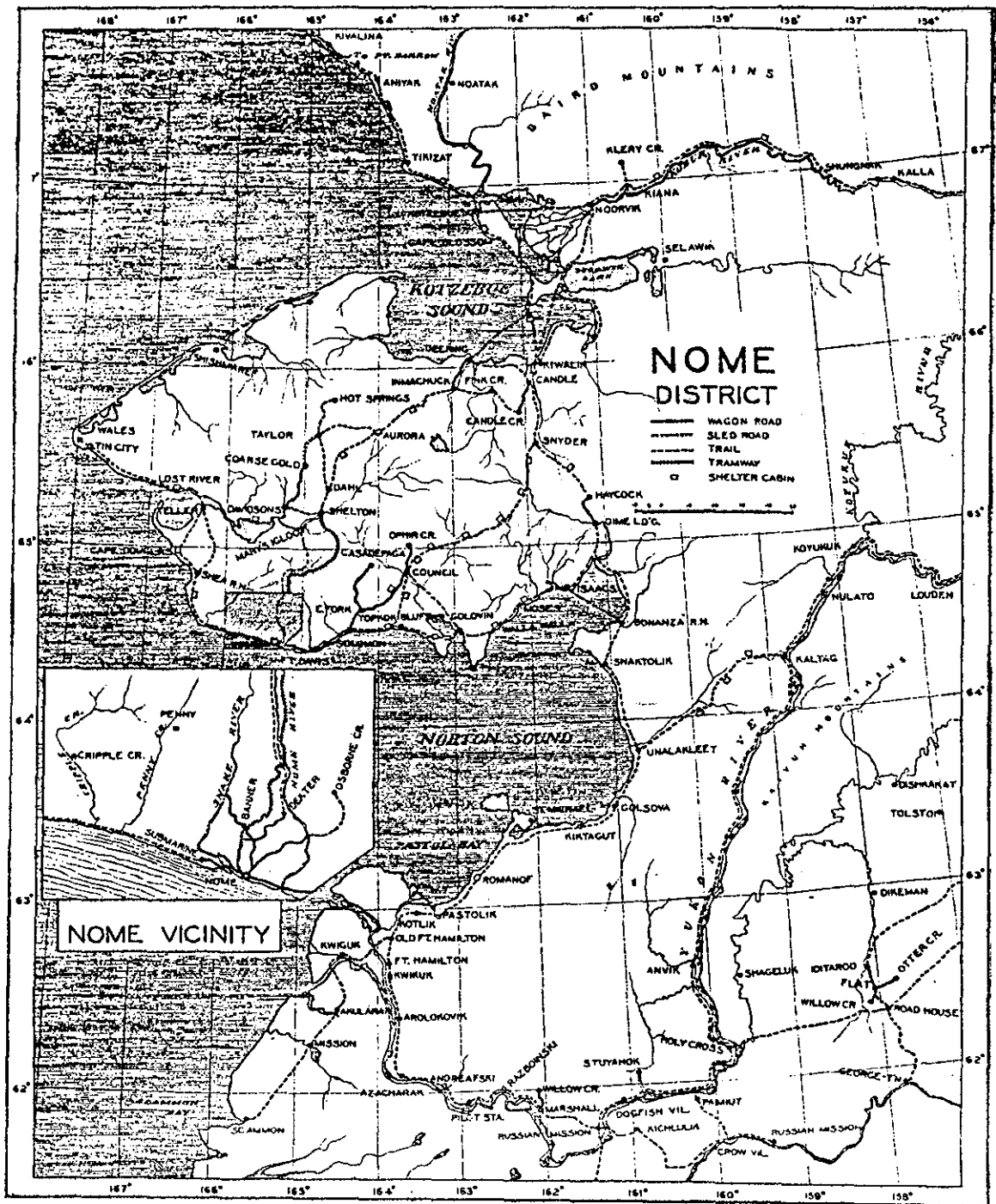


Reproduced from the 1923 Alaska Road Commission Annual Report.

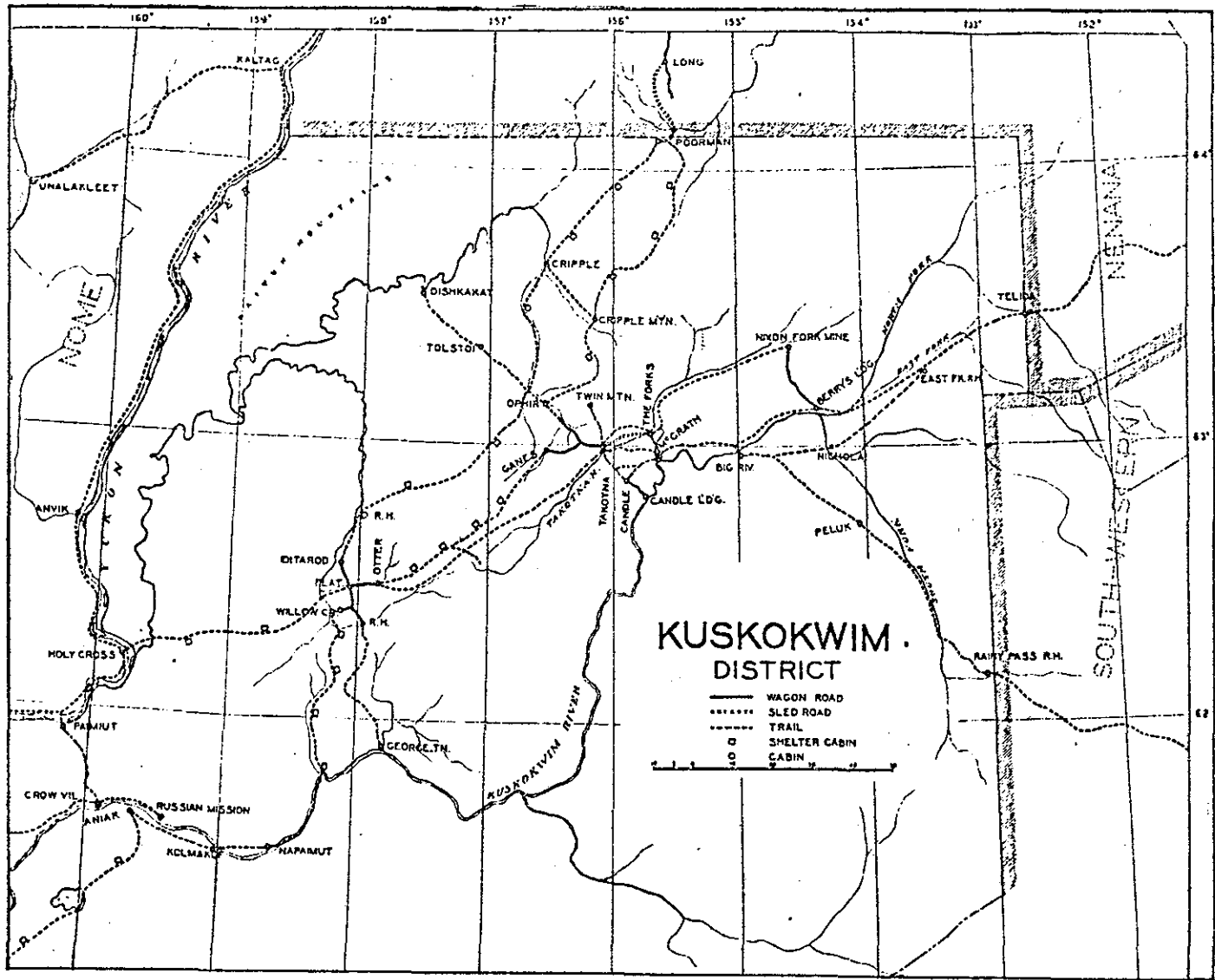


Reproduced from the 1923 Alaska Road Commission Annual Report.

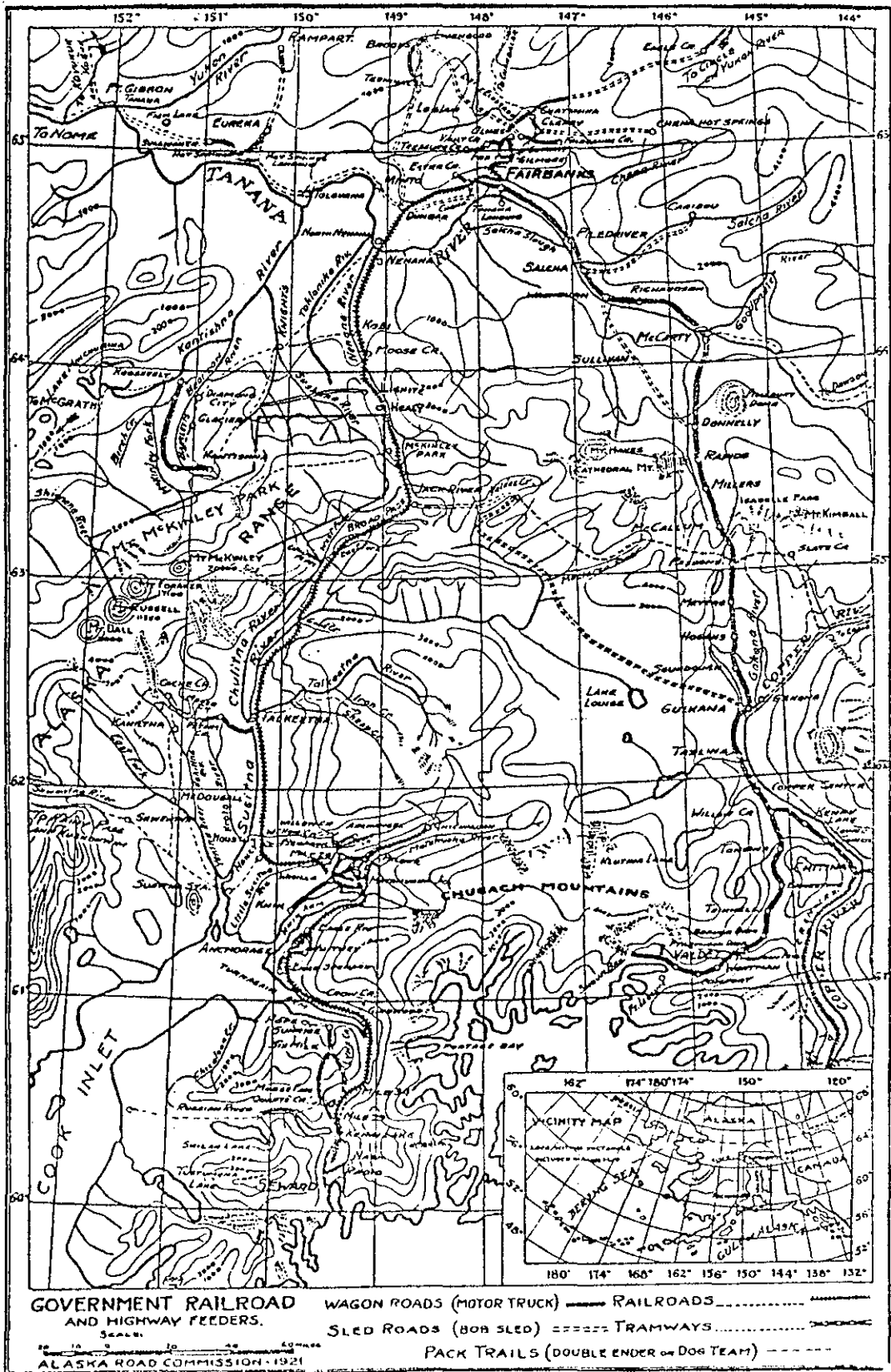
ENGINEER REPRODUCTION PLANS, U. S. ARMY, WASHINGTON BARRACKS, D. C. 4633 1



Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.

Progress Reports

The crews of the Board of Commissioners worked hard, and the monthly reports by the various district engineers give the real flavor of the work. C. G. Morrison, responsible for the Valdez-Fairbanks road, tells of the achievements and difficulties encountered by his crews in July and August, 1918. His reports follow in full:¹⁸

July 1918

1. CHITINA - WILLOW CREEK ROAD.

Foreman W. R. Cameron with a crew of 13 men, four horses, and three automobile trucks in addition to the regular maintenance of this entire section has been engaged in the surfacing of one and three fourths miles between mile 11 and 12.75. In doing this 1178 cubic yards of gravel and 100 cubic yards of rock have been moved by the trucks.

An excellent quality of gravel has been secured in mile 12 and approximately 3000 cubic yards uncovered during the month. A double loading bin has been constructed at this point the filling of the bin being accomplished by slip scraper.

The stripping of this gravel deposit has been expensive as both the gravel and surface soil were frozen. In the future, I believe that it will be advisable for use to strip the surface from the gravel pits at least two months previous to the time when they will be needed.

Between mile 11 and mile 13 all ditches have been cleaned or enlarged, a few culverts repaired, and all sharp corners on the inside of sharp curves have been removed.

The entire length of this section has been maintained in excellent condition during the month.

2. VALDEZ - ERNESTINE ROAD.

(a) From mile 1 to 3 inclusive foreman T. O. Bell with a crew of two men has been employed throughout the month on the placing of fascines, repairing grade, removing drift from the bridges, and making light repairs to the bridges in this section.

On the 16th, a bridge of three spans was washed out and on the 20th, another of one span was lost, both being in mile two. A pile-driver was secured from the Valdez Dock Co. and after considerable trouble and delay sufficient men to operate it were secured only on applying to the Commanding office at Fort Liscum. By the 28th, both these structures were again in place each having had two spans added to their original length.

(b) During the entire month foreman Matt McGlade with an average crew of 12 men and 4 horses has been employed between miles three and thirteen fighting the inroads from the Lowe River. A total of 650 cubic yards of gravel and rock and man loads of brush were employed in this work in addition to numerous logs which were used for crib diversion spurs in the river. Several stretches of grade in miles 8, 10, and 11 had to be raised to prevent the loss of the road.

(c) The month of July has been for foreman Naud and his crew a period of unremitting strife with the Lowe River. The destruction caused by the high water has several times nearly discouraged the men in the crew. The men are to be commended for having remained with the work in the face of such a discouragement.

The shortage of labor on this section has been felt to a considerable extent. Sections of the road in miles 12 and 13 have been destroyed several times thus shutting off the traffic for short periods. At the end of the month a piece of the old railroad grade in mile 13 at the mouth of the Keystone Canyon was taken out. It has been necessary in each of these cases to place the new road in the solid rock to prevent any further damage.

Bear Creek at the head end of the Canyon has been giving trouble for some time as the old river bed has filled in up to the level of the bridge floor. The course of the stream has been changed until now it is running to the north of the double truss. The few views which were sent you some time ago will show this action.

Nauds crew consisted during this period of an average of 11 men and four horses.

(d) From the summit of Thompson Pass to Ernestine foreman Howard with 6 horses and with a crew of 17 men in addition to the regular maintenance has done the following work:

Constructed or repaired 23 culverts

Placed 240 cubic yards of gravel surfacing or 6600 linear feet

Placed rock fill in washout near summit, 500 cubic yards

Ditched 2730 linear feet

Blasted out of rock on steep grades about 600 cubic feet to prevent further washouts.

On the 28th, due to the washout and inroads from the Saina River at Beaver Dam a dike was constructed and clearing and grading started in mile 43 for a diversion around the washout. As the present road in miles 42 and 43 is below the elevation of the river bed of the Saina at this point the new location was laid out with the idea of placing both mile 42 as well as 43 on the hillside within the next two years it being very certain that the river would in that time at least destroy the present road. The south approach to this diversion was for this reason made steeper than would otherwise have been the case as it is the intention to abandon about three hundred feet of it when it becomes necessary to lengthen out the diversion. When this work does become necessary there should not be the question of labor that we had to meet this season.

3. Foreman Joe Olson, with an average crew of 20 men and 8 horses, in addition to maintenance over the entire section from Ernestine to Copper Center, has constructed numerous bridges and culverts in addition to removing mud and rock slides. In most cases the bridges and culverts were necessitated by the loss of the former ones by fires. There appears no evidence as to the origin of the fires, although I am certain that the mushers are in nearly all cases the guilty parties. Of course, in some cases in the past our own men in the road crews have been responsible.

This bridge work is as follows:

1	bridge of 44	feet	span		
1	"	"	61	"	"
1	"	"	21	"	"
1	culvert	"	10	"	"
2	"	"	8	"	"
5	"	"	6	"	"
1	"	"	5	"	" and
3	"	"	5	"	" rebuilt and
9	"	"	5	"	" repaired

In addition to the above, during the month 590 cubic yards of gravel were placed as surfacing on roads.

4. Copper Center - Sourdough

Foreman Shipp with a crew of 19 men and 8 horses in addition to the regular maintenance constructed three and one half miles of new grade between mile 124.5 and 128, built 17 new culverts in this section, and putting 1000 linear feet of drainage ditches, the culverts in this section being of an average span of six feet.

5. Sourdough - Paxson

With a crew of 17 men and 8 horses foreman Ellingson with the exception of grading one mile south of Paxson has been engaged in cleaning and enlarging ditches, repairing culverts and bridges, and in the repair and dragging of the grade.

6. Paxson - Rapids

Holland's crew of 20 men and 8 horses at the first of the month were employed in bridge construction and in the removal of the heavy snow drifts in the vicinity of Millers Road House. On the completion of the bridge in mile 227 which was reported last month a dike of rock, gravel, brush, and wire netting was constructed just above it to concentrate all the glacier water at the bridge. This dike had an extreme length of 467 feet. Another dike of the same type was constructed in mile 223 to control the river at the Long Bridge. The later dike has a length of 210 feet. A new road 610 feet in length was constructed in mile 217 to replace a washed out section. Over this entire section the scour from the glacier streams the Phelan and Big Delta River annually does considerably damage. During the past month it has been necessary for Holland to protect 1750 feet with brush and whole trees used as fascines. The section of the road between Yosts and the Summit although dragged has absorbed

so much water that it has been impossible to prevent it being cut up. It, like numerous sections at other places in the Valdez - Fairbanks roads needs a surface of gravel or at least of sand before satisfactory results will be obtained.

7. Rapids - McCarty

Foreman Oscar Olson with his crew of 20 men and 8 horses has during the entire month been employed on the section between miles 275 and 243. The former trail between McCarty and Beales Cache has been repaired and drained so that although not graded it is now one of the better parts of the road. This distance of 18 miles is now being made in 50 minutes by the stage cars.

The road over the Dome and in the vicinity of Donnelly has all been placed in good condition and the culverts of the entire section are now in good shape.

At the end of the month the camp had been moved north of the telegraph station at Donnelly and a start made on the grading of the road from mile 240 to 232 at Rapids. This work is to be of standard section and the alignment will be as straight as possible.

8. McCarty - Richardson

During this month no maintenance has been necessary on this section.

9. Richardson - Munson

Foreman Sheedy has repaired culverts and bridges between miles 320 and 312 and ditched, cleared, and repaired the grade between miles 317 and 312. During the month six contract horses with their owners have been employed on slip scrapers and a four horse team has been used for freighting for this camp as well as to place supplies in the several caches.

10. Munson - Fairbanks

Foreman McKinnon on July 7th started out of Fairbanks with the new Case tractors which during the month have been used for regrading and dragging of the road. The summary of the work accomplished is as follows: Repaired culvert at 368 mile post, placed new floor stringers in the Little Piledriver Bridge, repaired the Little Salchaket Bridge as well as placed new floor stringers, and also repaired two culverts near the 336 mile post. The entire length of the road was dragged with the new Three Way Drags. From mile 364 to mile 356 gravel and sand were placed in all mud-holes and the bad spots were all repaired. Three hundred feet of bad road at mile 355 were covered with gravel. Near this same place 200 linear feet of road were raised and covered with gravel. In mile 353, 1500 linear feet of road were raised one foot and covered with gravel. The road near mile 348 was also repaired for a distance of 400 feet.

This crew consisted of a total of eight men having two Case tractors, one large grader, and two Three Way Drags for the entire month and for a portion of the month a two horse contract team with

driver which was used for the bridge repairs and in the transporting of the gravel and sand from the the distant pits to the mudholes.

11. Eagle - Forty Mile

The crew under J. B. Powers started on general maintenance on July 10th. Mr. Powers reports that the season is a very dry one and that he therefore expects to accomplish considerable without any lost time or funds. He has requested an additional allotment principally, I believe, to furnish work to the miners of that district who are unable to work their claims on account of shortage of water. Nothing other than maintenance has been accomplished.

12. Circle - Miller House

Mr. John Joslin, the foreman in charge, had completed all the work on this project by August 4th and on that date was en route down the river to his new assignment at Arctic Circle Hot Springs. The following was the work accomplished on this project:

- a. Seven miles of road regraded
- b. One thirty foot bridge constructed
- c. All bridges and culverts repaired
- d. Ferry scow at Birch Creek repaired
- e. Passenger car and carrier erected across Birch Creek.

13. Ruby - Long

During the period from July 1st. to 7th. awaiting advices as to the appropriation for the new Fiscal Year nothing was done. From the latter date to the end of the month the crew was again in the field. There are now 9 men and one team in the crew. The first camp was pitched at mile 27 where a 60 foot bridge and 2000 feet of connecting road was being built at the last report. The maintenance of the entire length is being continued and it is the intention to finish the grading into Long, a distance of approximately two and one half miles.

14. Hot Springs Landing-Eureka and Hot Springs-Sullivan Creek.

Mr. John Joslin arrived here on the project on August 20th. and immediately started work on the Hot Springs Landing Bridge which had been destroyed by the break-up this spring.

15. Rampart-Eureka

Wm. Garrett was appointed by Mr. Joslin as road patrolman and continues to render his personal services at all times having the privilege during times of necessity to engage other labor to assist him.

August, 1918

1. VALDEZ - ERNESTINE ROAD.

Foreman Bell with an average of two men during the entire month

has been employed between Valdez and mile four repairing bridge floors, clearing drift from bridges, placing fascines for grade protection and maintaining the gravel surfacing over the entire distance. There have been no washouts on this section during the month.

Foreman McGlade with two teams and an average of nine men has during the entire month been engaged solely on repairing damages in miles seven to eleven inclusive which had been caused by inroads from the Lowe River. He also constructed 335 linear feet of gravel and earth filled log diversion spurs to prevent further encroachments from the river.

Foreman Naud with a crew of eight men and two teams was engaged for the entire period on maintenance from mile twelve to eighteen inclusive. He has, during the month accomplished the following:

1256	linear feet of gravel surfacing on the new diversion in mile twelve,
156	linear feet of new road in mile 13 necessitated by scour
300	" " " " " " " " " 12 " " " "
150	" " " " " " " " " 14 " " " "
50	" " " " " " " " " 15 " " " "
100	" " " " " " " " " 16 " " " "
1800	" " " clearing in mile 17 for diversion

Both McGlade and Naud have been on the jump every day of the month in the endeavor to keep the road open at all times and for the most part of the month have been successful. The washout in mile sixteen occurred at the latter end of the month but it was possible to get the mail through as well as the new Nash Quads of the winter mail-contractor before the road was closed.

On the twentieth of the month Bear Creek bridge in mile eighteen was destroyed by the flood water from a glacial lake at the source of Bear Creek. The bridge timbers were all salvaged by the road crew.

Foreman Howard constructed 3400 linear feet of new grading at Beaver Dam in mile 43, the change being necessitated by a change in the channel of the Saina River. The new line is so located that as the river makes further inroads the road may be extended further to the southward. In addition to the grading of this new diversion he has placed 140 cubic yards for gravel surfacing, constructed three new culverts, and rebuilt ten culverts. The crew during this period has on an average consisted of 17 men of whom 7 were native indians. Three teams were used.

2. Ernestine - Willow Creek Road (4C)

The road crew with Joe Olson in charge was engaged during this month on the section from mile 74 to mile 83 inclusive due to the necessity of replacing and repairing bridges and culverts which had been destroyed by a large forest fire during the latter part of July.

The work done is as follows:

one mile of new grading
6 bridges constructed having total width or span of 236 feet,
11 culverts " " " " " " " " 65 feet
1 " rebuilt " " " " " " " " 6 feet
330 linear feet of drainage ditch,
200 cubic yards of gravel surfacing,
2 large mud slides removed.

The total average strength of the crew was 17 men of whom 5 were Siwash Indians.

3. Chitina - Willow Creek Road (6 B and 6 A)

Foreman Cameron having an average crew of twelve men of whom four were native indians up to the 20th of the month were employed in the graveling of the road by the use of three Mack self-dumping trucks and in general bridge and culvert repairs. By the end of the month all bridges and culverts between Chitina and Willow Creek had been rebuilt or strengthened in preparation for the heavy truck and tractor freighting which is to be done this fall and winter by the new mail contractor and the Alaska Road Commission. About the 20th. camp was moved from the vicinity of the gravel pit at 12 mile and was pitched at 14 mile where the remainder of the month was consumed in clearing 2600 linear feet for a diversion along the foot of the hill to escape further floods and washouts from the Tonsina River. As there is considerable frost in all this ground it was thought advisable to do the clearing now so that it would be possible to do the grading next season.

While awaiting the thawing out of the gravel pit the trucks were engaged in moving freight from Chitina out onto the road to the north of Tonsina.

4. The WHITE TRUCK as in former months has been used for freighting supplies of all kinds from Chitina to Ptarmigan Drop and Paxsons. Al Moore, the Commission blacksmith at Chitina, has been placed on the truck as driver and at the same time continues his duties as blacksmith and horseshoer for all the camps from Chitina and Ptarmigan Drop north to Paxson. Our personnel is thus reduced by one man.

5. Motor mechanic A. G. Brown with headquarters at Chitina has continued a close personal supervision and maintenance of all motor equipment as well as doing all receiving and shipping of supplies at Chitina. He spent several days at the Fairbanks end during this month repairing the Ford truck and in general inspection of the new tractors and all the heavy equipment and vehicles between Fairbanks and Valdez.

Mr. Brown is within the draft age and is registered at Riverside, California. As his services are very necessary it is hoped that in case he is drafted you may be able to have him assigned to duty with the Commission. Mechanics are now practically unknown in this

vicinity and it is a certainty that it will be necessary at the beginning of next season to make chauffeurs out of the laborers we may have. Without a good mechanic to watch the drivers and machines the equipment is apt to be laid up for repairs for a considerable part of the season.

At the end of the month the new Case tractor arrived in Chitina and was immediately set up but on account of lack of fuel was not started out onto the road until the first week in September.

6. Willow Creek - Gulkana Road (4 D)

Frank Shipp has been in charge of the crew on this section having a total of 19 men and four teams employed on the work. The work accomplished was as follows:

- 1.75 miles of new grading
- 0.5 miles of clearing and grubbing
- 15 new culverts constructed
- 7 culverts rebuilt or repaired
- 1 pier of the Gulkana bridge repaired and filled with rock
- 21 loads of gravel surfacing placed at the Gulkana bridge
- 940 linear feet of drainage ditches dug

7. Gulkana - Sourdough Road (4 E)

No work done.

8. Sourdough - 165 mile post (4 F)

Ellingson with four teams and 18 men of whom 6 were indians was engaged only during the latter week of the month on this section repairing culverts and filling mudholes in the vicinity of Hogan Hill. During heavy rains and even for some time afterward the road between mile 152 and mile 162 becomes so badly cut up by the wagons and automobiles that an automobile is able to make the distance only after considerable trouble and labor. I am planning to gravel this entire section at the very beginning of the next working season.

9. 165 mile post - 208 mile post (4 G)

Ellingson with his full crew during the first 23 days of the month was engaged between Paxson and Meiers doing the following:

- 122 linear feet of culverts constructed
- 4 miles of new road graded
- 46 cubic yards of gravel placed
- 10 miles of road repaired

10. 208 mile - McCarty Road (4 H)

Lars Holland with the same crew as last month has accomplished the following between Paxson and Rapids:

- 1 bridge 24 feet span at Fish Creek,

2 new culverts of 10 feet span each
1500 linear feet of new road necessitated by inroads of the
Delta River and Phelan Creek,
850 linear feet of road surfaced with gravel, and
repairs made to the Long bridge in mile 222 and the dike at Gun
Creek.

Oscar Olson has had the same crew as in July and during the
entire period has been engaged on road construction. Grading has
been completed between mile post 242 and mile post 237. From 241 to
237 it was necessary to do a considerable amount of clearing and
grubbing.

11. McCarty - Richardson Road (4 I)

Two round trips of a tractor hauling one of the Three Way Drag
placed this section in good shape. A small amount of machine grading
was done in the vicinity of Richardson.

12. Richardson - Salchaket Road (4 J)

Foreman Sheedy and foreman McKinnon were both at work on this
section for a part of the month, the first with a crew of men and
horses for the heavier grading and bridge work while the latter used
the two new tractors with the grader and Three Way Drags to do the
light grading and the general repairs to the entire section.

On the 23rd. McKinnon was placed in charge of all the work with
instructions as follows:

- a. Tractor 30 with chauffeur and assistant to work with Three
Way Drag between Richardson and Fairbanks. At termination
of the season this machine will be stored at Fairbanks.
- b. Tractor 31 with chauffeur and assistant to work with Three
Way Drag between Richardson and McCarty. At termination of
the season this machine will be stored at Richardson in the
cache rented from McClusky.
- c. The crew at present with the tractors and also the crew
under Sheedy will be immediately returned to Fairbanks
retaining only six men and one team under McKinnon to repair
bridges and culverts and bridges and to get out material
for the Little Piledriver bridge.

During the month the entire section of road between the Salchaket
River at Munsons and Birch Lake was put in good condition so that at
no time in the future is it expected that there will be any interrup-
tion to traffic. In addition to the road work the Banner Creek
bridge at Richardson was repaired and the mudsill replaced by
trestle bents, the small grider bridge north of this was repaired,
four other bridges were repaired, two culverts rebuilt, and all the
drainage leading to and from the structures were opened up.

13. Salchaket - Fairbanks Road (4 K)

The section from mile 332 to 330 was regraded and timber gotten out for the little Piledriver bridge. The intention is to do the actual bridge work at the Little Piledriver later in the fall when the slough is dry.

District Engineer Morrison

A year later, in 1919, district Engineer Morrison left Valdez in early May and traveled to Meiers Roadhouse on the Valdez-Fairbanks road. With the season's work about to begin in earnest, he worried that his best mechanic, Arthur, had left the employ of the Board to attend to his sick wife in Seattle. "His absence," he complained, "leaves us in considerable of a fix as there is not a man on the whole job who could fill his place." Morrison thought that mechanics should get at least \$185 per month since chauffeurs received \$165 per month. Without the pay boost it would be difficult to engage competent men.¹⁹

Morrison advised Major W. H. Waugh, the president of the Board, that now was the time to get a brown bear. It only took "an easy jaunt of a few hours from Cordova" to the head of Eyak Lake, or a trip to Hinchinbrook Island. Dr. Walter W. Council, a Cordova physician, and his hunting companion had bagged three brownies on the north arm of Eyak Lake. One had been a monster in size, and Council had stated "under oath that the foot-steps alone weighed one hundred and fifty pounds." and Meiers, the proprietor of the roadhouse, had told him that the "caribou are so thick beyond Paxson that they interfere with the [road] work," so Lars, an employee of the Board had to relocate his camp "as he could not force the caribou to move."²⁰

Between Meiers and Paxson

A few days later Morrison traveled over the very rough road section from Meiers to Paxson. It needed much repair and maintenance work, but he was pleasantly surprised that the stretch from Paxson to Rapids was in excellent shape. It was usually this part of the road which suffered severe heaving damage every spring during the breakup.

Game was plentiful, and Morrison told Waugh that Joe Johansen, who owned a couple of hunting cabins, one at the head of Jarvis Creek, had invited both to hunt in the area. Johansen assured Morrison that they would be certain to bag sheep, bear, and perhaps also caribou.

At McCarthy

On June 26, he was in McCarthy and complained that labor was scarce and the Kennicott mine competed with the Board for the few men available for the season. He was lucky, however, in hiring a number of men who had come up from Seattle. Ten of the men he had hired, he told the major, "were Mexicans in spite of their statements that they're Spanish." As long as they worked in a satisfactory fashion, however, nationality did not make any difference.

Morrison enjoyed his stay in the settlement of McCarthy. The weather was ideal, the men all worked in their shirtsleeves, and everybody was happy. He observed that the settlement for some time had "a crooked booze-running Commissioner...who has permitted the Red Lights and bootleggers to run the town." A week ago that man was fired and a good man appointed. Now the "inmates of the dives" all scurried for cover, and after only a few days of cleaning up, the Kennicott Corporation once again had "recognized the place as again fit for their men to visit." Morrison did not elaborate how the Kennicott employees were to entertain themselves with all the dives closed.

Visiting the North Midas

From Strelna on the Copper River and Northwestern Railroad Morrison made a short side trip to inspect the road that the Alaska Copper Corporation had built. He went as far as the junction with Ole Berg's property, the North Midas. It was a good road and almost the entire length of sixteen miles was graveled and the surface hard and smooth. Berg's branch road extended three miles to the foot of his train and crossed the Kuskalana River over a bridge jointly

constructed by Berg and the Board. Berg estimated that he shipped about one hundred tons of ore to the railroad. He asked Morrison for help in putting his branch-road into better shape. Morrison recommended that the Board spend \$2,000 on Berg's road and assumed maintenance responsibilities for the Alaska Copper Corporation road. Morrison's suggestions were in accord with Board policies to stretch available monies wherever possible to aid local economic development.

John Hajdukovich and the McCarty - Healey River Trail

Farther north, John Hajdukovich, a trader, requested that the Board improve the thirty-six mile long McCarty - Healy River trail, providing the only means of communication between Fairbanks and Richardson and the area contiguous to the Healey River. No vehicles heavier than dog sleds used it, since motorboat and poling boats operated on the Tanana during the summers carrying passengers and freight. Twelve white men and about one-hundred Indians, living as far east as Tanana Crossing, used the winter trail. It was a good one, except for Clearwater Creek and two smaller streams in its vicinity which never froze even in the coldest winters. The two streams were bridged "with wretched, ramshackle polefoot bridges which endanger the lives of the users." Hajdukovich suggested that the Board build proper bridges, and that a trapper operating a small ferry across Clearwater Creek who intended to give up the operation be induced to stay.⁴⁶ If the money could be found, the Board agreed to build the two bridges and pay the ferry operator a small sum for his services in order to keep the trail operational.²¹

F. M. Leach of Circle Hot Springs Requests a Road

While the Hajdukovich request had been a minor one, F. M. Leach, the proprietor of Circle Hot Springs north of Fairbanks, complained to Alaska's governor that the ARC had failed to connect his resort with its road stretching from Circle to 2.5 miles below the Miller

Roadhouse, a distance of some 46 miles. The construction and maintenance of this stretch had cost in excess of \$100,000. Leach and others had pleaded with ARC officials to build branch roads to connect with the mines, and were "placated with assurances that as soon as the main road was complete, branch roads would be built to the side creeks and the Circle Hot Springs." Eight years had passed since then, Leach stated, and yet less than \$3,000 had been expended, and that only on the nine mile branch to Deadwood Creek, connecting with the government road at the Central House. Not one cent had been allotted to build a road another nine miles to Circle Hot Springs. It was badly needed to give individuals suffering from rheumatism access to the baths for relief who now could not reach them during the summer. The abundance of hot water used for irrigation gave the opportunity to establish a great farm at the site, and Leach felt "that this is the most permanent asset so far discovered... this warm ground farm, free from frosts in this frozen country and this great flow of healing, revivifying water surely will be a great boon to mankind long after the placer mines have been worked out and forgotten..." But the resource had to be made accessible to the world²²

Money, Money, Money

The problem was that there was not enough money available to comply with all the requests. In fact, with America's entry into World War I Congressional appropriations for Alaskan road and trail construction decreased dramatically. In 1917, the Board received \$500,031.95 in federal monies and \$76,716.15 in territorial funds for a total of \$576,747.90. In 1919 the total had shrunk to \$299,024.26, increased to only \$358,604.25 in 1920, and stood at \$936,107.65 in 1924. Thereafter, total annual funds available hovered around approximately \$1,200,000 per year until 1933 when, because of the depression, they plummeted to \$695,036.16. Because of the shortage of funds during the war and immediate postwar years, the Board had been forced to abandon significant road and trail mileage. In fact, Colonel James G. Steese remarked in 1921, that "we have about ten million dollars worth of work in sight and are viewing with

considerable concern the possibility of our securing only about four hundred and twenty-five thousand for the next year. That would be hardly enough money to complete the rehabilitation of the existing mileage and perform the necessary annual maintenance." Steese was not far off the mark. Congress appropriated a meager \$426,807.34 in 1922. Together with territorial and private funds, Steese had a budget of \$683,247.68 at his disposal, a very small sum indeed.²³

But despite the shortage of funds, the Board accomplished much. The foreman for the Forty Mile district, Fred Price, was an observant individual. His report on the work accomplished in the 1921 season together with his reconnaissance of O'Brien and Polly creeks as a possible route for a main trunk road to Chicken and his general remarks on the mining activities follows in full:²⁴

Eagle and Forty-Mile Roads and Trails

In July I put a small crew of men to work upon the winter roads and pack trails, putting them into good shape for winter travel. As much ground as possible was covered with the money at my command. The high water of the spring caused a wash-out in the canyon leading to Gravel Gulch. A repetition of this could be avoided by a small amount of maintenance work in the spring during the high water. Cutting a channel in the ice would cost but a few dollars but would save hundreds by avoiding an occurrence of this kind. I would recommend that this be done.

Seventy-Mile

On my trip to the Seventy-Mile I found the trail leading to Alder Gulch in very bad condition, from Crooked Creek up-stream, but with the money allotted to this district there is now a good trail leading up-stream to Barney Creek. I set aside \$100.00 out of the \$1,000.00 allotted for the construction of a foot-bridge across the Seventy-mile at Nugget Gulch. This bridge is to be put in this winter, as there is no way of crossing the river at medium high water. Some parties were held up for two days before they could cross. The possibility of extending the road to Crooked Creek on the left limit is rather impractical, as there are several abrupt bluffs which would entail too much expense in getting around them. There is a good base leading up to the falls upon the right limit of Seventy-mile.

Fourth of July

In July I made an investigation of the trail leading from Fourth of July to Nation. Good work had been done there with the small amount of money at Mr. Vanderveer's command in 1920. This years work will complete the trail to Nation. This work not only leads to their camp, but is the means of ingress to an extensive country lying south of Fourth of July Creek. The mining operations on Fourth of July Creek will be worked upon a large scale, and a road is necessary. The base is good and my estimate of construction will not exceed \$50.00 per mile. It is less than ten miles to the works. I would recommend that this road be constructed if possible in the near future.

Wade Creek to Walker's Fork and Boundry Line

In traveling from Wade Creek, up Robinson Creek, to the ridge leading to Walker's Fork an easy grade is encountered. The road to Walker's Fork has a very good road-bed, continuing to the boundry line, and with a small amount of money could be put into good condition. At the time of my visit to Walker's Fork, Mr. Jacobson, who is a mining operator in that locality came from Dawson with a two horse team loaded with 800 lbs. of provisions. He informed me that the road from the boundry to Dawson was the worst part. It is about 5 miles from Jacobson's to the boundry following the right limit of Walker's Fork.

Canyon Creek

There is a very good road down Canyon Creek following the right limit slope for a distance of five miles. From this point the creek bottom is used during the winter. The freight is brought to the mouth of Canyon, thence up Canyon to Walker's Fork. There is some mining activity on Canyon and Squaw Creeks this season.

Canyon to Steel Creek

Ascending the Steel Creek divide from Squaw Creek the winter trail is followed down to Steel Creek. This is a very bad road during the winter months for traveling as the grades exceed 15% and the snow drifts upon the summit are bad. This road also leads to Wade Creek for winter freighting.

O'Brien Creek

Following up O'Brien Creek from the mouth in its entirety there is a very good road bed part of the way. The present winter road is, in my estimation, not practical for a permanent road going to the many crossings of the creek requiring too many bridges. Along the right limit, however, fairly good material is found until Columbia Creek is reached, then the present road could be followed to Liberty.

Reconnaissance of Outlets

from

O'Brien, Polly and Uhler Creeks to Chicken

From the mouth of O'Brien Creek the Forty-mile river would have to be bridged, following up the right limit to Polly Creek, thence up Polly Creek which has an easy grade, possibly a 6%. Good material is found on the left limit up to a low divide which could be followed for a short distance to the head of Uhler Creek. Uhler Creek has about the same grade as Polly Creek. Going down Uhler Creek to the mouth which is about five miles below Franklin, another bridge would be needed, crossing to the left limit of the Forty Mile River, going up river to Franklin, thence up river opposite Two-mile Creek, onto a good, dry ridge which can be followed to Chicken Creek. The approach to this ridge is a little steep but can be used.

Walker's Fork

Part of the river is in bad condition due to the fact that there are numerous large boulders in the river bed. This condition can be relieved by blasting the mouth. My recommendation is that a small allotment be made for this purpose.

Outlet to North Fork of Forty Mile

Mr. McCandless who expected to go over this route with me was unable to go so this trip was not made. Previously, however, the road was indicated on the map. This road leads from Eagle to American Creek and thence to the head of Arkansa Creek. From this point the old Government trail is followed into and down Champion Creek to the proposed power site of the McCandless Company on the North Fork of the Forty-mile River. This road would also form an outlet to the Charlie River district which is practically an undeveloped country. Mr. McCandless assured me that if the assays proved as good as previous ones taken, \$200,000 would be available next season for construction of their plant, requiring 200 tons of freight to be handled. This will of course depend upon the assay returns of the black sand, which Mr. McCandless promised to let us know. The estimated cost of this road is \$10,000 for work on the first 13 miles from discovery Fork to the head of Arkansaw Creek. This road is really necessary for the further development of the mining industry of that section and the Charlie River district.

Lumber

Some investigations have been made in regard to lumber and it was found that 60 to 70 thousand board feet measure can be secured two miles from Gravel Gulch. With a little grading the main road can be reached. There is also some good timber on O'Brien Creek

and at the mouth of Chicken Creek. The round poles used for bridges and culverts are unsatisfactory, lasting only a year or so, making it expensive to replace them each year. Mr. Powers has a saw mill on O'Brien Creek and a recommendation here would be timely that some 3" planks be sawed and delivered along the road before they get bad in the spring. The lumber at Gravel Gulch can be sawed and hauled in the summer as it is needed.

Freight Rates

Present summer rates.	* Winter rates	* These rates are
	*	* freighter's estimate
	*	* with a trunk road
	*	* Chicken.
	*	*
	*	*
From Eagle to		
Gravel Gulch 2¢ per lb.	* ¢ per lb.	* 1¢ per lb.
Liberty 7¢ " "	* 2-1/2¢ " "	* 2¢ " "
Dome Creek 10¢ " "	* 3¢ " "	* 3¢ " "
Steel Creek 15¢ " "	* 3-1/2¢ " "	* 4¢ " "
Wade Creek 20¢ " "	* 5¢ " "	* 6¢ " "
Franklin & Chicken 25¢ " "	* 5-1/2¢ " "	* 8-1/2¢ " "
Up river to N. Fork	* 4-1/2¢ " "	* -----
Above Walker's Fork	* 6¢ " "	* -----
Napoleon Creek	* 5-1/2¢ " "	* -----
1¢ per lb. added for perishable*		*

Note:

Freighting up Forty-mile costs 16¢ to Chicken. It is uncertain as a method of transportation.

From information obtained from the miners in the vicinity of Chicken and Franklin, the cost of provisions and supplies used during the past four years cost approximately \$0.75 per pound.

Activity in the District

Creeks 40 mile	* Number of men	* Class of Mining	* Estimated Output
	*	*	*
American Creek	2	* Open Cut	* \$850.00
"	1	* " "	* \$3,000.00
"	2	* " "	* Depends on water
Discovery Fork	2	* " "	* " " "
Dome Creek	12	* Hydraulic	* \$40,000.00
Down stream from	15	* 3 Hydraulic	* \$5,000.00
Steel Cr.40-mile	*	* 12 Rocking	* \$4 to \$6 per day

Up 40-mile from Steel Creek	*	4	*	2 winter drift	*	No data
Franklin Creek	*	5	*	2 Rocking	*	" "
South Fork of 40-mile	*	1	*	Open Cut	*	\$4,340.00
	*		*	Winter Drifting	*	\$400.00
	*		*	Open Cut	*	
Chicken Creek	*	7	*	" "	*	
Lost Chicken	*	2	*	" "	*	None
Ingle Creek	*	3	*	" "	*	\$1,200.00
Littlevig Creek	*	3	*	Winter Drifting	*	\$2,300.00
Mosquito Fork	*	3	*	Scrapper Plant	*	\$18,000.00
	*hh		*		*	
Napoleon Creek	*	2	*	Open Cut	*	None
Montana Creek	*	1	*	" "	*	\$700.00
Walkers Fork	*	5	*	Scrapper Plant	*	\$8,000.00
Davis Creek	*	2	*	Open Cut	*	\$1,400.00
Wood Creek	*	1	*	" "	*	\$375.00
Squaw Creek	*	3	*	Scrapper Plant	*	No data
Canyon Creek	*	3	*	Open Cut & Winter drift.	*	\$3,800.00
Wade Creek	*	16	*	1 Hydraulic	*	\$11,300.00
	*		*	15 Open Cut & drifting	*	

Creeks 70 mile	*	Number of men	*	Class of Mining	*	Estimated Output
Crooked Creek	*	3	*	Hydraulic	*	\$5,000.00
Broken Neck Cr.	*	1	*	Open Cut	*	-----
Big Bear Bar	*	2	*	Open Cut & Rocking	*	\$300.00
Nugget Creek	*	1	*	Hydraulic	*	\$700.00
Alder Creek	*	3	*	"	*	\$4,000.00
Curtis Bar	*	1	*	Open Cut	*	\$300.00
Flume Creek	*	1	*	Hydraulic	*	\$150.00
Barney Creek	*	1	*	"	*	\$200.00
Fox Creek	*	2	*	"	*	No data
Fourth of July	*	7	*	"	*	Depends on water
Ruby Creek	*	1	*	Winter Drifting	*	\$300.00
Washington Creek	*	1	*	Prospecting	*	-----
Mission Creek	*	1	*	Open Cut	*	\$300.00
Estimate	*	5	*	In outlying districts	*	-----

Note: -

The output may be increased after September 1st owing to heavy rainfall. The output of Dome Creek will probably reach the \$150,000 mark as better ground has been found since the estimate was given. Miners usually yield \$3.00 per gold pan washed.

Mail Service

There is semi-monthly service to the creek, each mail having a weight limit of 600 pounds. On the 15th of July there was in the post-office at Eagle, 3,600 pounds of mail and unless a special contract is issued the mail will lay until it can be taken over the winter trail, causing a considerable inconvenience to the miners. Mr. Powers, the present mail carrier assured me that with a good road these conditions now existing would be relieved. Furthermore the contract for carrying the mail could be cut one third a year making a saving to the Government, amounting to \$2,600 which in a short time would pay for the construction of the road.

Summary

Being conversant with mining conditions, it is in my judgement not a worked out district, but one with a future before it, second to none in the Yukon. This district has been producing, extensively for the past forty years. During the war it of course received a setback, but with good roads and trails, and a reduction in the cost of produce will induce younger blood to enter the country.

The Eagle - Forty Mile and the surrounding districts have a bright future.

Russian River - Kenai Reconnaissance

This narrative report could include numerous examples of Alaskan ire at the Alaska Road Commission, but illustrative cases show that northerners were vociferously unhappy if any of their petitions were denied or delayed. Without attempting to exonerate the Board from all criticism it is important to show that its staff investigated conditions on the trails and roads, and in the remote back country as well. There is no more effective way to show how the necessary work was accomplished sixty years ago than by including the full report of a Russian River - Kenai Reconnaissance trip submitted in March, 1923:²⁵

1. The reconnaissance was made during the month of March, 1923. Fifteen days time required from March 1st to 15th inclusive. Employed one man as guide, also one dog team consisting of three dogs and one light sled. Small amount of provisions was also purchased and used on the trip.

Made the trip in four days each way actual traveling time from Moose Pass to Kenai and from Kenai returning to Moose Pass. Two

days snow shoeing was required on each way of the trip, this being due to a very heavy snow storm and winds.

Snow conditions from Moose Pass Station, U. S. Railroad to Kenai. The snow at Moose Pass is approximately four feet deep. The snow down along Kenai Lake and the upper Kenai River is one foot six inches deep. Then as we approached Kenai town the snow was deeper measuring about four feet on an average. The winter 1922-1923 has been one of much snow fall in the vicinity of Kenai. The average snow fall this section of the country is twelve to fourteen inches.

Seven days were spent making side trips from the main line of travel. The present line of travel in many sections of the trail should be changed to a new location in the timber rather than to be located on the sloughs, creeks, rivers and lakes, which are late to freeze up and often early to open up in the spring; also requiring every one who travels to break trail every trip they make through the open country.

There is very little cutting or marking of trail to guide the travelers and during a snow or wind storm it is very dangerous to travel. The trail can be shortened. The approximate distance as now traveled estimated to be one hundred five miles, also estimated the route can be shortened approximately twenty miles thus making the entire distance from Moose Pass to Kenai approximately eighty five miles and under favorable conditions the trip could be made in three days travel.

There are several cabins along the trail that can be used for shelter, also along the central part of part of the trail the mail carrier erected two shelter tents 12' x 12' and provided them with stoves. This is done each winter and provides very good shelter for the general travel, however there should be erected several log shelter cabins, about fourteen by twelve feet with one door and one window and a pole roof covered with twelve inch layer of moss and then covered with corrugated iron.

Beginning at Moose Pass or mile one of the Moose Pass-Sunrise trail which begins at Mile twenty nine U. S. Railroad, Enroute for Kenai the travel is upon a lightly constructed wagon road to Mile eight and one half where the travel turns out to the left across a small lake, called Mud Lake, then the travel continues down a small creek in a canyon, which is called Bear Creek, then from Bear Creek the travel continues down a much larger creek valley called Quartz Creek. After traveling down Quartz Creek Valley the trail then crosses the lower end of Kenai Lake. The trail which is traveled from where it turns out of the Moose Pass-Sunrise Road at Mile eight and one half to the lower end of Kenai Lake is seven and one half miles and has never been cut out for a dog team, only as the travelers themselves have been

forced from time to time to cut away a wind fall tree or occasionally a drooping willow or alder that would catch the sled or load thereon.

This section of the trail should be cut out for dog teams and double enders, the brush and trees are quite thick and some places heavy timber is to be encountered. Estimate the cost cutting this section of seven and one half miles of trail at \$450.00. Six small bridges at fifty dollars each, three hundred dollars. total cost \$750.00.

Shelter cabins on this section. There is a homesteader at the junction of the Moose Pass-Sunrise wagon road where travelers are welcome to stop, also about four miles up Quartz Creek from Kenai Lake there is a log cabin approximately 12' x 16' equipped with stove and etc. The cabin is in first class condition.

The usual travel goes from mile 23 U. S. Railroad, or Roosevelt over the ice down Kenai Lake to the Lower end, under varying conditions. There are some years the Kenai Lake does not freeze safe to travel on, also the lake is very late to freeze up. For the above mentioned conditions the trail should go by the way of Moose Pass, therefore assuring early and late travel with safety each year.

Here at the lower end of the Kenai Lake the wagon road survey crosses the lake and continues down the south side of the river, for several conditions the survey for the wagon road should have continued down the north side of the Kenai River, and not crossed at the lower end of Kenai Lake.

From the lower end of Kenai Lake on the north bank near Quartz Creek mouth, the winter trail crosses Kenai Lake and continues down the south bank a distance of about three miles to the lower landing stations, where Louis Bell and Mr. Fuller each have a large comfortable well constructed cabin, also some outhouses for dog shelter; and who are always willing to accommodate travelers. Then about one and one half miles below Mr. Bell's place there are the other cabins where travelers can also stop. From this lower landing the Bureau of Public Roads have constructed a light wagon road for a distance of approximately 5 1/2 miles along the south bank of the Upper Kenai River. Then crossing the river near Schooner Bend, this crossing consists of three seventy foot trusses constructed of native timber also one hundred feet of trestle approach, pile driven bents, width of bridge twelve feet. This structure was erected in the fall and winter 1920. Then the lightly constructed wagon road continues down the north side of the upper Kenai River for a distance of approximately two miles. From the end of the graded wagon road a narrow right of way has been cut along the foot hills and a very narrow trail graded along the steep banks and

holding to the bench flats wherever possible, for a distance of four miles.

At this point the trail turns north and leaves the river and follows up a small creek then through a low pass on to a deep lake about one mile long and three eighths mile wide. From there the trail leaves the Kenai River and continuing up the small creek to the lake a distance of four miles. The right of way has been cleared and not graded. This section should be graded as it is very difficult to travel along a hillside early in the fall of the year and no snow for the sled to run on also to keep the same from turning over. There are several very narrow places of the grade section along the Kenai River bank on the north side.

Estimated cost of repairs and reconstruction of this trail section from the landing on lower Kenai Lake to the shelter tent in the lower pass which is a distance of approximately fifteen miles. Four miles of widening the grade for sleds at some of the narrow points. Estimates \$300.00 per mile making total cost of widening the trail \$1,200.00. Estimated grading hillside for sled road at \$500.00 per mile will make a total \$2,000.00 for grading this section.

Then from the tent in the low pass on to Kenai a distance by way of the present trail approximately seventy miles continues through a low swamp, and lake country. This section of the trail should be relocated through the timber section, and well cut out and tripoded where same is laid out across sloughs or lakes. Some ten or twelve miles of this trail follows down Moose River which is a winding sluggish stream and does not freeze up very solid also over flows and causes much trouble. The entire trail can be well located in the timber. Estimated cost of cutting this section of the trail for dog sleds at sixty dollars per mile and seventy miles to be cut out would equal \$4,200.00 total cost including all necessary small bridges.

There should be three new shelter cabins constructed between Moose River and Upper Kenai River, estimate cost of the cabins \$250.00 each, making a total cost \$750.00.

Estimated cost of repairs and construction of winter sled trail from Moose Pass Station at Mile 29 U. S. Railroad through to Kenai which would be for the use of dog teams, also horses and double enders could be used on this trail from time to time as such should be required, the amount would be \$8,900.00 to be expended as reported herein.

The work from Moose Pass Station to where the trail leaves the upper Kenai River is included in the Bureau of Public Roads district. Should any work be considered the section between

Moose Pass road and Kenai Lake is most needed and should be cut out first, then the next section of this trail should be the first seventy miles out of Kenai Station also, three shelter cabins. Then last of all the central part of the trail and road along the upper Kenai River.

Should at any time a wagon road be considered the same should be constructed along the north side of the upper Kenai River down to Skilak Lake then along the north side of Skilak Lake to the Lower Kenai River to the mouth of Moose River, and a one hundred fifty foot suspension type bridge should be used. Then the road should leave the Lower Kenai River and take a direct course for Kenai Station.

The country through this section is ideal for wagon road construction. Most of the country is dry gravel benches with some small outcroppings solid rock of which is mostly composed of slate. Estimate the cost of constructing a wagon road through this section to cost from seven to ten thousand dollars per mile. Plenty timber available for all small bridges, as there would not be many required.

Under present conditions there has been but very little work done on the last seventy miles of trail out of Kenai, should this trail be cut out for travel, eliminating many short unnecessary crooks and turns which have been created by driving through the timber dodging trees to eliminate cutting as much as possible.

Should a good trail be cut out, two round trips per month could be made as easily and cheap as under present conditions, and only making one round trip per month. The mail contractor has contracted all mail offered, one trip per month. Heretofore the amount of mail has never exceeded four hundred pounds, sometimes only one hundred fifty pounds received. The last trip or March trip the mail carrier received seven hundred eighty pounds mail mostly parcel post. The trail being so crooked and narrow, the longest he can use is a ten foot long sled and is very difficult to handle, also four hundred pounds is about the limit for the sled in weight. Therefore the mail carrier was compelled to relay his mail and it will take him about twenty days to make the round trip and will also be about ten days late with the mail arriving at Kenai. The mail offered each year is increasing rapidly.

The school at Kenai has eighty seven pupils enrolled. Three teachers employed. One church and two stores, also a U. S. Commissioner's precinct. Two fish cannerys, one owned by the Northwest Fisheries and the other by the Libby-McNeil Company. Both Cannerys to be operated season 1923, Current report.

Much fur is produced from trapping wild fur bearing animals also from fur farms which are becoming very numerous. Reported six new fox farms to start this season. The winter population of Kenai is estimated at five hundred most of whom are Russians and native indians. There being no doctor in Kenai all persons seeking medical aid have to be hauled out on dog sleds or take the chances and wait over until navigation opens so they can be removed by boat to Anchorage or elsewhere.

A trail should be cut from Kenai to the Coal Bay of Homer Post Office, Kachemack Bay, which is a distance of approximately seventy miles. This would permit winter travel about the coast also give access to the many fox farmers and few ranchers living along the coast. This entire section of the country is much in need of trails.

Should this trail and road to the Lower Kenai or Skilak be constructed and repaired it would not only afford much better travel for the Kenai vicinity, also would help to open up one of the best game and scenic sections of Alaska.

This is one of the best and largest moose pastures in Alaska, also the brown and black bear are numerous. This section affords one of the best hunting grounds in Alaska, both for local people and the trophy hunters who come to Alaska and hunt with guides. There are many sections of land in the Kenai Valley where settlers can take up homesteads. Roads and trails would greatly improve this condition.

2. The following is a summary of the estimated cost of improvements and repairs, advised to be made on this project, season 1923.

7-1/2 Miles	Cutting Trail	@ 60.00	450.00
4 "	Widening Grade	300.00	1,200.00
4 "	Hillside Grade	500.00	2,000.00
70 "	Cutting Sled Trail	60.00	4,200.00
6 Bridges	Small Log	50.00	300.00
3 Cabins	New Shelter	250.00	750.00
Total Amount Estimated			\$8,900.00

3. Expenses on the Russian River-Kenai Reconnaissance were as follows:

15 days hire one man with sled and equipment	150.00
at 10.00 per day	
Provisions and supplies	16.85
Dog Fish, 60 pounds @ .20	12.00
One pair snow shoes	11.55
Total Expenses	<u>\$190.40</u>

Other such work reports are included as additional illustrations of the work required from Board personnel. These samples have been selected from hundreds of similar reports dealing with various parts of Alaska. They tell more about travel conditions than a mere summarization could convey, and they also establish that an orderly process in settling construction priorities was well established by the 1920s.

Annual Appropriations

Throughout the history of the Board of Road Commissioners for Alaska the time lines of the annual appropriation remained a matter of concern. Prior to 1919 appropriations were not available until the first of July, the beginning of the fiscal year. To make effective use of Alaska's short construction season it made sense to purchase supplies and freight them to work locations in the winter, but this could not be done unless money remained from the previous year's appropriation. Congress helped the situation in 1919 by authorizing the immediate use of money as soon as the appropriation was approved. But delays in starting construction still occurred when Congress did not pass the appropriations until late in the fiscal year and, particularly, when the bill was held up until the early part of the next fiscal year. Congress found a remedy in 1922 when it authorized the Board to incur obligations prior to July up to a limit of fifty percent of the budgeted appropriations. Congress made the same provision in 1923, but in 1924 it dropped this authorization for indebtedness from the bill. The Board members were dismayed. It seemed as if Congress just could not understand Alaskan conditions.²⁶

Congress did achieve a more lasting reform in 1922 by specifying that the Secretary of War was responsible for "military and post" roads in Alaska and for "other roads, bridges, and trails" as well.²⁷ Coupled with this change was Congressional approval of the War Department's transfer of road appropriations to Title II, Nonmilitary Activities. This change was of considerable benefit to Alaska. Roads funds would no longer be charged against the support of the Army and subjected to the spirited efforts of the military brass to divert funds for other purposes.

Alaska Railroad and Alaska Road Commission Separated

As already stated, the railroad and road activities were separated in 1924. Board President Steese had applauded the consolidation of roads and railroads under his direction when it was made the previous year. Now he faced the prospect of dual competing transportation administrations once again. His disgust triggered an unprecedented sharp complaint in his 1924 report. No reason was assigned for this "sudden and unexpected change of policy," he remarked. And the separation of authority "partly broke the only effort successfully made in coordinating and consolidating some of the activities of the 38 or more federal bureaus attempting to run Alaska from Washington, D.C."²⁸

Steese's reference to "38 or more federal bureaus" was the first direct public statement any Board president had ever made to the administrative chaos that had always threatened road and trail work in Alaska. Briefly he had abandoned the venerable pretense that the several federal agencies cooperated gracefully to resolve construction priorities.

President Warren G. Harding Visits Alaska

Perhaps some of Steese's problems could be traced to expectations raised by President Warren Harding's 1923 visit to Alaska. Harding's chief purpose in Alaska was the dedication of the Alaska Railroad, but he did join Steese and other officials on inspection tours of the Richardson Road, motoring for 20 mile stretches out of Fairbanks and Valdez, respectively. Then, after reaching Seattle, President Harding made a speech which included remarks of heartwarming cheer to Alaska's road proponents:

In another direction there is justification for a most liberal disposition -- that of road and trail building... Roads constitute a prime need in every new country, and our long national experience in pushing our highways ahead of the controlling wave of settlement ought to convince us that the broadest liberality towards roads in Alaska will be certain to bring manifold returns . . . The present road system is but a beginning, and I am willing to be charged with a purpose of something like prodigality in my wish to serve Alaska generously, and more, in this matter of road building.²⁹

Alas! President Harding had no time to demonstrate his "prodigality." He died a few days later.

Washington Does Not Understand Alaska

Certainly Steese's disappointment over any changes which he considered setbacks to his efforts can be understood. At times the Board members felt overwhelmed by their responsibilities and the magnitude of their task. On occasion Steese tried to express his duties in terms that might capture the imagination of distant Washington bureaucrats. Consider, he wrote in 1922, "the magnitude of a task that takes two years of continual traveling with the best facilities for a single individual to make a complete inspection of the entire mileage of road and trails in Alaska."³⁰

Steese also wanted it understood that the Board members were not desk-bound paper shufflers: "The President and the Engineer spend eighty percent of their time in the field"⁵⁶ It is a little hard to see how the two chief officers managed such extensive field work with interdepartmental meetings and the flow of paperwork, but there is no reason to dispute Steese's statement.

Another technological advance created more work for the Board in the 1920s. Increasing numbers of airplanes were based in Alaska. Someone had to build airfields, and the powers in Washington determined that the Board had to undertake such construction. Help in this task soon came, however, when the territorial legislature appropriated money for airfields in its 1925 session, and also statutorily entrusted the Territorial Board of Road Commissioners with the job of designing and constructing such facilities.³¹

Others could confirm Steese's view of the administrative confusion in Alaska's road management. General A. W. Greely, the famed polar explorer, praised the Board's work but deplored that "unfortunately, under the uncoordinated activities, there are four other bodies engaged in road building . . . a manifest waste of administrative energy."³²

General A. W. Greely

Greely, who had been assigned to work in Alaska for the military telegraph early in his career, was pleased that travelers could finally reach Eagle without passing through Canada, and amused that Juneau's 300 automobiles shared 30 miles of road. To his readers he emphasized the significance of Fairbanks as "the center of the Alaska road system." Roads out of Fairbanks reached the adjacent mining districts and fanned east to the Salcha Valley; northeast to Circle, Eagle, and Dawson; northwest to Hot Springs -- "this last most important, the great winter mail route to Fort Gibbon (Tanana); to the entire Yukon Valley; to the Koyukuk; and to the Seward Peninsula and the Arctic."³³

Carrying the road north from Fairbanks to the Yukon had not been easy because of the high maintenance demands for the Richardson Highway, and construction priorities in other regions. But by 1924, the links to the north could be used by wagons during the summer for 100 of its 160 miles distance, and in winter travelers could drive their double ender bobsleds over the full route. Getting the road to such a state was the realization of a long-deferred dream. There were many folks living in Fairbanks who recalled the hard trails and trailless tundra they had been forced to tramp.

The Governor of Alaska

Like the Board of Road Commissioners, the governor of Alaska reported each year on all territorial activities including transportation data gleaned from the Board's reports. The chief executive was ever an avid proponent of better roads and trails. Annually the governor repeated the same language in opening his discussion of transportation: "The great outstanding problem of Alaska is that of transportation."³⁴ All forms of transportation should be improved, but "the crying need of the Territory is for roads; Alaska will never reach a high state of development until a system of good roads covers the entire country."³⁵

The governors always praised the work of the Board of Road Commissioners and emphasized the difficult terrain of Alaska. They stated, for example, that "almost all routes of travel cross long stretches of boggy country over which it is impossible to drag a wagon. . . Appropriations of \$750,000 or \$1,000,000 per annum would only be a fair amount with which to continue this excellent construction work..."³⁶

After the intensive work done on the Richardson Highway in anticipation of President Harding's visit, the long route to the interior was in good shape, and graveled for much of its length. The state of the Richardson Highway meant much to Alaskans as an amenity of civilization and commerce -- and for its promise of development. But it would be fair to point out that the territory's major road was not thronged with traffic. In 1923 the governor tried to keep an accurate check on the road's traffic. His count may have missed some furtive voyages, but he stated his tallies with some satisfaction:

- 1,517 persons
- 87 motor vehicles
- 30 wagons
- 24 double hobsleds
- 26 pack horses
- 384-1/2 tons of freight³⁷

Slim figures? Well, that depends on one's particular point of view. The governor remembered that only a few years earlier Alaskans had to depend entirely on rivers or rough winter dog trails. Now eighty-seven automobiles and trucks had passed along in comfort and speed. That was progress! And, after all, the number of vehicles might well have been in thousands -- and certainly would be soon.

Appropriations Increase

Despite the disappointments of Steese and Alaskan residents who longed for a better road system, congressional appropriations were increasing significantly in the mid-1920s. Compared to the low appropriations of \$425,000 in 1921 and \$465,000 in 1922, the appropriations for

the 1923, 1924, and 1925 working seasons were \$650,000, \$780,000, and \$900,000, respectively.⁶⁴

The \$900,000 for 1925 (actually fiscal year 1926, but funds could be utilized for working season 1925) was close to the \$1,000,000 annual budget stipulated in the 10 year plan of 1920.

By 1921, the Board of Road Commissioners had also become known as the Alaska Road Commission, and it was the latter term which was used at the end of the era under consideration. The future looked fairly bright. The wartime neglect and tardiness of postwar recovery seemed to have reached a point of reversal. The Territorial Board of Road Commissioners vigorously participated in many projects and contributed sorely needed dollars. America in the 1920s represented a remarkable picture of prosperity. Belately, it appeared that Alaska, still sulking in the economic woes of the war and mining declines, might benefit substantially from the national prosperity. Perhaps soon a motorist could speed the entire distance from Valdez to Circle on improved, surfaced roads!

Footnotes

1. Annual Report of the Alaska Road Commission, Fiscal Year 1920, pp. 61-65.
2. F. M. Leach to Governor Thomas Riggs, June 12, 1919, Alaska Road Commission, R. G. 30, F.R.C., Seattle Washington.
3. Governor Thomsas Riggs to Chairman, Alaska Road Commission, January 5, 1920; Captain John Zug to John H. Joslin, January 8, 1920; R. G. 30, F.R.C., Seattle, Washington.
4. John H. Joslin to Captain John Zug, January 30, 1920, R. G. 30, F.R.C., Seattle, Washington.
5. Petition to Alaska Road Commission from Circle, undated, probably February, 1922, R. G. 30, F.R.C., Seattle, Washington.
6. Hawley W. Sterling to the Board, April 14, 1922, R. G. 30, F.R.C., Seattle, Washington.
7. James G. Steese to Circle residents, May 12, 1922, R. G. 30, F.R.C., Seattle, Washington.
8. Annual Report of the Alaska Road Commission, Fiscal Year 1922, pp. 2237-38.
9. Ibid., part II, pp. 6-7
10. Annual Report of the Alaska Road Commission, Fiscal Year 1923, p. 2087.
11. Hunt, North of the 53°, pp. 251-257; see also William H. Wilson, "Alaska's Past, Alaska's Future," Alaska Review, Spring and Summer, 1970, pp. 1-12.
12. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2100-2101.
13. Ibid.
14. William H. Wilson, Railroad in the Clouds: The Alaska Railroad in the Age of Steam, 1914-1945 (Boulder, Colorado: Pruett Publishing Company, 1977), pp. 84-85.
15. Ibid., p. 156-159.
16. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2102-2104.

17. Annual Report of the Alaska Road Commission, Fiscal Year 1925, and other reports of the 1920s.
18. Narrative monthly reports ,June, July, August 1918, box 65418, Alaska Road Commission, R. G. 30, Federal Records Center, Seattle, Washington.
19. C. G. Morrison to Waugh, May 23, 25, June 26, 27, 1919, box 65481, Alaska Road Commission, R. G. 30, Federal Records Center, Seattle, Washington. All quotes are from this document.
20. C. G. Morrison to President of the Board, October 2, 1919, Alaska Road Commission, box 65480, R. G. 30, Federal Records center, Seattle, Washington.
21. District Engineer to President of the Board, October 2, 1919, R.G. 30, Alaska Road Commission, box 65480, Federal Records Center, Seattle, Washington.
22. F. M. Leach to governor, January 2, 1920, Alaska Road Commission, box 65480, Federal Records Center, Seattle, Washington.
23. Alaska Road Commission, Annual Report of the Alaska Road Commission (Juneau, Alaska, Fiscal Year 1933), p. 2; Steese to Macnate, November 12, 1921, Alaska Road Commission, box 65479, R. G. 30, Federal Records Center, Seattle, Washington.
24. Price to Alaska Road Commission, November 5, 1921, Alaska Road Commission, box 65480, R. G. 30, Federal Records Center, Seattle, Washington.
25. Walter W. Lukens to Engineer Officer of the Board, March 9, 1923, R. G. 30, F.R.C., Seattle, Washington.
26. Annual Report of the Alaska Road Commission, Fiscal Year 1925, pp. 2070-2071.
27. Ibid., p. 2071.
28. Annual Report of the Alaska Road Commission, Fiscal Year 1924, p.iii.
29. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2070.
30. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 10.
31. Annual Report of the Alaska Road Commission, Fiscal Year 1926, p. 1956; Session Laws of Alaska, 1925.
32. A. W. Greely, Handbook of Alaska (New York: Charles Scribner's Sons, 1925), p. 41.

33. Ibid., p. 42.
34. Annual Report of the Governor of Alaska, (Washington, D. C.: Government Printing Office, 1920), p. 10. Hereafter cited as Annual Report of the Governor of Alaska and year.
35. Annual Report of the Governor of Alaska, 1919, p. 47.
36. Ibid.
37. Annual Report of the Governor of Alaska, 1924, p. 18.
38. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2069; Annual Report of the Alaska Road Commission Fiscal Year 1926, p. 1954.

CHAPTER SEVEN

THE MIDDLE YEARS OF THE 1920s

Almost from the beginning, the Board of Road Commissioners for Alaska had been referred to as the Alaska Road Commission. In fact, banks, mercantile establishments and dealers with whom the Board conducted business soon did not recognize the official title of the organization. But until about 1925, all forms used by the Board continued to have the heading "Board of Road Commissioners for Alaska." In that year, through informal instruction of the president of the organization, the forms were changed and henceforth read "Alaska Road Commission".¹

Board of Road Commissioners Becomes Alaska Road Commission

When Major James G. Steese, submitted his annual report to the War Department on October 5, 1926, the president of the organization used the name "Alaska Road Commission". As on previous occasions, he summarized the statutory origins and the history of his organization. He pointed out that until the retirement of Colonel Richardson on December 29, 1917 the board had reported directly to the War Department through the Adjutant General. This arrangement probably reflected the good rapport Richardson had enjoyed both with the Adjutant General and the Secretary of War. When Richardson left, the Secretary of War gave orders that the Alaska Road Commission be placed under the general supervision of the Chief of Engineers.²

Steese reported that the Alaska Road Commission maintained its headquarters in Juneau, and ran suboffices, when required by active operations, at Valdez, Chitina, Fairbanks, Eagle, Nenana, Anchorage, Seward, Takotna, and Nome; and also in Seattle, Washington and in the nation's capital. Steese obviously took pride in the accomplishments achieved over a twenty-two year period. It had constructed 1,433.5 miles of wagon road, 100 miles of tram road, 1,086 miles of sled road, 6,671.5 miles of permanent trail, and 712 miles of temporary flagged

trail for a total of 10,003 miles.³

Major Steese Dissatisfied

Despite these gains, Steese was dissatisfied. He pointed out that the Alaska Road Commission had proposed a comprehensive ten-year construction program and asked for specific annual appropriations to carry it out. Unfortunately, however, the total appropriations for the first five years had been less than half the estimates, and about three-fourths of the available funds had been required for repairs and maintenance. Instead of receiving the \$6,655,000 asked for for the first five years, Congress only had appropriated \$3,220,000. Steese recommended that construction work be speeded up in order to realize the maximum benefit from the work already accomplished. Accordingly, the Commission had revised the ten-year program in 1924 and recommended the following appropriations for the second five years of the program period:⁴

(a) For maintenance of existing routes, at \$542,00 per year	\$2,710,000
(b) For improvement of existing routes to the same standard throughout	\$2,600,000
(c) For completion of projects already undertaken	\$1,735,000
(d) For completion of projects already approved but not yet undertaken	\$1,780,000
(e) For completion of projects likely to arise with development during the five years . .	<u>\$1,135,000</u>
Total for five years	\$9,960,000
Less Alaska fund and Territorial contributions (estimated)	\$ 960,000
Net federal appropriations	\$9,000,000

Shortage of Funds

Yet, despite earnest pleading, Congress had seen fit to appropriate only \$900,000 of the \$1,750,000 needed for the fiscal year 1927 or the working season of 1926 to realize the goals of the second five-year period. But despite the shortage of funds, the Commission had continued the work begun in 1920 of rehabilitating the roads and trails in remote sections of Alaska. In addition, new construction of 67.5 miles of wagon roads, 14 miles of sled roads, 212 miles of trails, 380 linear feet of bridges of 60-foot span and over, and 8 airplane landing fields had been accomplished. Some 62 miles of wagon road had been reconstructed, 96 miles of wagon roads graveled, 5 miles of the Nome-Shelton tramway raised to standard of 10-ton loads, and many small bridges and culverts had been rebuilt. The employees of the Commission also maintained 1,035 miles of wagon roads, 95 miles tramway, 935 miles of sled roads, 3,631.5 miles of permanent trails, 368.5 miles of temporary flagged trail, and 400 miles of telephone lines. It was an impressive achievement.⁵

New Construction

Steese related that the Commission had undertaken new construction on the following roads:

The Haines - Pleasant Camp, McCarthy - Nizina, Chatanika - Circle, Mount McKinley National Park, Gulkana - Chistochina, Long - Poorman, and Ophir - Takotna. In addition, the extensive bridge program begun in 1925 continued, and Alaska Road Commission crews newly constructed or extensively repaired bridges across the Savage and Sanctuary Rivers in McKinley Park, Big Goldstream, Hot Springs Slough, Valdez Glacier Stream, Bear Creek, Klutina River, Miller's Glacier Stream at mile 223, Banner Creek, Gasoline Creek, and Tanana Slough at mile 348.⁶

Steese wrote that automobile use in the territory had increased rapidly in the last few years, and estimated that motor cars and trucks handled about ninety percent of the traffic on the main wagon roads.

This heavy use had greatly increased the cost of road maintenance. The Richardson Highway bore the brunt of this increased traffic. Traffic reports for the 1925 calendar year showed the following movement over the highway:

4,208 persons, 1,853 motor-driven vehicles, 139 wagons, 479 double bobsleds, 6 pack horses, and 1,704 tons of freight.⁷

Steese estimated that within two more working seasons it would be possible to have the Richardson Highway completed to a uniform standard and graveled along its entire 410 mile length. Finally, about 110 miles of the planned 165 mile extension from Fairbanks to Circle on the Upper Yukon had become passable for wagons in the summertime, while double bobsleds used the entire length during the winters. He warned, however, that unless Congress appropriated more money, little could be done to meet the pressing needs for the improvements and extensions of the systems and especially in constructing the badly needed highway and trail feeders to the Alaska Railroad.⁸ This was very important because it would help developing local industries and provide freight for the railroad.

New Equipment Purchases

Steese was proud of the mechanical equipment the Alaska Road Commission had acquired. High labor costs and maintenance of horses had forced the Commission to mechanize its operations. A list of equipment acquired over the years follows:

10 Auto Trucks, Dodge.	1 Loader, Bucket, power driven.
71 Auto Trucks, Ford	1 Locomotive, Fordson.
39 Auto Trucks, G.M.C.	2 Machines, mowing
4 Auto Trucks, Packard.	1 Mixer, concrete.
1 Auto Truck, Pierce Arrow.	4 Piledrivers.
5 Auto Trucks, White.	54 Plows,
1 Boiler, Piledriver.	1 Plow, Snow, lateral rotary type.
2 Cars, Gasoline section.	3 Radio outfits.
4 Cars, Roller bearing push.	8 Rollers, road.
2 Compressors, Air.	3 Saws, power driven.
2 Crushers, Stone.	1 Scarifier.
1 Drum, hoisting.	78 Scrapers, slip.
25 Drags, Road.	10 Scrapers, wheel.
1 Drag, planer.	2 Scrapers, Fresno.
2 Drag lines, gasoline.	1 Shovel, 3/4 gd. steam.
2 Derricks, motor.	

- | | |
|---|---------------------------------------|
| 2 Ditchers, road. | 3 Shovels, 1/2 gd.
gasoline. |
| 1 Engine, Donkey | 70 Sleds, bob. |
| 9 Engines, Hoisting. | 8 Trackers, Best 30. |
| 14 Graders, road, tractor drawn. | 16 Tractors, Holt. |
| 22 Graders, road, horsedrawn. | 1 Tractor, Case. |
| 4 Graders, power with Fordson
Tractor. | 1 Tractor, Fordson, crawler
space. |
| 4 Levels, surveying. | 83 Wagons. |
| 2 Tractors, Titan. | 1 Welder outfit. |
| 1 Tractor, Yuba. | 5 Winches, hand. |
| 36 Trailers, Highway. | |
| 8 Transits, surveying. | |

During the fiscal year, the Commission purchased the following equipment:

- | | |
|--|---|
| 11 Trucks, Ford, 1 yd. dump. | 4 Graders, Tractor drawn (Adams). |
| 5 Trucks, Ford, light cargo. | 2 Graders, Horse drawn (Adams). |
| 3 Tractors, Best 30. | 1 Shovel, Gasoline, Byers 1/2 yd. |
| 1 Tractor, Fordson, with
crawler tread. | 1 Loader, Bucket, Power driven. |
| 3 Graders, Gilbert with Fordson
tractor attached. | 1 Compressor, Air, Portable. |
| | 1 Snow Plow, lateral rotary type. |
| | 4 Dump bodies, 1 yd., for Ford
trucks. |

Additionally, the Army turned over the following pieces of surplus stock to the Alaska Road Commission:

- 25 Trucks, G.M.C. 3/4 ton.
- 17.25 Tons Pyrotol.
- Miscellaneous small surveying instruments and drafting supplies.⁹

Road Construction Expensive

Despite the impressive inventory of mechanical equipment, worth about \$500,000, road construction was very expensive because of the high territorial wage scales, averaging from \$3.50 to \$6.00 per day for common labor, including board, and the high cost of supplies. Steese also pointed out that Alaska's size, difficult geography and climate, in addition to high costs, made comparisons with road work in the contiguous states difficult. Alaska road construction, Steese observed, included the cruising, clearing, grubbing and actual construction all in one operation. In the contiguous, settled parts of the United States these processes had started in pioneer days. Indeed, Steese remarked, the magnitude of the task and extent of territory

covered by the far-flung activities of the Commission were illustrated by the fact that it would take two years of continuous traveling with the best facilities available for a single individual to make a complete inspection of the entire mileage for which the Commission was responsible. Lest his readers thought that Commission members were office-bound bureaucrats, Steese hastened to add that "actually the President and the Engineer Officer spend about 80% of their time in the field. They have visited every district and have inspected most of the sub-projects a number of times." While these two spent about 80% of their time in the field, the Secretary and Disbursing Officer had overhauled the property, accounts and office methods and visited the district offices to make them conform to the new procedures.¹⁰

Territorial Cooperation

Cooperation with the Territory remained excellent. Initially based on the Territorial Cooperative Road Act of April 21, 1919 and an Act of Congress approved June 30, 1921, the Commission had entered into additional cooperative agreements for work supported partially by federal and territorial funds. For the fiscal year 1926, cooperative projects had been allotted \$86,772.91 in Alaska Road Commission monies, \$101,765.00 in territorial funds and \$2,819.01 in miscellaneous contributions. These monies had been spent on shelter cabins in the second, third and fourth judicial divisions, aviation fields in the second and fourth judicial divisions, telephone lines, the Nome harbor, Seward Peninsula Tramway and the Tolovana Tramroad and the Nizina Bridge. Other cooperative projects were planned for 1927. Steese thought that the amount of roadwork accomplished for the money expended had "been far in excess of anything heretofore possible." Indeed if the Territory had attempted to expend its \$30,000 per division under an independent organization, nearly one-third of the available funds would have gone into overhead, salary and expenses of a divisional chairman and clerk, rent, light and other items. Under the cooperative agreement, the Alaska Road Commission furnished all of this free without any additional costs to

itself. Additionally, the Commission made available its extensive plant and mechanical equipment to territorial road work without extra charge except for fuel and ordinary repairs. And since Commission activities covered all of Alaska, it was possible to use Territorial money in outlying projects where the maintenance of an independent organization would have been impossible or prohibitive in cost. Most importantly, perhaps, all monies were lumped together and expended on a comprehensive transportation system with a continuity in plans and consistency in operations over an extended period of years.¹¹

If the Territory benefited under the terms of the Cooperative Road Act, so did the Alaska Road Commission. The availability of larger funds enabled the consolidation of supply purchases and with it lower prices. And having monies become available throughout the year, minimized the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of the open working season. This made the entire organization and conduct of operations more flexible.¹²

Historical Summary of Organization

President James G. Steese also found it appropriate to summarize the history of the Commission after the completion of almost twenty-two years of service to Alaska. He divided the twenty-two years into three periods. The first covered the administration of General Richardson from 1905 to 1917. This was the pioneering period which covered nearly all of the stampedes to Alaska. Settlements and lines of communication were very primitive. With small but increasing appropriations, Richardson intelligently developed the rudiments of an Alaskan transportation system. In 1913 he drew up a comprehensive operations program which called for the expenditure of \$7,500,000 during the succeeding ten years. Indeed, during Richardson's last two years in Alaska Congress appropriated a high of \$500,000 each year for the work. The Richardson Highway was the Commission's largest project throughout the period. Running from Valdez to Chitina and thence to Fairbanks, it had become passable throughout its length for dogteams by 1907, by 1910 for

light horse-drawn wagons, and in 1913 the first light automobile made the entire trip from the interior to the coast. The pioneer period, in short, laid the foundation for all future work and terminated when Richardson was called to service in the European War in December 1917.¹³

The Period From 1917-1920

The second period spanned the years from 1917 to 1920, characterized by a general stand-still of Commission work and the cessation of economic development within the territory. Congress appropriated very little money, and during the last two years reduced funds to a mere \$100,000 per year. Expert personnel were not available for supervision, having been lured to the contiguous states by job opportunities created by the war. Labor in general was scarce and living expenses high. Work proceeded on only a few projects, and much of the mileage constructed in the previous period went into disrepair or was reclaimed by the wilderness. The period closed in 1920 when the present Commission organized itself.¹⁴

The Period From 1920 To 1926

The third period, from 1920 to the close of the 1926 fiscal year, was characterized by increased appropriations, broader legislation, close cooperation with the Territory, the purchase of much mechanical equipment largely replacing horses, and heavier construction standards to withstand motor traffic. The Commission also reopened old trails and roads, and generally adjusted the transportation routes made necessary by the construction of the Alaska Railroad from Seward which had reached Fairbanks in 1925. Federal appropriations increased from \$350,000 to \$900,000 per annum, and together with other resources, brought the funds available for the 1925 work season to \$1,350,000.¹⁵

Commission Employee John Hajdukovich

While the Commission planned the overall program for each season, the personnel in the field performed the work. John Hajdukovich, an interior sourdough and trader, with his crew performed trailwork between McCarty and Tanana Crossing for the Commission on a contract basis. At the end of February 1924 he reported on his accomplishments in detail.¹⁶ From McCarty to Clearwater, a distance of about twelve miles, he had widened the trail, eliminating windfalls and cut three miles of new trail through heavy timber burned in a forest fire the previous year. His crew bridged the Middle Clearwater with a 110 foot long bridge, wide enough for horse-drawn double-enders. Hajdukovich wrote that his crew had built several smaller bridges, graded high banks and widened the trail where necessary, and removed the windfalls. In short, the trail between McCarty and Tanana Crossing once again was in fairly good shape.

Commercial Transportation On The Richardson Highway

J. L. Galen, the president of the Richardson Highway Transportation Company, early in the spring of 1924 lobbied Colonel Steese for "every dollar you can spare to the Richardson Highway," made necessary, indeed fully justified by the greatly increased travel he anticipated in the coming season. His company had every intention of substantially improving the transportation service over the Richardson Highway. Ten new Studebaker cars were to be put into service to handle all tourists in comfort, and if traffic volume justified, Galen was ready to purchase as many other automobiles as the market demanded. He proudly related that his company already owned nine Studebakers, three Dodge touring cars, two Cadillac passenger cars used for hauling baggage, and one freight truck. All equipment was first class and attractive, he assured Steese. Galen also considered erecting a tent camp at either Paxson's or Summit Lake because the stretch between Black Rapids and Meiers' Roadhouse would be too long should it become necessary to

divide a large tourist party and "yet take them through on a close schedule." In fact, the Richardson Highway had become an important traffic feeder both for the Alaska Railroad and the Copper River and Northwestern Railway. With these two rail systems it formed a circular route which had become widely known in the contiguous states as the "Golden Belt Line Tour," and hundreds of tourists made this very scenic trip each season without any delays or inconveniences. In the process Galen's company and others catering to the visitors had experienced a modest prosperity. Steese responded favorably to these entreaties, and the Alaska Road Commission spent about \$280,000 on the Richardson Highway during the 1924 season.¹⁷

Nenana - Tanana Winter Trail

Territorial residents perceived many transportation needs, and as Colonel Steese pointed out, "each town . . . wants all roads and trails brought to its front door regardless of other communities or of the general transportation situation." Many requests for local roads and trails the Commission had to turn down for lack of funds. In the spring of 1924, for example, the Chief Clerk of the Post Office Department at Nenana recommended that the Commission make extensive improvements to the Nenana - Tanana winter mail route, in effect making it a summer route as well. Steese refused to consider the proposal because, as he pointed out, whenever practicable, boats carried the mails in the summer and horse-drawn bobsleds or dogsleds in the winter. The Commission, as a matter of policy, did not spend any money constructing summer roads to parallel river routes. The Nenana - Tanana, or Dunbar - Fort Gibbon winter bobsled road, formerly known as the Fairbanks - Esther - Fort Gibbon winter bobsled road, was the main winter route into all of western and northwestern Alaska. The Commission had improved the trail to winter bobsled road standards many years ago and consistently maintained it. In view of the excellent boat service on the Tanana River, therefore, the Commission did not consider it justified to improve the winter bobsled road to permit the summer use of

wagons.¹⁸

The Yukon-Kuskokwim-Russian Mission Portage

In another section of Alaska, travelers made several requests that the Commission improve the Yukon-Kuskokwim-Russian Mission Portage, and in the fall of 1923 Walter W. Lukens, an assistant superintendent for the Commission, made an investigation of the site. In October 1923 he reported from Holy Cross recommending that \$1,000 be expended on the Russian Mission portage that same fall to clear out brush from the creeks. If this work was performed, Lukens thought that the mail delivery to the Kuskokwim on this route could be increased to two runs per month, and the weight limit raised to one thousand pounds, four hundred of these to Bethel and six hundred to McGrath. Lukens advised that the Commission also should spend some \$3,000 in the early spring and summer of 1924 to clear the small streams, sloughs, and lakes of "grassod" which had closed most of the shallow waterways completely, making it very difficult for travelers to navigate. He suggested that the Commission construct small dams at six of the creeks. These would impound the water, making it possible to build a skidway or slide on which boats and canoes could be drawn up and let down on the other side with a hand windlass and small steel cable.¹⁹

There were two land portages, one very low and the other quite high, each about one mile long. Lukens recommended that the Commission build a tram for each of the portages, equipped with light hand-pushed four-wheeled cars to haul the mails, freight and baggage and boats. Since the portage was so difficult in its present unimproved form, travel over it was fairly light. Once improvements had been made, however, Lukens expected travel between the two rivers to increase substantially. He therefore suggested the erection of three shelter cabins along the portage for summer travel, each to cost about \$350. Lukens recommended that the Paimute portage be staked with high beacons which would lessen the travel hardships over this route, that two shelter cabins be built, the creeks be cleared of brush and grass, and the two small lakes be

cleared along one shore to permit the passage of small boats.²⁰

Assistant Chief Engineer Ike P. Taylor Inspects Portage

Lack of money prevented the Commission from implementing most of Lukens recommendations. In the fall of 1929 Assistant Chief Engineer Ike P. Taylor inspected the Yukon-Kuskokwim Russian Mission Portage to report what had been accomplished and what work still needed to be done. He left Russian Mission over the portage on September 8 and arrived at the mouth of Mud Creek on the Kuskokwim River two days later, accompanying the mail carrier who traveled the route once every two weeks. Taylor carefully described the route. He left Russian Mission on a small gas boat some six miles down the Yukon River to the mouth of Tatlawuksuk Slough and up this slough about thirty miles to the first portage. The first portage was about one-half mile in length; on it was located a shelter cabin the Commission had constructed in 1926. Once across the portage, he used a row boat propelled by an outboard engine to cross a lake about one mile in length, then through a narrow channel some 300 feet long into a second small lake of the same length. At the end of the second lake it was necessary to portage about 3,000 feet to a large lake beyond. Taking another row boat with an outboard engine, he crossed the two mile long lake which ended in a winding one-mile long one-foot deep channel with a slight current, very crooked and partly filled with grass and water lilies. This channel entered yet another shallow two-mile long lake which ended in narrow, grassy channels connecting small lakes. Taylor observed that there were several alternate routes which all should be investigated and the best selected, then well-marked and improved by widening and straightening. Approximately four miles of this type of channel constituted the headwaters of Crooked Creek which he followed downstream for approximately 20 miles. Taylor left Crooked Creek at its junction with Johnson Creek, followed it up about eight miles and reached the next portage, about 3,000 feet long, which led to a small lake with a Commission shelter cabin. He crossed the lake by row boat and went over another

short portage to Mud Creek. This he followed downstream five miles to a deep water slough of the Kuskokwim River. Taylor found these last five miles as troublesome as any of the water portions of the route. The water was very shallow for the entire distance, and in some sections not over six inches deep. In addition, Mud Creek was very narrow in places and brush and snags obstructed progress. Taylor related that some years ago a brush and earth dam, some six feet high, had been built at the mouth to back up water allowing logs to be floated down. Travelers later removed part of the dam to allow the passage of boats. Taylor recommended that another similar dam be built at the same location, backing the water up to the portage. A stiff log derrick with a hand winch, he thought, could be used to elevate boats over it.²¹

Taylor then recommended the construction of two trams with steel rails placed on wooden ties together with the necessary appurtenances, and the straightening, cleaning, and where necessary, damming, of the water portions of the route. He did point out, however, that there was little traffic over the route beside the mail trip every two weeks each way. The mail amounted to about 4,000 pounds per season, and additionally, about forty individuals crossed the portage in the 1926 season.²²

Engineer Officer D. H. Gillette Inspects Portage

The next year D. H. Gillette, the engineer officer of the Commission and his assistant left for the Yukon-Kuskokwim-Russian Mission Portage. They arrived at Russian Mission on June 27, 1928 and left the settlement with the mail carrier the next day, arriving at Bethel on July 1. Gillette and his assistant took elevations with a hand level and made careful measurements with tape, in the process confirming Taylor's report of the previous fall and correcting it where necessary. Gillette drew up a list of recommended projects, consisting of two steel trams 2,500 and 4,000 feet long, respectively, costing a total of \$12,470, and water improvements, including the construction of a 3,000 long canal at

second portage, costing \$12,050 for a combined total of \$24,520. Gillette admitted that the traffic at present was slight, but he pointed out that improving the portage would entice many travelers to enter and leave the Kuskokwim by that route. As Gillette appraised the situation, local inhabitants were practically forced to use the portage in order to get out of the area since the airplane fares to Anchorage and Fairbanks cost a prohibitive \$500 and \$750, respectively. Furthermore, the river-boat Tupper arrived too late and left too early to benefit prospectors and trappers very much. In short, the benefits to be derived would be entirely commensurate with the costs of the improvements. Finally, Gillette suggested that the Commission and the territory split the construction costs evenly.²³

Donald MacDonald To Supervise Construction of Portage

Early in 1929, the Commission had decided to proceed with the work and instructed Donald MacDonald, an assistant superintendent, to familiarize himself with all the details of the project. The Commission was to furnish the steel rails, squared lumber and explosives needed to blast the canal on the second portage. The Commission intended to build the canal, but have the rest of the work performed by local contractors. Still, despite the detailed instructions and blueprints, Gillette admonished the foreman to use his good sense in building from the blueprints because field conditions might call for alterations. What the Commission wanted to accomplish, he stated, "is a route which will enable a stranger to start at one end and go through the whole portage in the same boat without unloading it, the only limitation being that boat and cargo should not weigh more than about two tons."²⁴ It was to take the 1930 construction season as well before the project was finished because territorial funds did not become available in time.

Kodiak Road Needs

The citizens of Kodiak wanted roads as well. In June 1924,

Willard T. Scott, the Deputy Marshal of Kodiak, visited Hawley W. Sterling, the superintendent of the Anchorage division of the Alaska Road Commission "for the purpose of boosting the road situation at Kodiak Island." Hawley suggested that Scott meet with those interested in road construction in Kodiak in order to arrive at a concensus as to how the small allotment available should be spent. In July, Sterling left for Kodiak with a crew of three men and a cook to investigate conditions himself. He met with some of the town's leading citizens, including Scott, Erskine, Kraft, Broadcobb and Abbett and discussed road needs with them. Each one presented a different view, Sterling ruefully reported, but all except one agreed that the money should be spent on a road from the town toward the cannery - although they could not agree on a location.²⁵

Sterling and his crew then examined the possible location of a road as far as Spangler's cut which the Commission had built in 1922. The cut had been of some value, allowing three homesteaders some five miles from town to reach it on a saddle horse. Put in as a temporary measure, it had cost \$3,000 including the survey. Unfortunately, none of the work on the cut could be used as a base for later road construction, for it forced travelers to traverse the beach over large broken rock and slippery boulders, and to go around a rock point which could only be negotiated at low tide. Sterling discussed the situation with Abbett, who used the route most often, and then decided to spend the little available money in putting in a horse trail on the side hill in a location which later could be widened into a road, avoiding the beach entirely.²⁶

Regretfully, no one of the interested parties, except Abbett, had offered any financial or labor assistance on the work unless the road went their way. In fact, Sterling reported, Erskine took the attitude that "we are entitled to it," and refused to apply anything to the project regardless of the route. This attitude riled Sterling, for if anyone was entitled to any assistance it was Abbett who owned a ranch five miles from town and had worked hard and conscientiously for twelve years to build a viable business. He had invested \$40,000 in his

place, possessed about 500 sheep, 70 head of cattle and 8 horses, but had steadily lost money on his enterprise until the last two years when he had barely broken even.²⁷

Hawley Sterling's Recommendations

Sterling recommended to Commission President Steese not to spend any funds at all on the 3,000 foot road from the town to the cannery, for he felt that city residents should have the initiative to construct this section from their own resources. Furthermore, he counseled that the Commission should not even get involved in the location of this road, because it only would entangle it in heated arguments over property rights. Let the locals settle these problems among themselves, Hawley advised, and then allot \$10,000 next season to start road construction from the cannery toward Abbert's ranch - but only if the town's people build the stretch to the cannery. Sterling concluded that "if they refuse to construct the road which lies within the town, I would not approve of spending five cents more at Kodiak until such time as they see the light and are willing to help themselves, to that extent."²⁸

Subcommittee of Kodiak Good Roads Club Petitions Commission

Early in 1925 a subcommittee of the Kodiak Good Roads Club petitioned the Commission to spend \$30,000 over the next three years on three projects. First, it wanted the Commission to take over the maintenance of that portion of the old Russian Mill Bay road, some 2.25 miles in length, which the community had kept open and maintained over more than fifty years at substantial expense. And while no maintenance expense figures were available prior to 1914, the community had spent over \$3,000 during the last five years alone. It was an important stretch of road because it served the United State Agricultural Experiment Station as well as many homesteads west of town. The Committee also asked that the Commission reopen the last 1.5 miles

of this road all the way to Mill Bay. Not only would this construction materially benefit the homesteaders, but there were valid historical and sentimental reasons for performing the work. The Russians had built this road, perhaps as early as 1798, in order to reach their grist mill on Mill Bay, operated by water flowing from the chain of lakes. The date of construction made it a historical road, "the oldest highway in the Territory of Alaska, and almost as old as the famous El Camino Real of the California Padres."²⁹

The subcommittee pointed out that Kodiak Island was most favorably located with regard to the great fishing banks of the North Pacific. This location promised a prosperous future, and Kodiak shortly was destined "to become the center of the largest deep sea fisheries of the Pacific ocean, meaning, most likely, the most important, as far as quantity of production is concerned, fishery in the world." The development of the fisheries naturally would create a higher demand for farm goods, such as meat and dairy products. It therefore was essential to build highways to the ranches so farmers could deliver their goods to town. The subcommittee reminded the Commission that its first road project on Kodiak had been designed to enable Abbert's ranch in the Buskin River Valley to market his meat and milk in town without having to depend upon the uncertain water route. When citizens first broached the subject with the Commission, they received assurances that this road to the Abbert ranch would be built. On the strength of that promise, Abbert had invested thousands of dollars in ranch improvements and several other homesteaders had located in the Buskin River Valley. Finally, the subcommittee was of the firm belief that every member of the Kodiak Good Roads Club, embracing virtually every resident of Kodiak and vicinity, would contribute in either cash or labor to help carry out this project. In fact, residents already had pledged \$295.00 in cash and 61 man-days of labor, including horse teams as well.³⁰

During the 1926 work season, the Commission spent \$13,754.29 in construction of the Kodiak-Abberts road and another \$500 in maintenance for a total of \$14,254.29.³¹ The petitioning had been successful.

The Iliamna Project

There were times when the Commission discovered that it had listed a stretch of wagon road erroneously in its annual report. This was the case with the Iliamna project, route 48, listed as ten miles of wagon road and two miles of trail. Superintendent Sterling inspected the site in 1924 and reported that no wagon road existed, nor had there ever been one. Prior to 1917 the Commission had performed no work in that district with the exception of a reconnaissance trip by John Zug. In 1917 the Commission had sent W. G. Fenton to start work on the so-called road. He spent \$5,000 and less than a week after he had left, a heavy rain made the first four miles impassable because the location had been too close to a stream. In 1921 the Commission sent H. W. Vance as foreman to the project. Vance changed the location of the first four miles, crossing a different summit to reach the creek flowing into the Iliamna River. Although Vance had avoided danger of flooding, the stretch getting up to the summit and then down from it was so steep as to be unsuitable for a wagon road, indeed, in some places not even a pack horse could carry a load.³²

Sterling observed that the trail served traders, settlers, prospectors and trappers in and around Iliamna village who transported part of their supplies over it. Villagers purchased most of their goods from canneries on Bristol Bay. They shipped their supplies up the Kvichak River, thence through Iliamna Lake and four miles up the Iliamna River. It cost \$20 to transport each ton over this route, entirely navigable for boats drawing three feet even in low water. Sterling suggested that the route from Bristol Bay would always be used for transporting bulk tonnage, depending on the availability of steamer service. Building a wagon road from Iliamna Bay would not change this transportation pattern, he thought, but since there was no regular, frequent and dependable service to Bristol Bay, and since the canneries could not always supply all needs, the Iliamna Bay outlet was vital to those living within the district. He estimated that there were 45 Caucasians and 150 Natives. Most of the residents trapped, a few pros-

pected, and most seemed content to remain in the area all of their lives. Sterling pointed out that the area was highly mineralized, containing gold, silver, copper, lead, zinc and oil. All that was needed to develop the country, he thought, was to encourage immigration by constructing a transportation route. He suggested that various government bureaus cooperate to make the trail a viable one. The Department of Commerce, for example, should improve the bay by marking the deepest channel with buoys or spars to make it safe for gasboats; while the Post Office Department should inaugurate a bimonthly service between May and October on specified days, insisting that the carrier deliver the mail to a cabin at the end of the trail so that it could be taken on by pack horse. This scheme would insure that residents could get in and out on a regular mail boat.³³

Ultimately a wagon road should be built, but before this happened the Commission should undertake several projects for helping the district, such as constructing a shelter cabin at the end of the new trail; carry the bay end of the trail to a point where it could be reached by gas boat in high or low tide; build bridges over the entire route; and put the trail on the west and east sides of the summit on wagon road grade.³⁴

Following Sterling's recommendations, the Commission expended \$5,770.00 in new construction and \$725 in maintenance on the Iliamna Bay - Iliamna Lake route for a total of \$6,495; and another \$5001.76 and \$1,540, for a total of \$6,541.76 in 1927.³⁵

What the foregoing examples show are that the Alaska Road Commission responded flexibly and intelligently to the territory's transportation needs. A highly competent staff stretched modest appropriations to best advantage. What nagged Commission personnel, however, was the fact that each new project completed subsequently required funds for maintenance. There would come a time, they feared, when all available funds would be required for maintaining existing wagon roads, trails, bridges, and tramways, among others. This would foreclose the construction of any new projects.

FOOTNOTES

1. Memorandum by C. H. Skinner, Chief Clerk, September 30, 1932, R. G. 126, Central Classified Files, 9-1-55, N.A.
2. Board of Road Commissioners for Alaska, Report Upon The Construction and Maintenance of Roads, Bridges, and Trails, Alaska in Annual Report of the Chief of Engineers, 1926, Extract (Washington: Government Printing Office, 1926), p. 1953. Hereafter cited as Annual Report of the Alaska Road Commission and Year.
3. Ibid.
4. Ibid., p. 1954.
5. Ibid., p. 1957.
6. Ibid.
7. Ibid.
8. Ibid., pp. 1957-1958.
9. Board of Road Commissioners For Alaska, Annual Report Of The Alaska Road Commission Fiscal Year 1926, 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-Second Annual Report, 1926, Part II, Operations (Juneau, Alaska: Alaska Daily Empire Print, 1926), pp. 10-11. Hereafter cited as Part II, Operations and year.
10. Ibid., pp. 12, 15-16.
11. Ibid., pp. 19-20.
12. Ibid., p. 20.
13. Ibid., p. 37.
14. Ibid.
15. Ibid., pp. 37-38.
16. Hajdukovich to Superintendent, ARC, Fairbanks, February 25, 1924, R.G. 30, A.R.C., Box 65480, Federal Records Center, Seattle, Washington.

17. Galen to Steese, April 20, 1924, R.G. 30, ARC, Box 65480, Federal Records Center, Seattle, Washington; Part II, Operations, 1924, pp. 49-50.
18. Steese to Territorial Board of Road Commissioners, April 29, 1924, R.G. 30, ARC, Box 65480, Federal Records Center, Seattle, Washington.
19. Lukens to Gotwals, February 9, 1924, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
20. Ibid.
21. Taylor to Gillette, October 21, 1927, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
22. Ibid.
23. Gillette to President of the Board, July 26, 1928, R.G. 30, Box 65637, Federal Records Center, Seattle, Washington.
24. Gillette to MacDonald, February 16, 1929, Gillette to Foreman, Yukon-Kuskokwim Portage, April 22, 1929, Gillette to Haselem, April 23, 1929, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
25. Sterling to Steese, July 16, 1924, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
26. Ibid.
27. Ibid.
28. Ibid.
29. Subcommittee of the Kodiak Good Roads' Club to Lunsford, February 9, 1925, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
30. Ibid.
31. Part II, Operations, 1926, p. 97.
32. Sterling to Lunsford, September 2, 1924, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
33. Ibid.
34. Ibid.
35. Part II, Operations, 1927, 1928, pp. 95, 85.

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
79	Seward Warehouse	\$	\$ 16.00	\$ 16.00
80	Minchumina Portage Recon....	500.00	.....	500.00
80A	McGrath-Tokotna (Summer) ...	.....	60.20	60.20
80AA	McGrath-Tokotna (Winter) ...	.....	831.42	831.42
80B	McGrath-Telida .....	.....	408.90	408.90
80E	Tokotna-Twin Peaks	113.16	.....	113.16
80G	Tokotna-Nixon Fork (Summer).	.....	160.56	160.56
80GG	Tokotna-Nixon Fork (Winter).	.....	108.16	108.16
81	Good Creek-Salmon River.....	1,493.00	300.00	1,793.32
86	Fourth of July Creek	600.00	440.39	1,040.39
88	Ferry-Eva Creek	10,155.79	1,400.00	11,555.79
89A	Seward Peninsula Railroad, 1st Sec.	7,649.25	4,200.00	11,849.25
89A	Seward Peninsula Railroad, 2nd Sec. ....	.....	13,200.00	13,200.00
90B	Shelter Cabins, 2nd Division	1,754.55	917.53	2,672.08
90C	Shelter Cabins, 3rd Division	2,852.73	417.30	3,270.03
90D	Shelter Cabins, 4th Division	3,340.60	432.70	3,773.30
92A	Bethel-Quinhagak .....	.....	112.60	112.60
92B	Bethel-Akiak	300.00	222.77	522.77
92L	Crooked Creek-Anlak .....	.....	277.42	277.42
92M	Aniak-Tuluksak .....	.....	25.00	25.00
92N	Akiak-Canyon Creek .....	.....	306.00	306.00
92O	Tuluksak-Bear Creek	1,185.12	.....	1,185.12
92P	Holy Cross-Kaltshak	500.00	.....	500.00
93	Chulitna Trail .....	.....	116.29	116.29
93A	Bull River Trail	1,183.51	200.00	1,383.51
93B	Indian River Footbridge ....	.....	4.00	4.00
94	Kodiak-Abberts	13,754.29	500.00	14,254.29
95	Kanatak-Becharof Lake .....	.....	50.75	50.75
96	Chickaloon-King River .....	.....	413.66	413.66
98	Homer Project	7,382.57	.....	7,382.57
98A	Nuka Bay	4,302.66	.....	4,302.66
100	Juneau Office and General Overhead.....	12,217.29	22,100.00	34,317.29
Totals		\$828,045.38	\$483,272.31	\$1,311,317.69

Source: Part II, Operations, 1926, pp. 34, 93-96,

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
47A	Wiseman Aviation Field.....	\$ 2,000.00	\$	\$ 2,000.00
48	Iliamna Bay-Iliamna Lake...	5,770.00	725.00	6,495.00
49	Davidson's Landing-Taylor..	.....	2,616.84	2,616.84
51	Talkeetna-Cache Creek	2,000.00	8,229.12	10,229.12
51A	Cache Creek Trail	1,270.00	706.28	1,976.28
51B	Peters Creek Trail	3,807.93	620.00	4,427.93
51C	Upper Yentna	1,114.91	.....	1,114.91
53	Eagle-Circle	742.00	941.78	1,683.78
53A	Circle-Fort Yukon .....	.....	1,219.65	1,219.65
53B	Fort Yukon Aviation Field..	1,190.89	.....	1,190.89
54	Chisana-Nizina	770.19	.....	770.19
55	Kenai-Russian River	1,200.00	1,908.87	3,108.87
57	McCarthy-Nizina	9,291.88	6,290.00	15,581.88
57A	Nizina river Bridge	3,000.00	3,876.35	6,876.35
59	Fairbanks Bridge .....	.....	13.85	13.85
59A	Fairbanks Depot	3,403.09	.....	3,043.09
61	Strelna-Kuskhana .....	.....	1,321.44	1,321.44
62	Dime Creek .....	.....	2.50	2.50
63	Dunbar-Brooks	2,500.00	1,706.02	4,206.02
63B	Brooks-Amy Creek .....	.....	277.10	277.10
63C	Brooks Tram .....	.....	4,190.59	4,190.59
63E	Livengood Aviation Field...	294.00	.....	294.00
64AA	Cripple-Cripple Mountain...	611.05	.....	611.05
65A	Gulkana-Chistochina, 1st Sec.....	13,500.00	2,185.00	15,685.00
65A	Gulkana-Chistochina, 2nd Sec.....	5,600.00	.....	5,600.00
65D	Ketchumstuk-Tanana Crossing	.....	807.00	807.00
65E	Chicken-Ketchumstuk .....	.....	144.50	144.50
65F	Grundler-Tanana Crossing...	602.26	.....	602.26
65G	Slana-Chisana Reconnaiss- sance	385.04	.....	385.04
67	Nome-Teller .....	.....	697.90	697.90
68	Flagging Trails .....	.....	4,043.04	4,043.40
73C	Old Hamilton-Scammon Bay ..	1,100.00	.....	1,100.00
75	Anchorage-Eagle River	4,973.60	5,800.00	10,773.60
75B	Anchorage-Whitney	3,627.47	1,500.00	5,127.47
75D	Anchorage Warehouse .....	.....	427.98	427.98
75E	McDonald Road	605.13	150.00	755.13
76	Cantwell-Valdez Creek .....	.....	21.00	21.00

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
33F	Flat City-Otter Discovery..	\$	\$ 480.60	\$ 480.60
33H	Flat Aviation Field	1,200.00	.....	1,200.00
34B	Iditarod-Shageluk.....	500.00	.....	500.00
35A	Archange Extension	1,200.00	1,767.42	2,967.42
35AA	Sherry Branch	1,119.32	.....	1,119.32
35AB	Fairangel Extension	104.20	.....	104.20
35D	Willow Creek Extension ....	.....	2,865.60	2,865.60
35E	Wasilla-Fishhook .....	.....	4,284.58	4,284.58
35F	Wasilla-Knik	2,610.00	2,055.62	4,665.62
35H	Wasilla-Finger Lake- Palmer.....	.....	220.30	220.30
35J	Wasilla-Matanuska	3,520.00	2,317.62	5,837.62
35K	Matanuska Trunk Road .....	.....	391.50	391.50
35N	Houston-Willow Creek .....	.....	249.00	249.00
36	Mineral Creek	6,817.01	3,341.00	10,158.01
36A	Granby Road .....	.....	349.44	349.44
38A	Ruby-Long .....	.....	4,183.79	4,183.79
38C	Ophir-Cripple .....	.....	475.79	475.79
38D	Ophir-Tokotna, 1st Sec. ...	10,240.00	2,340.00	12,580.00
38D	Ophir-Tokotna, 2nd Sec. ...	12,768.16	3,210.00	15,978.16
38E	Long-Poorman (Summer)	11,725.88	2,200.00	13,925.88
38F	Poorman-Ophir .....	.....	702.59	702.59
38H	Ganes Creek Road	2,158.85	3,000.00	5,158.85
38K	Ruby Aviation Field	600.00	.....	600.00
40	Douglas-Gastineau Channel..	2,102.16	800.00	2,902.16
41B	Kotzebue-Point Barrow	1,900.00	.....	1,900.00
44A	Skagway-Smuggler's Cove ...	.....	558.80	558.80
46	Kobi-Eureka .....	.....	659.75	659.75
46D	McKinley Park Road, 1st Sec.....	15,230.00	49.16	15,279.16
46D	McKinley Park Road, 2nd Sec.....	18,200.00	.....	18,200.00
46D	McKinley Park Road, 3rd Sec.....	19,060.24	.....	19,060.24
46E	Diamond-Telida .....	.....	968.89	968.89
46F	Nenana Cemetery .....	.....	619.20	619.20
46G	Kobi-Bonfield .....	.....	60.90	60.90
46H	Lake Minchumina Aviation Field.....	750.00	.....	750.00
47	Coldfoot-Wiseman .....	.....	657.24	657.24

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
16	Chatanika-Miller House, 7th Sec.	\$ 19,975.00	\$	\$ 19,975.00
16	Chatanika-Miller House, 8th Sec.	19,703.48	.....	19,703.48
17	Fort Gibbon-Kaltag .....	.....	514.00	514.00
18	Kaltag-Nome	2,000.00	969.88	2,969.88
18A	Bonana-Kotzebue .....	.....	234.78	234.78
20DA	Tokotna-Ophir .....	.....	396.43	396.43
21	Unalakleet-St. Michael ....	.....	162.28	162.28
22	Hot Springs-Sullivan Creek.	.....	3,075.95	3,075.95
23A	Snowshoe-Beaver .....	.....	916.81	916.81
23B	Beaver-Caro	5,250.00	9,220.10	14,470.10
23C	Big Creek	1,060.00	907.57	1,967.57
23D	Caro-Flat Creek .....	.....	529.32	529.32
25D	Mouth of Center Creek .....	.....	122.15	122.15
25E	Submarine Paystreak .....	.....	359.39	359.39
25F	Anvil-Glacier	1,489.41	900.00	2,389.41
25G	Snake River Extension .....	.....	963.53	963.59
25L	Nome Aviation Field	2,500.00	.....	2,500.00
25M	Seward Peninsula Telephone Lines .....	.....	2,149.10	2,149.10
26	Candle-Candle Creek .....	.....	1,020.69	1,020.69
27	Deering-Immachuk	1,500.00	3,995.06	5,495.06
28A	Nome-Taylor .....	.....	455.68	455.68
29	Fort Gibbon-Bettles .....	.....	780.75	780.75
29A	Bettles-Coldfoot .....	.....	130.75	130.75
30	Hot Springs Landing-Eureka.	1,500.00	5,473.77	6,973.77
30A	Hot Springs-Tofty	600.00	658.47	1,258.47
31	Caribou Creek .....	.....	125.71	125.71
32A	Tokotna-Flat (Summer) .....	.....	463.33	463.33
32AC	Candle Creek-Tokotna .....	.....	74.89	74.89
32B	Iditarod-Flat	3,858.20	2,400.00	6,258.20
32C	Ophir-Iditarod (Winter) ...	.....	225.88	225.88
32D	Flat-Crooked Creek (Winter)	500.00	1,107.60	1,607.60
32E	Tokotna Aviation Field	1,691.19	.....	1,691.19
32F	Tokotna Depot	1,650.26	300.00	1,950.26
33C	Flat City-Flat Creek .....	.....	623.80	623.80
33D	Head Flat Creek-Willow Creek .....	.....	730.95	730.95

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
7V	Fairbanks-Wireless Road	\$	\$ 15.00	\$ 15.00
8	Nome-Council, 1st Sec.	2,000.00	14,050.00	
8	Nome-Council, 2nd Sec.	6,402.43	2,150.00	8,552.43
8H	Casa de Paga .....	.....	727.52	727.52
11A	Eagle-Liberty .....	.....	1,835.80	1,835.80
11AA	American Summit-King Solomon	5,429.14	1,000.00	6,429.14
11B	Liberty-Fortymile .....	.....	171.50	171.50
11C	Steel Creek-Jack Wade .....	.....	325.25	325.25
11CC	Steel Creek-Jack Wade (Summer) .....	.....	162.50	162.50
11D	Steel Creek-Walker's Fork ..	.....	308.20	308.20
11E	Eagle-Seventymile	10.00	1,301.80	2,211.80
11F	Jack Wade-Chicken .....	.....	814.20	814.20
11G	Steel Creek-Canyon Creek ...	.....	92.00	92.00
11H	Liberty Cabin-Dome .....	.....	77.15	77.15
11I	Dome-Steel Creek	500.00	1,485.49	1,985.49
11L	Franklin-Chicken Creek .....	.....	156.50	156.50
11M	Jack Wade-Walker's Fork (Summer) .....	.....	125.00	125.00
11MM	Jack Wade-Mouth of Walker's Fork .....	.....	114.50	114.50
13A	Nome-Bessie	4,931.90	1,400.00	6,331.90
13B	Bessie-Banner .....	.....	738.91	738.91
13C	Bessie-Little Creek	500.00	1,041.82	1,541.82
13F	Nome-Osborne .....	.....	141.42	141.42
13K	Bessie-Buster	3,121.95	1,500.00	4,621.95
14A	Sitka National Monument	300.00	1,272.65	1,572.65
14B	Sitka National Cemetary	150.00	631.82	781.82
15	Circle-Miller House .....	.....	3,135.91	3,135.91
16	Chatanika-Miller House, 1st Sec.	8,210.00	10,130.00	18,340.00
16	Chatanika-Miller House, 2nd Sec.	16,127.00	3,000.00	19,127.00
16	Chatanika-Miller House, 3rd Sec.	17,800.00	2,009.00	19,809.00
16	Chatanika-Miller House, 4th Sec.	19,725.00	.....	19,725.00
16	Chatanika-Miller House, 5th Sec.	19,910.00	.....	19,910.00
16	Chatanika-Miller House, 6th Sec.	19,850.00	.....	19,850.00

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
4G	Mile 168-Delta River, 2nd Sec.	\$ 5,711.00	\$ 9,400.00	\$ 15,111.00
4H1	Delta River-Rapids, 1st Sec.	7,250.00	9,100.00	16,350.00
4H1	Delta River-Rapids, 2nd Sec.	9,300.00	8,200.00	17,500.00
4H1	Delta River-Rapids, 3rd Sec.	8,020.00	9,020.00	17,121.57
4H2	Rapids-Grundler, 1st Sec. .	9,210.00	10,150.00	19,360.00
4H2	Rapids-Grundler, 2nd Sec. .	10,307.69	9,050.00	19,357.69
4I	Grundler-Richardson, 1st Sec.	8,500.00	4,200.00	12,700.00
4I	Grundler-Richardson, 2nd Sec.	6,690.00	5,720.00	12,410.00
4J	Richardson-Salchaket, 1st Sec.	10,500.00	6,420.00	15,920.00
4J	Richardson-Salchaket, 2nd Sec.	8,180.00	7,600.00	15,780.00
4J	Richardson-Salchaket, 3rd Sec.	10,402.64	5,190.00	15,592.64
4K	Salchaket-Fairbanks, 1st Sec. ....	.....	9,210.00	9,210.00
4K	Salchaket-Fairbanks, 2nd Sec.	15,077.92	4,020.00	19,097.92
4KA	Salcha Bridge	12,207.89	2,725.00	14,932.89
5A	Dunbar-Fort Gibbon .....	.....	1,440.48	1,440.48
6A	Willow Creek-Tonsina, 1st Sec.	7,600.00	3,275.00	10,875.00
6A	Willow Creek-Tonsina, 2nd Sec.	8,035.85	2,475.00	10,510.85
6B	Tonsina-Chitina	5,220.08	7,220.00	12,440.08
6D	Chitina Depot	3,380.78	750.00	4,130.78
7A	Summit-Chatanika	8,354.40	4,500.00	12,854.40
7D	Ester Creek	920.00	2,279.01	3,199.01
7G	Fairbanks-Gilmore, 1st Sec.	13,427.00	3,800.00	17,227.00
7G	Fairbanks-Gilmore, 2nd Sec.	14,503.87	2,700.00	17,203.87
7I	Gilmore-Summit	4,514.38	3,100.00	7,614.38
7J	Fairbanks-Chena Hot Springs.	500.00	1,203.06	1,703.06

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

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

Acct. No.	Name of Route	Construction	Maintenance	Totals
3A	Haines-Wells	\$ 2,060.00	\$ 6,025.14	\$ 8,085.14
3B	Pleasant Camp Extension, 1st Sec.	13,050.00	5,120.00	18,170.00
3B	Pleasant Camp Extension, 2nd Sec.	15,500.00	.....	15,500.00
3B	Pleasant Camp Extension, 3rd Sec.	7,511.69	.....	7,511.69
3C	Porcupine Extension .....	.....	25.00	25.00
3D	Haines-Mud Bay .....	.....	261.75	261.75
3E	Haines-Chilkoot .....	.....	64.50	64.50
4BA	Valdez-Ptarmigan Drop, 1st Sec.	9,700.00	9,200.00	18,900.00
4BA	Valdez-Ptarmigan Drop, 2nd Sec.	11,200.00	8,000.00	19,200.00
4BA	Valdez-Ptarmigan Drop, 3rd Sec.	10,625.00	7,300.00	17,925.00
4BA	Valdez-Ptarmigan Drop, 4th Sec.	14,070.00	5,060.00	19,130.00
4BA	Valdez-Ptarmigan Drop, 5th Sec.	15,130.68	3,000.00	18,130.68
4BB	Ptarmigan Drop-Ernestine, 1st Sec.	8,030.00	8,030.00	16,330.00
4BB	Ptarmigan Drop-Ernestine, 2nd Sec.	9,520.00	10,100.00	19,620.00
4BB	Ptarmigan Drop-Ernestine, 3rd Sec.	7,227.69	10,042.00	17,269.69
4C	Ernestine-Willow Creek, 1st Sec.	10,130.00	8,520.00	18,650.00
4C	Ernestine-Willow Creek, 2nd Sec.	12,130.31	6,205.00	18,335.31
4D	Willow Creek-Gulkana, 1st Sec.	12,200.00	6,300.00	18,500.00
4D	Willow Creek-Gulkana, 2nd Sec.	14,204.39	4,900.00	19,104.39
4D	Willow Creek-Gulkana, 3rd Sec.	13,100.00	4,000.00	17,100.00
4E	Gulkana-Sourdough	500.00	7,816.20	8,316.20
4F	Sourdough-Mile 168	8,754.59	5,400.00	14,154.59
4G	Mile 168-Delta River, 1st Sec.	6,000.00	9,800.00	15,800.00

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Sleds	Pack Horses	Tonnage
Flat City-Flat Creek	33C	Flat	Jan.-Dec.	600	100	40	100	20	175
Flat Creek-Willow Creek	33D	Willow Creek	Jan.-Dec.	300	90	30	50	15	125
Flat City-Otter Discovery ..	33F	Flat	Jan.-Dec.	600	40	100	40	70	325
Ophir-Tokotna	38D	Ganes Creek	June-Sept.	267	89	36	----	54	70
Poorman-Ophir	38F	Ophir	May-Oct.	30	----	----	----	6	----
Ganes Creek Road	38H	Ganes Creek	June-Sept.	473	154	182	----	25	241
Cripple-Cripple Mt.....	64A	Cripple	Jan.-Dec.	80	----	----	40	----	3
McGrath-Tokotna	80AA	McGrath	Nov.-Dec.	528	----	----	373	----	20
McGrath-Candle Creek	80C	McGrath	May-Nov.	60	----	----	----	----	----
Tokotna-Twin Peaks	80E	Tokotna	May-Oct.	25	----	----	----	8	1/2
Medfra-Nixon Mine	80F	Medfra	June-Oct.	80	----	20	----	----	8
Tokotna-Nixon Fork	80G	Tokotna	May-Oct.	30	----	----	----	----	----
NOME									
Nome-Council	8	Safety	June-Oct.	260	75	49	----	----	29
Nome-Teller	67	Sinrock	Jan.-Dec.	380	----	----	156	----	17

Source: Part II, Operations, 1926, pp. 34-35

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Steds	Pack Horses	Tonnage
NENANA									
Rampart-Eureka	9	Rampart	June	49	----	1	----	----	1
Kobi-Diamond	46	Kobi	Jan.-Apr.	75	----	----	65	----	12
Nenana-McGrath	----	Knight's R. H... ..	Jan.-Dec.	390	----	----	275	----	30
Ruby-Poorman	38A&E	Long	Jan.-Dec.	610	58	48	239	----	155
Ferry-Eva Creek	88	Ferry	May-Dec.	265	----	46	25	----	21
SOUTHWESTERN									
219 Archangel Extension	35A	Fishhook	Jan.	57	----	----	36	----	30
Wasilla-Fishhook	35E	Wasilla	Jan.-Dec.	3646	937	46	215	----	1112
Wasilla-Knik	35F	Wasilla	Jan.-Dec.	2591	258	156	98	78	140
Wasilla-Palmer	35H								
and Wasilla-Matanuska ..	35J	Wasilla	Jan.-Dec.	4249	394	359	181	53	259
McKinley Park Road	46D	McKinley	Jan.-Apr.	207	----	----	175	----	411
Iliamna Bay-Iliamna	48	Iliamna	Mar.-Oct.	242	----	----	71	120	13
Talkeetna-Cache Creek	51	Moose Creek	Jan.-May	409	----	----	193	----	201
Kenai-Russian River	55	Cooper's Landing	Jan.-Dec.	674	----	----	113	----	23
Anchorage-Eagle River	75	6 Mile R.H.....	Jan.-Nov.	7509	3213	2	43	----	100
Anchorage-Lake Separd	75A	Spenard	Jan.-June	931	245	----	37	----	518
Cantwell-Valdez Creek	76	Cantwell	Jan.	40	----	----	19	----	2
Kanatak-Becharof Lake	94	Kanatak	Jan.-Apr.	338	27	9	88	60	72
KUSKOKWIM									
Tokotna-Flat	32A	Tokotna	May-Nov.	96	----	----	----	36	3
Flat-Moose Creek	32AB	Flat	May-Nov.	44	----	----	----	24	2
Candle Creek-Tokotna	32AC	Tokotna	May-Oct.	64	----	----	----	----	----
Iditarod-Flat	32B	Flat	Jan.-Dec.	700	120	200	300	30	799

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Sleds	Pack Horses	Tonnage
HAINES									
Haines-Pleasant Camp	3A&B	Wells	May-Dec.	7691	2191	23	148	----	297
EAGLE									
Eagle-Liberty	11A	Eagle	June-Dec.	1190	----	78	436	381	281
Eagle-Seventymile	11E	Eagle	Oct.-Dec.	225	----	----	105	25	87
Jack Wade-Chicken	11F	Jack Wade	June-Nov.	232	----	----	----	237	10
Steel Creek-Walker's Fork .	11D&G	Steel Creek	June-Sept.	155	----	----	----	158	7
Franklin-Chicken	11L	Franklin	June-Dec.	517	----	----	29	215	73
Eagle-Circle	53	Eagle	Nov.-Dec.	56	----	----	28	----	6
Chicken-Tanana Crossing ...	65D&E	Chicken	June-Sept.	261	----	----	----	86	5
CHITINA									
Chitina-Valdez-Fairbanks ..	----	Chitina	Jan.-Dec.	2097	982	72	479	6	1274
FAIRBANKS									
Fairbanks-Chitina-Valdez ..	----	Richardson	May-Nov.	3111	1171	67	----	----	430
Fairbanks-Chitina-Valdez ..	----	Grundler Ferry .	May-Oct.	2149	854	4	----	----	246
Gilmore-Fairbanks Creek ...	7C	Meehan	May-June	375	97	32	26	----	157
Gilmore-Fairbanks Creek ...	7C	Meehan	Oct.-Dec.	108	4	----	43	----	72
Fairbanks-Chena Hot Springs	7J	Colorado R. H... .	Jan.-Dec.	310	----	----	155	----	131
Chatanika-Circle	15&16	Miller House ...	Jan.-Nov.	1123	----	136	315	5	139
Chatanika-Circle	15&16	12 Mile R.H	Jan.-Apr.	174	----	----	198	----	40
Beaver-Caro	23B	Beaver	May-Dec.	75	----	2	27	10	27
Circle-Ft. Yukon	53A	Ft. Yukon	Jan.-Apr.	150	----	----	58	----	14
Grundler-Tanana Crossing ..	65F	Grundler	Jan.-Apr.	108	----	----	66	----	14

CHAPTER EIGHT

HIGH HOPES AND DISAPPOINTMENTS

Alaskans always demanded more transportation facilities than the Alaska Road Commission could construct because of the fiscal constraints Congress imposed. It did not matter in what isolated sections of the Territory its residents worked and played. Invariably, they always demanded that their mails be delivered and they be afforded access to supply sources, such as rivers and ports. Alaskans also were incurable hoosters who bragged about the natural resources, scenic attractions, and climatic advantages of their particular region.

Citizens of Nome Think Highly of Their Region

The citizens of Nome, on the sparsely settled, treeless and windswept Seward Peninsula, thought much of their region. At the end of 1927, the Northwestern Alaska Chamber of Commerce issued an appeal to the federal government to extend the Nome-Shelton Tramway to Candle and to construct adequate harbor facilities at Nome. The appeal, handsomely printed by the Nome Nugget, the town's newspaper, featured a map of the Seward Peninsula on the cover. Noted on it were the region's resources, such as numerous reindeer herds, gold, coal, and tin fields, and a hot springs location. Lines radiating out from Nome harbor into the ocean marked water transportation routes: to Barrow and the Arctic Ocean, to St. Michael and the Yukon River, to Seattle and San Francisco, to Japan and China, and to Anadyr, Siberia.¹

Want Federal Aid

The chamber explained that the citizens of Nome needed federal aid in order to "open up a highly mineralized region to the northward rich almost beyond imagination of man...giving access to a region in comparison with which all other mining fields in Alaska pale." Nome was the

logical and only supply base, for its port had at least two more months of open navigation than any other port on the Seward Peninsula, allowing ships to arrive and depart from the middle of May until the beginning of November. With the suggested improvements, Nome would serve the mining districts on the Kougarok, Inmachuk, Kugruk, and Keewalik Rivers.²

Rehabilitation Work Applauded

The Chamber applauded the rehabilitation work on the Nome-Shelton tramway, a distance of 86 miles, which the Commission had undertaken during the last three years. As a result of the work freight rates had fallen from 10¢ to 1¢ a pound. Extending the tramway to Taylor, about 40 miles from Shelton, would effect a similar savings. Beyond Taylor, unfortunately, mining activities had almost ceased because of excessive freight costs. If the federal government financed the proposed extension, the Chamber argued, "a vast field of quartz, as well as placer values, would be opened up to the nation's wealth and advantage." In addition, "great wealth would also be tapped in the fur industry and the reindeer industry."³

Nome Harbor

Nome needed a decent harbor, because its geographical position made it the "metropolis of the north and the only distributing point for the coast of Alaska from the Kuskokwim to Herschel Island on the American side of the Arctic Ocean, a distance of over 2,000 miles, and the logical port from which to supply settlements on the Siberian coast, the Chamber pointed out. Indeed, "all roads lead to Nome," and with a little government help Nome would become a great seaport and harbor, serving the needs of "the vast treasure house of the Northern section almost at our door. . . ."⁴

Minerals were only a part of the region's wealth, because the Chamber expected that the Bering Sea shortly was to become "the nation's greatest fish reserve." It abounded in halibut, cod, shrimp, crabs, and many

varieties of salmon, as well as herring. These riches of the sea strengthened the argument that Nome needed a large modern harbor and transportation facilities in order to dock and shelter the fishing fleet. Indeed, the Chamber expected that within a few years, Nome would "be the Ketchikan of Northwestern Alaska."⁵

Reindeer Industry

The Chamber also believed that there was a great future for the reindeer industry. A government biologist, Dr. E. W. Nelson, a few years earlier had estimated that Alaska could support between four to five million reindeer. About a million and a quarter could be slaughtered each year. A reindeer carcass, dressed for the market, averaged about 150 pounds. Taking this weight and the value of the meat, Nelson had estimated that a fully developed industry should yield approximately \$43 million per annum. The Chamber conservatively estimated one million carcasses per year, and at 150 pounds each, that would necessitate shipping out 150 million pounds of meat. It was not only the meat which was valuable, of course, since markets also had developed for reindeer by-products. Hides yielded leather, bone could be ground and shipped, horns utilized in manufacturing, and the hoofs made excellent glue stock. Waste fat found use in soap making, and the entrails and blood could be manufactured into fertilizer or dog and fox feed.⁶

Vast Coal Deposits

Last, but not least, were the coal deposits in the Kugruk River valley which would give a great impetus to prospecting. At present, the Seward Peninsula imported coal from British Columbia which cost from \$28.50 to \$35.00 per ton. The Kugruk coal could easily be landed in Nome for \$12.00 to \$15.00 per ton, a substantial savings. In view of all of the foregoing prospects, the Chamber asked Congress to appropriate \$750,000 for extending the Nome-Shelton tramway to Candle and building an adequate harbor at Nome, and providing docking facilities for ships of eight feet

draft or more "in order that the region described herein may be developed and redound to the Nation's wealth and strength."⁷

Congressional Parsimony

Congress, in its blindness, did not appropriate the requested funds. Instead the Commission continued to spend funds for construction and maintenance for a wide variety of projects. In fiscal year 1929, for example, it allotted a total of \$113,406 for projects in the second judicial division, a far cry from the \$750,000 requested by the North-western Alaska Chamber of Commerce for only two construction proposals.⁸

Road From Haines to Chilkoot

At times, the Commission could not help at all with funds. This was the case with a three-mile road from Haines to Chilkoot. In the summer of 1926, Joseph W. Stansfield, a homesteader and proprietor of Chilkoot Fur Farms who raised mink, blue foxes and chinchillas, asked Colonel Steese if the Commission could start work on a road to connect Chilkoot with Haines, a distance of about three miles. Regrettably, the Commission had to inform Stansfield that there was no possibility of starting the project in 1926, and in fact, there appeared to be "no possibility that it will be started within the next several years." Territorial officials, who would have put up the money for the road, had told the Commission that there was much desirable homestead land adjoining the existing good roads in the vicinity of Haines, and "that they cannot afford to build expensive roads such as this to any locality far from the existing roads where one may take out a homestead."⁹

Fur Farmer Stansfield Disappointed

Stansfield was taken aback by the attitude of the Territorial Board and the Commission. He insisted on presenting his side of the question. He agreed that Haines and vicinity had good roads and that there was

excellent homestead land nearby, yet this did not mean that there was an abundance of suitable sites for homesteads near Haines. On the Haines-Pleasant camp road, claimants had taken up the land for seven miles, and there was no good land beyond that for several miles. There was no available land along the Mud Bay road. Stansfield argued that it was very much of an uphill struggle to establish a homestead in Alaska. Since the local market was so small, homesteaders with products to sell needed to be as near as possible to a steamship dock in order to be successful. Stansfield complained that too many homesteaders had given up the struggle. Building a short road would give a group of homesteaders a fair chance to succeed. He even offered to have the group of settlers participate financially, in a modest fashion, in the project. This, he had heard, had been done in other parts of the Territory. Still, the Commission could promise no road work, but Stansfield's neighbors started to add their voices to the growing demand for a road. In the fall of 1926, Ruby E. Allen, the fur farmer's neighbor, told the Alaska Road Commission that "I have staked me a homestead and built a cabin north of Haines on Chilcoot Inlet, I would greatly appreciate it if you would do all in your power to see that we have a road along the beach in the near future." Steese assured Allen, as he had Stansfield, that the Territorial Board and the Commission would consider the request when next year's program came under discussion, but he could offer "no encouragement whatever as to the inauguration of this project." Steese had examined the stretch of proposed road and concluded that the costs were "all out of proportion to the possible benefits."¹⁰

Homesteaders Press Claims For Road

In the spring of 1927, Stansfield and Allen had interested numerous other citizens of the Haines region in their plight. Some eighty residents signed a petition directed to the Commission and the Territorial Board asking that the road from Haines to Chilcoot be built as soon as possible. The petitioners pointed out that the requested road would provide "an outlet for a very fertile farming district," a typically Alaskan exaggeration.

tion. Steese once again promised that the Commission and the Territorial Board would consider the proposal but could not be more specific. Stansfield was grateful that the Commission had at least acknowledged the petition. He pointed out that despite the lack of access, improvements and development on various homesteads had been progressing for the last four years, "and a good deal of building will be done there this summer, road or no road." But it was difficult. His neighbor, for example, had been waiting for ten days with a crew of four men to transport supplies and materials to his site but the weather had been too bad to make the trip.¹¹

What did Stansfield expect during the breakup seasons when travel throughout the territory was difficult, Steese asked. Even the road out of Juneau, he reminded Stansfield, was "still blocked by deep snow and neither the Bureau of Public Roads nor ourselves have ever pretended to maintain traffic at this season of the year." But Steese apparently was more optimistic, because he told Stansfield that an engineer officer would come to Haines in early May to inspect the entire situation "and line up a program for next year."¹²

Major Lunsford E. Oliver, the engineer officer, visited Haines and estimated that the short road would cost between \$10,000 to \$12,000, far more than the Commission or the Territorial Board were willing to spend because it would benefit relatively few people. Such an amount of money could be spent more effectively elsewhere serving a much larger constituency. Stansfield was disappointed, and he and his neighbors now asked for the construction of a packhorse trail along the beach from Haines to Chilkoot. Those benefited, he promised, would contribute fifty dollars in labor or cash to get the project underway. But despite repeated pleas by the homesteaders, neither the Commission nor the Territorial Board appropriated any funds.¹³

Gillette Makes Preliminary Survey

In the late fall of 1928, Engineer Officer D. H. Gillette walked over the proposed route. A road of sorts existed, he explained, and the

homesteaders apparently had done much work on it lately. But it had a slope of thirty-three percent of the north side, and for about a mile extensive clearing and boulder blasting would be necessary to put it into shape. He estimated the cost of the road at about \$11,500; it would serve three homesteading families raising vegetables and furs. These three shipped out about twenty tons of goods a year, and brought in the same amount, at an average cost of approximately \$12 per ton. This rate could easily be reduced to \$2 per ton with the road in place. Gillette thought that an additional fifteen to twenty homesteaders could locate between the hill and the cannery, and related that the construction of the road "would actually lead to more families coming in as they all seem to be doing very well, with their furs especially." In conclusion, he pointed out that the residents of Haines supported the proposal wholeheartedly, undoubtedly because all would indirectly benefit from increased business in the vicinity. In the 1929 season, the Territorial Board finally appropriated funds for the road from Haines to Chilkoot, and the Commission built it. The tenacity of the residents finally had paid off.¹⁴

Situation In 1927

In The Alaska Year Book of 1927, the editors summed up the Alaskan transportation situation. "In a pioneer country," they stated, "there is nothing so important at the start as roads and trails. They are the arteries that carry the very life blood of supplies to the far flung outposts, and make living possible until the Constitution catches up with the Flag." Much had already been accomplished in Alaska, such as the construction of the Richardson Highway and the Alaska Railroad. Considering the difficult terrain, the total construction cost of the Richardson Highway, including maintenance for more than twenty years, came to slightly under \$12,000 per mile, a truly remarkable figure. Now the Alaska Road Commission planned to extend this road from Fairbanks to Circle, which, when finished, would link the coast to the Yukon River with a scenic highway about 540 miles in length.¹⁵

More Roads Needed

But despite these accomplishments, the north needed still more roads into new mining districts and there were "sections that only need transportation to make them productive." For example, the Kuskokwim, Lower Yukon, and Nome districts in southeastern Alaska needed more roads. Millions of tons of pay ore in the Hyder district could be developed as soon as connection to tidewater was complete. The promising mineral regions of the Copper and Nabesna country were only accessible by pack trains. In fact, lack of transportation arteries made it impossible to get supplies and mining machinery into most of the territory except at prohibitive costs. Therefore, promising mineral properties were idle and prospectors only performed the annual assessment work to hold the ground, and in the meantime waited for the federal government to build transportation routes.¹⁶

Shortage of Funds

Unfortunately, Congress had never appropriated the full amount the Commission had requested. That body knew of "the crying needs ... [for] roads and trails in the North..." but when presenting their budget to Congress, "some bunchgrass congressman who wants a new post-office building at Pumpkin Center" had always been able to reduce the Alaskan request at least by one half. Therefore, Congress could do nothing more important during its next session than to appropriate funds generously for the construction of new roads in Alaska, the editors concluded. For the 1928 season, Congress appropriated \$860,192.90 to the War Department for its Alaska work, down from the \$889,443.65 it had allowed in 1927. The Alaska fund had yielded another \$134,593.11, while other contributions had amounted to \$258,883.17 for a total of \$1,253,668.18 which amounted to a slight increase of \$36,501.29 over the previous year's total.¹⁷

Lottsfeldt's Trip

While Congress and the territorial legislature wrestled with money questions, the employees of the commission were out in the field performing their duties. For example, C. F. Lottsfeldt, the superintendent of the Kuskokwim district, left Takotna on November 30, 1927 accompanied by Lars Indergard as dog musher and a team consisting of fifteen dogs. The purpose of the trip was to inspect the Bethel district and make recommendations for winter trail work. The two men traveled for 37 days, covering a distance of 931 miles, and averaging about 25 miles per day. The account of their travel and Lottsfeldt's recommendations follow:¹⁸

Arrived at Ophir evening 30th and the next day proceeded toward Flat arriving there on December 3rd. Laid over one day at Flat and then left for Holy Cross inspecting the new work along this route. Stopped evening 5th at Frank Fox's Reindeer Camp, arrived at Holy Cross following day.

Laid over the 7th and the following day left for Paimute, arriving there that evening. Account extremely soft weather laid over Dec. 9th. Dec. 10th we proceeded toward the Kuskokwim River arriving at Kaltshak [sic] that evening. The next proceeded to Tuluksak arriving there the 12th. Stopped evening 11th at Bob Hermans cabin. On December 13th in company with Tony Sumi left to make an inspection of the new shelter cabin at the Foothills, we returned to Tuluksak evening 14th.

On December 15th left Tuluksak and arrived Bethel on the 17th. Laid over at Bethel for repairs to sled the 18th, 19th and 20th. Left Bethel December 21st arrived at Quinhagak December 23rd, stopped the 21st at the new shelter cabin at Black Fish Lake and the 22nd at the Eek schoolhouse.

Left Quinhagak December 24th proceeding toward Goodnews Bay, arriving there afternoon December 26th. Stopped one night Jack Smith's Bay shelter cabin and the other at Indian River shelter cabin. Laid over the 27th at Goodnews Bay. December 28th we proceeded toward Togiak arriving there January 1st. On the 29th and 30th we were held storm bound at the shelter igloo on the South Fork of the Goodnews River. On December 31st we "siwashed it" about four miles from Togiak.

January 1st, 1928 we proceeded down the bay to Johnny Owens place. On the second we left for Kulukuk arriving there that evening. The next day we left Dillingham arriving there on the 5th. Due to poor trail markings and soft weather we were forced to "siwash it" the first night out about ten miles from Kulukuk, and the second evening stopped at the native village at Tuklong.

Laid over at Dillingham the 6th, making arrangements for the summer trail work between Dillingham and Snag Point. The 7th left for Koggiung arriving there on the 9th. Stayed one night with natives six miles from Portage Creek, and the second night at the King Salmon Saltery. This saltery is four miles off the trail but does not greatly lengthen the distance to the Squaw Creek Cannery.

Left Koggiung January 10th in a blinding blizzard and were lucky to reach Libbyville Cannery that evening just at dark. This section is not marked. The next day we proceeded toward Naknek stopping that night at the Portland Packers Cannery. Jan. 12th left for Egegik arriving there before noon on the 14th. Stopped first night at the Halfway Shelter Cabin and the second at Frank Atlonen's six miles from Egegik. This section is well tripoded but due to a very severe blizzard at times it was impossible to see twenty five feet ahead.

Left Egegik January 15th and arrived Kanatak January 17th at 2 P.M. Stopped the first night at West End Becharoff Lake shelter cabin and the second night at the East End Becharoff Lake shelter Cabin.

Route 92 P Holy Cross-Kaltshak [sic] 56 Miles Trail

The section of this trail between Holy Cross and Paimute, that is the part traveled along the river should be staked with willows every winter. The river between these points has several channels, some of which are several miles longer than others. Strangers often take the longer channel due to lack of markings.

The section of the trail between Paimute and Kaltshak can be greatly shortened by cutting through some heavy timber near Paimute. Would also culminate travel on several sloughs which overflow badly. A tundra fire burnt down many of the old tripods which should be replaced next fall.

Allotment Required \$785.00

Route 92 Tuluksak-Bear Creek 32 Miles Trail.

Inspection was made over this route and only necessary maintenance need to be performed next year.

Route 92 Aniak-Tuluksak 60 Miles Trail.

The crossings on the river route between these two places should be marked with willows right after the freezeup every winter. A short land portage cut out between Ohogamute and Kaltshak would shorten this trail two miles.

 Allotment Required \$375.00

Route 92 L Crooked Creek-Aniak 74 Miles Trail.

All the crossings on this river route should be marked with willows every winter after freezeup.

 Allotment Required \$75.00

Route 92 B Bethel-Tuluksak 44 Miles Trail.

This section should also be marked with willows on the river every fall as it is very easy for travelers to get off the beaten trail. Because of the river cutting in the banks between Akiak and Bethel need to be cut down every year.

 Allotment Required \$125.00

Route 92 A Bethel-Quinhagak 90 Miles Trail.

This trail is now in good condition, well marked and tripoded the entire distance. Beacons have been placed on the edge of all the larger lakes. Only maintenance work need be performed next season.

Route 92 F Quinhagak-Goodnews Bay 60 Miles Trail.

This trail is in first class condition with only maintenance needed next season.

Route 92 G Goodnews Bay-Togiak 53 Miles Trail.

This trail is far below standard and without a guide is nearly impossible to follow. The first four miles out of Goodnews Bay there are no tripods, and the remainder of the distance they can only be found here and there. Tripods were constructed from small willows and tied at the top with rope. These tripods will not stand up against the weather in this section where at times they have very violent winds. If the commission desires to have this as a standard part of the route between Bethel and Kanatak the entire work will have to be done over in a year or two I don't believe any of the present markings will remain. This work will be rather expensive as poles for good tripods cannot be obtained closer than Akiak.

Allotment Required \$3,000.00

Route 92 H Togiak-Nushagak 125 Miles Trail.

The section of the trail between Togiak and Johnny Owens, a distance of nine miles is not tripoded. This work should be done in the next year or two. The section between Johnny Owens and Kulukuk is only fairly well marked and needs considerable improvement in the way of tripoding. Between Kulukuk and Tuklong the trail is poorly marked. The first four miles out of Kulukuk has never been tripoded, because of this we went up the wrong draw which put us off the trail about ten miles. Several places where the trail crosses creeks the brush needs to be cut out. The Tuklong shelter cabin is two miles off the trail and there are neither markings to or from the cabin. Tripods should be placed to and from the cabin otherwise it will never be used.

The trail between Tuklong and Nushagak is well marked and needs no further improvement. I think it advisable that this entire section between Togiak and Nushagak be brought up to standard as quickly as possible due to considerable travel between the government hospital at Dillingham and the schools along the Bering Sea.

Allotment Required \$1,500.00

Route 92 I Lewis Point-Naknek 86 Miles Trail.

The trail between Lewis Point and Portage Creek needs some improvements, especially a large beacon showing where the trail goes into Portage Creek leaving the Nushagak River. Trail between Portage Creek and Koggiung is well marked. There are no markings between Koggiung and Naknek account the heavy travel between the various canneries in this section.

Allotm

Route 92 J Naknek-Egegik 50 Miles Trail.

The trail between the Diamond M. Cannery and Egegik is marked with old telephone poles, many of them are beginning to fall down. Mr. Frank Altonen original contractor of this work offered to do this maintenance work for nominal sum.

Guthries Inspection Trip

Captain Ralph R. Guthrie undertook a much shorter inspection trip in February, 1928. Employing the same musher with a team of seventeen dogs, he left Lawing on February 5 bound for Kenai which they reached in three days. After a one day rest the party returned to Lawing. The weather was variable, temperatures fluctuating from +40°F to 0°F. The two men experienced snow drifts three feet deep, and on the return journey encountered a snow storm which dumped eighteen inches on the trail. They followed a well-broken trail, except during the snow storm on Kenai Lake, and met eleven dog teams during their travels. Guthrie estimated that this amounted to a fairly heavy traffic of about forty dogsleds during the winter months. Guthrie's report of his journey and his work recommendation follow:¹⁹

The route of the inspection started at Lawing, Mile 25, U. S. Railroad, and led over the ice, down Kenai Lake, to the lower end. Thence up the Kenai River a short distance, off the river and up the mountain side to an elevation of approximately seventy-five feet, and rather precipitous, for a mile and a half to Cooper's Landing. About this section of the lake it may be said that travel in the winter is very precarious, there being a considerable number of air holes off Black Point, opposite the mouth of Quartz Creek. During the past twenty years many teams have broken through. The mile-and-a-half section between the mouth of Kenai River and Cooper's Landing is maintained apparently by the fire patrols, and is the worse place on the trail. A little grading, the rehabilitation of one small bridge, and the hewing down of a few trees here would do very well and could be accomplished at a cost of one hundred dollars. On the lower end of Kenai Lake to a point seven and one half miles beyond Cooper's Landing there is an average of one cabin per mile, and all are suitable for shelter. The prevailing grade is about thirty per cent.

The first shelter cabin encountered is located fifteen miles from Cooper's Landing. It was in good condition, corrugated iron roof, one door, two windows, sheet iron stove, five joints of pipe, pole bed, and dog cabin. The latter was about twelve by twelve feet inside measurement, the dimensions of the shelter cabin itself being fourteen by sixteen feet. After leaving this cabin no further shelter was encountered until the cabin known as the "Midway Cabin," of approximately the same dimensions as the first, but without dog shelter, was reached. This was twenty-nine miles from Cooper's Landing. This cabin was very comfortable, indeed, with a sheet iron stove, a pole bed, and the comforts which could be expected under

the circumstances. It is here suggested that these cabins (all of them) could be improved by battening up or filling in the interval between the iron roof and the pole roof, six inches beneath. Into this open space the snow drifts and melts from the heat of the stove, causing leakage in the vicinity of the bed. The approximate cost for three cabins on the Kenai-Lawing trail in the opinion of the undersigned could be covered by one hundred and fifty dollars, or fifty dollars per cabin. Between Cooper's Landing and Midway Cabin only two fallen trees were encountered, and they were lying across the road as it led across the second small lake after leaving Cooper's Landing. They were about fifty yards apart, and could be removed by one man in about a minute. A few objectionable "nigger-heads" were found on the trail between a point eight miles from Coopers Landing and Midway Cabin, and again six miles beyond Moose River and the village of Kenai. The third relief cabin, located Mile 19 from Kenai, was in the same condition as the others; very habitable, but it was found that natives had been using it as a trapper's cabin, and it is strongly suspected of being infested with vermin.

Using a twelve-foot sled and seventeen dogs with a broken trail it was found that from forty to sixty miles could have been easily accomplished in a day, any place on the road. At approximately twelve miles from Kenai village there is a plateau with a very steep incline, varying from thirty-five to fifty per cent grade, and winding in and out between trees, very dangerous to teams. From this point toward Kenai the Road Commission trail is practically abandoned and an old Siwash trail, leading over frozen swamps, is used. It is recommended that the Road Commission accept the judgement of traffic in this regard, and that the Siwash trail be adopted and improved. Three miles of trail in the vicinity of Mile 19 from Kenai has also been abandoned by traffic in preference of a shorter cut, apparently to good advantage. It was found that the trail is opened each winter by the natives, and that in spite of any advantage which might exist in the new government trail, they prefer the one that they laid out themselves. In the judgement of the undersigned, the only way to get those sections of the trail used would be to send a trail breaking crew over the trail early in the season. The advisability of this is questioned.

In general, the trail from Lawing to Kenai is not in bad condition for either heavy or light hauling. It is believed that Duncan Little, of Cooper's Landing, with one assistant could go over the entire trail in two months next summer and put it in excellent shape. No one could hope to remove all of the nigger-heads, but the more prominent ones could be smoothed away. All the equipment needed would be a couple of axes, cross cut saw, spades, hammers, nails, and a couple of pack horses. Bridges and shelter cabin roofs could be repaired, and the material found on the ground. Mr. Little has the reputation of being extremely conscientious and industrious, and has both experience and common sense. It is recommended that he be put in charge of the work and authorized to employ one man as an assistant, and that the period of his employment not exceed two months.

Answering the questions in your memorandum of May 20, 1927, for all superintendents, the following information is given:

Length of road from Lawing to Kenai, approximately 120 miles.

Shelter cabins, Mile 19 from Kenai and Mile 37 from Kenai. A privately owned prospector's cabin used as a shelter cabin at Mile 46 from Kenai.

General ruling grade, 20 per cent.

Maximum grade encountered, 50 per cent, 150 feet long. Maximum grade not objectionable if trees are cut which now endangers sleds from turning over. Cost of improvement \$20.00.

Two-horse teams cannot be used.

One small bridge to be renewed at Cooper's Landing.

Grading not necessary, but strong shovel work required at approaches to two small lakes between Cooper's Landing and Midway shelter cabin, approximate cost \$20.00

No new bridges required.

Road now used does not drift nor glacier badly. Trail is located so that approximately thirty-nine miles is over frozen lakes and streams. This not objectionable.

Nigger-heads and stumps are to be removed in a few instances.

Condition of shelter cabins excellent, except for roofs noted. Stoves have all been installed by private interests, and are at present adequate, but should be replaced next summer by new stoves suitable for both heating and cooking.

Character of traffic on route, foot, and dog sleds, about forty sleds per month.

This route can not be used in the summer time without long and difficult detours on account of so much of it being over ice. It is purely a winter trail, and if it is to be converted into a summer trail, as well, a road must be cut from Lawing along the north bank of Kenai Lake to Cooper's Landing, and from a point seven and one half miles beyond Cooper's Landing the road must be widened and improved, detouring all lakes and streams, the entire distance to Kenai. As seven lakes and three streams are used, this is liable to be expensive.

In case a wagon road were contemplated, it would necessitate a wagon road along the north bank of Kenai Lake to Cooper's Landing, or the use of the railroad outlet at present supplied by the Quartz Creek route to Moose Pass and thus junction with the railroad, cost about ten thousand dollars (\$10,000.00) per mile. From the lake the road could then follow the north bank of Kenai River along the present trail branching off onto a trapper's trail twelve miles from Cooper's Landing to Skilak Lake, cost about five thousand dollars (\$5,000.00) per mile. Thence along the north bank of Skilak lake to the Lower Kenai River to the mouth of Moose River which must be spanned by new fifty-foot suspension type bridge, cost of road ten thousand dollars

(\$10,000.00) per mile, cost of bridge five thousand dollars (\$5,000.00) to ten thousand dollars (\$10,000.00). From bridge the road could take direct route to Kenai village over tundra, cost about five thousand dollars (\$5,000.00) per mile.

RECOMMENDATIONS

It is recommended that two good trail construction men be employed for two months next summer to go over the entire trail from upper Kenai Lake to Kenai village to make common sense repairs to the winter trail and to shelter cabins, using material to be found in the forest with a moderate amount of equipment and material furnished, and no further expense undertaken. Also that plans be formulated to construct a winter trail around upper Kenai Lake from Lawing, for the purpose of avoiding the obvious dangers to lives and mail, involved in crossing over treacherous stretches of thin ice abounding in air holes at different periods during the winter.

The Anchorage-Matanuska Road

There can be no doubt that the Commission had assembled a knowledgeable headquarters and field staff over the years. Furthermore, the Commission and the Territorial Board cooperated smoothly on many projects, the former serving as the construction contractor and the latter supplying the funds. At times, however, there arose disagreements. One of these concerned the proposed construction of an Anchorage-Matanuska road. The 1927 territorial legislature, at the urgings of the legislative delegation from the third judicial division, had included \$25,000 for the undertaking. Perhaps the delegation had halfheartedly urged the appropriation at the behest of the Anchorage Chamber of Commerce, because the money measure stated "that in performance of said work...said Board shall not expend more than the sum of \$200,000.00..."The legislators knew that both the Territorial Highway Engineer and the Commission had estimated the cost of the project at \$318,000 without surfacing. The legislature knew that the Territorial Board could not proceed on a project which it could not finish - but voting the \$25,000 certainly endeared the politicians to the Anchorage electorate.²⁰

Elliott Rejects Anchorage-Matanuska Road

Major Malcolm Elliott, the Commission president, was appalled about the very idea of building this road. While residents in most parts of Alaska desperately needed the most rudimentary transportation network, Anchorage citizens demanded such a vast expenditure on a route already provided with a railroad. He carefully explained to the Territorial Board that the Commission would not approve the expenditure of federal funds on this project. The road was not needed, and the use of federal funds for the Anchorage-Matanuska road would inevitably deprive other communities of badly needed transportation facilities and of the full assistance from federal monies to which they were entitled. Furthermore, the Commission had an understanding with the Secretary of the Interior that it would not parallel existing railroad lines. The \$318,000 estimate was low, because it contemplated the joint use with the railroad of bridges over certain streams with no assurance that this heavy use would not require early rebuilding. There was no allowance for the maintenance of the completed sections during the construction phase. Including these factors, Elliott believed that the total cost of the project would amount to approximately \$500,000, a sum all out of proportion to the benefits expected. In short, the proposal was economically unsound and therefore not worthy of federal assistance.²¹

Elliott Warns That Congress Would Consider Road Waste of Funds

Worse yet, Elliott warned that Congress would most likely take a very dim view of the Anchorage-Matanuska road. Legislators very quickly would conclude that a territory which could afford the luxury of a highway paralleling a railroad clearly had advanced beyond the pioneer stage and no longer needed "appropriations for roads amounting to sums much larger than the per capita contributions for Federal aid in the States." He assured the Territorial Board of his "disinclination to interfere in any way with local control of how territorial money shall be spent," but in this case asked that the project at least be delayed. He concluded that

if this did not happen it probably would result in decreasing federal contributions for Alaska's road building program. And that, he asserted, would be injurious to Alaska's best interests.²²

Territorial Board Seeks Legal Advice

The Territorial Board thereupon sought the advice of Alaska's Attorney General, John Rustgard. He advised that because the estimated cost of construction exceeded the amount authorized by the legislature, the Board had no authority to proceed. The Anchorage Chamber of Commerce was bitterly disappointed at Rustgard's decision. Senator Arthur Frame, the sponsor of the measure authorizing the funds to begin the project was present at the Chamber meeting. He explained that the politicians had meant well, and blamed those in charge of road building operations in the territory of not wanting to connect the Anchorage and Matanuska road systems. Therefore, they "resorted to the adverse opinion of the attorney general as an excuse."²³

Territorial Board Holds Special Meeting

On March 29, 1928, the Territorial Board held a special meeting at which it accepted Rustgard's opinion and decided not to proceed with the work. The question then remained could the Board use the designated \$25,000 for general roadwork in the third judicial division? Attorney General Rustgard put the members of the Territorial Board at ease when he ruled that the construction of the Anchorage-Matanuska road was not compulsory but rather discretionary. Therefore, the attorney general ruled, the \$25,000 could be expended for general road work in the third division.²⁴

Chamber Memorializes Territorial Legislature

That was not the end of the matter, for by early March 1929 the legislative committee of the Anchorage Chamber of Commerce had prepared a memorial for the territorial house and senate. The Chamber complained

that because the Alaska Road Commission, "a federal agency," had been unwilling to cooperate in the construction of the project the territorial \$25,000 had not been used. It reiterated the necessity for building the road because it would open "one of the most fertile and promising agricultural regions in the Territory of Alaska" and asked that the legislature appropriate \$50,000 for the following biennium "for the purpose of building so much of said road as the sum permits to be constructed."²⁵ The Anchorage-Matanuska road eventually was built-but that was in the future.

President Elliott Reviews Accomplishments

In 1928, President Elliott proudly reviewed the territory's transportation system for the Alaska Year Book. The territory's road system, he told his readers, consisted of one main axis connecting Prince William Sound with the Yukon River, and a considerable number of small road nets which connect the various commercial, mining, and agricultural centers with supply bases located on the coast, railroads, the main highway, and the navigable rivers. The Commissions proudest accomplishments were the Richardson and Steese Highways, extending from Valdez to Circle to the Yukon River. At its northern terminal in Fairbanks, the Richardson Highway joined the northern terminal of the Alaska Railroad main line which connected the city with Seward. Together, the highway and railroad formed a belt line traversing much of interior Alaska.²⁶

The Copper River and Northwestern Railway ran from Cordova on Prince William Sound to the Kennecott copper mines. Chitina, a station on the railroad, also was the southern terminal of the Edgerton Cutoff, a branch of the Richardson Highway. The Steese Highway extended north from Fairbanks to Circle City on the Yukon River. Elliott pointed out that Circle City was on the route which, beginning at Skagway, followed the White Pass and Yukon Railroad to Whitehorse and then by river transportation went down the Yukon River through the Klondike goldfields and Dawson into central Alaska. These railroad, highway and water routes formed the framework of a transportation system covering a wide area rich in natural resources.²⁷

Cooperation With Forest Service

The Commission and the Forest Service were developing small road systems which either tied in with the main rail, highway and river systems or were located along the coast, connecting with good harbors. In southeastern Alaska, small highway systems centered at Ketchikan, Hyder, Wrangell, Petersburg, Sitka, Juneau, Haines and Skagway. Each of these towns and settlements possessed sheltered, deep-water harbors. Along the remaining coastline, roads connected almost all ports with the immediate hinterland. Small road networks of this kind existed at Cordova, Valdez, Seward, Kodiak, Iliamna, Kanatak, Nome and Deering. Settlements along the Yukon and Tanana Rivers, like Eagle, Beaver, Rampart, Brooks, Tanana Hot Springs and Ruby had short road systems. In the upper Kuskokwim Country travelers obtain access to the river over short road systems connecting with McGrath and Takotna. Similarly, a short road connected the mining areas around Flat and Otter with the Iditarod River, and Wiseman, the head of small-boat navigation of the upper tributaries of the Koyukuk River north of the Arctic Circle possessed roads leading to the nearby mines.²⁸

Transportation Network

Automobile, wagon and sled roads radiated from mining, agricultural, and trapping operations to the Alaska Railroad. Prospectors, miners, and homesteaders on the Kenai Peninsula, the Matanuska Valley, in the vicinity of Talkeetna and in the important Kantishna region used Commission built roads and trails which enabled them to transport supplies to their workings and ship their products to outside markets. A highway under construction from the railroad into Mt. McKinley National Park eventually was to lead to the base of the mountain, opening the park to public use. Homesteaders in both the Matanuska and Tanana Valleys did considerable farming. The Commission had built local roads connecting these operations to the railroad; and the country adjacent to the Richardson Highway and the Copper River and Northwestern Railway was connected with short roads

to the mineral operations in the vicinity of Kennecott, Kotsina, and the Chistochina country.²⁹

Length of System In 1928

As of 1928, the entire road system consisted of 1,623 miles of automobile, tram, and wagon roads, 1,375 miles of winter sled roads, 7,044 miles of rails, and 712 miles of flagged winter trails. The Alaska Road Commission had built this imposing transportation system within the short span of twenty-four years at a cost of about \$13 million. About \$4 million of this total, or about 30 percent, had been derived from Alaskan sources, while the federal treasury had contributed the balance.³⁰

When the Commission had started its labors in 1905, there had been no roads worthy of the name. Inhabitants freighted supplies over unimproved trails or used pack horses and dogsleds. Life was primitive by necessity in any community not close to water transportation. All this had changed, for the transportation system had enabled the residents to import all the conveniences of modern life, yet large areas of Alaska, capable of economic development, still were a wilderness. Much work needed to be done yet, Elliott concluded.³¹

Edmunds Makes Inspection Trip

Members of the Commission worked hard. M. C. Edmunds, the superintendent for the Anchorage district, took a ten day hiking trip inspecting various routes between Cache Creek and the Yentna River in the fall of 1928. The full report follows to give readers a feeling for the country covered:³²

The following report covers an inspection trip during which the various routes mentioned below were covered, route 51, 51-D, 51-E and 20-H.

The main object of the trip was to cover routes 51-D and 51-E, between Cache Creek and the Yentna river; no one attached to the force at present, had been over the trails, and the only information available

was obtained from people in the district, and it appears that the more persons talked the less reliable information was obtained.

As it is not likely that the trip will be taken again for sometime, as there is no necessity until more development takes place, I am writing a report of the trip, for future reference.

The trip was taken on foot, carrying ten days provisions, making a pack of about 60 lbs to start off, and 25 lbs when I finished up at the railroad.

I had intended to take a dog along, carrying some of the load on it, but the dog was too soft, and I had to leave him the second day out.

Itinerary.

- October 1st. Left Anchorage 1.45 p.m. by A.R.R. arriving Talkeetna 6 p.m.
- 2nd Left Talkeetna 7 a.m. stopped at A.R.C. cabin at Moose Cr. 12 miles out. arrived 1.30. p.m.
- 3rd Left Moose Cr. 7 a.m. arrived Peters Cr. noon mile 23 1/2, after lunch went to Lee's cabin on Black Creek, mile 29, arriving 2 p.m. (this cabin used by public for shelter.)
- 4th Left Black Cr. cabin 7 a.m. went to the A.R.C. road camp near Windy, a tributary of Cache Creek, arriving there 11:20 a.m. stayed here the night. traveled 10 miles. Waited over here for one day, in order to wait for two trappers who were going to Sunflower Creek.
- 5th Went, with trappers Wagner and Strom, to Falls Creek, stopping the night in a cabin belonging to Nagley, the merchant at Talkeetna, evidently used by the public; distance traveled 2 miles.
- 6th Left the cabin on Falls Creek, which is located about one half mile above the mouth at 8 a.m.; went down Cache Cr. to the mouth of Short Cr. then over trail to the Treasure Creek shelter cabin, arriving there at 6:30 p.m., distance travelled 18 miles.
- 7th Left the A.R.C. cabin on Treasure Creek 7:30 a.m., went to Wagners cabin on Sunflower, about three miles below the cable Crossing, arriving there at 1:30 p.m. distance traveled 10 miles.
- 8th Left Wagner's cabin 8 a.m. went to Pat Collins camp on Notobac creek, (the men who named this creek evidently must have been out of tobacco when they struck here) a tributary of Twin Creek. Stopped at Hugger's camp on Mills Creek enroute; distance between camps one and a half miles, distance traveled ten miles, the last two miles being on the South East slope of Fairview mountain. Was accompanied by Wagner this far. Arrived at Collins camp 5 p.m.
- Oct. 9th Left Collin's camp 7:30 a.m., after one mile reached the regular Yentna-Mills Creek trail, following same until

- I reached the camp of McLean and Patterson, on the Clearwater, one mile above the mouth, where it enters into the Yentna River. Arrived here 3 p.m. distance traveled 15 miles.
- 10th Left McLain and Patterson's cabin 7:30 a.m., went down trail to the Yentna river, inspected cabin, then proceeded down the river to the cabin of a trapper named Briggs, who had a light boat which I intended to get to go down the river. Found upon arriving that the boat was twenty miles further down stream, at the mouth of Donkey Creek slough, so walked down there. Had thought that I could get a trapper to take me down to the Station as they all have Johnson outboard motors, but ice was running in the Yentna, and the boats were all beached for the winter, and it was doubtful whether they would work in the ice. Arrived 5:p.m. distance traveled 27 miles.
- 11th Examined boat, which had not been in water for two seasons, calked two seams with gunnysack and old shirt, which were open for a good half inch, put a patch over a small hole in the bow, and started off at 10 a.m., arriving at the abandoned town of McDougall at 5:p.m. wet snow all day, distance traveled 18 miles.
- 12th Left McDougal 6:45 a.m. arriving at Susitna Station 2:p.m. had to break shore ice in order to beach boat, weather wet with snow and rain. Distance travelled 36 miles.
- 13th Left Susitna Station 7:a.m. over the winter trail for Nancy, on the Alaska Railroad, arrived at the shelter cabin at mile 10.5 at 2:p.m. distance traveled 11.5 miles.
- 14th Left shelter cabin 6 a.m. arriving at Nancy 1:p.m. caught freight train into Anchorage, arriving 8:p.m.

Route 51. Talkeetna-Cache Creek.

This route is being maintained each year, and will be covered in the annual report, so there is no necessity of mentioning it at this time.

Route 51-D. Yentna-Mills Creek, (23 miles trail.)

This is a pack trail leading from the Yentna river, on the left limit of Clearwater Creek, to the confluence of Twin and Mills Creek which head against Fairview mountain, in the Fairview District.

Leaving the river the trail crosses a flat country for a distance of three miles, covered with small green spruce and an occasional swamp, to high ground running in the same direction as the Yentna river, which runs in a Southeasterly direction.

The ridge is cut through by the water of Clearwater Creek, which runs in a Southerly direction.

After leaving the flats, high ground is followed for a distance of four miles, through spruce and birch timber, along the left limit of the creek, sometimes close to the creek, other times away out of sight, to a small creek running West; after crossing the creek, which is bridged, the trail continues along the high bench near the stream, with a fair growth of spruce, which comes to an end about mile 12, after which a heavy growth of willow and alder is encountered, to mile 15.

At mile 8, a small cabin is passed on the left of the trail, or West, which could be used in an emergency, but it is very small being about 6 feet by 8 feet, with a flat roof.

At mile 15 the trail leaves the Clearwater Creek watershed, running down the right limit of Twin Creek, on a high bare bench to its junction with Mills Creek, which is the end of the trail.

Very little work was done on the trail after passing the 15 mile post, the chief item being tripods that were erected to mark the trail.

The point where the trail starts down Twin Creek is about one mile from Skookum Pass, which is the route followed by the miners and trappers in going from the Clearwater Creek watershed to the Cache Creek district.

With the exception of some swampy ground across the Yentna flats, which could not be avoided, the trail is located in good ground, and is well defined.

It appears, however, as though it would have been better to have continued the trail through Skookum Pass to the mouth of Cottonwood Creek, instead of going down the right limit of Twin Creek, as this would have kept the trail on dry ground, passing close to the location of the men mining there, and been considerably shorter for a main route.

Considerable timber had fallen across the trail in places, but where it passed through willows and alder the cutting was very plain.

The shelter cabin on the Yentna was in good condition, except for the roof, which should be replaced with an iron roof, and a floor put in.

Arrangements were made to have the trail cleared up, and for the repairing of the shelter cabin next season.

This route is now in good condition, and, with the clearing of wind-falls occasionally should be ample for the requirements of the district for years to come, unless further development is shown. At the time the trail was put in there were some good publicity men interested in the district, and it appeared as though the district might develop into a mining camp.

Our friend Mr. Ben Grier, had a lot of property at the mouth of Twin and Mills Creek a few years ago, but, being unable to interest any capital in the venture, it has been abandoned, and has since been re-staked by another pencil miner, who has done no prospecting of any amount to determine whether it is commercial ground or not.

C. J. Lincke, an old newspaper man, has been in the vicinity for some years, off and on, and has staked a lot of ground in the district; He also does no prospecting, and has the means of keeping people off the ground who might dig up something. The only evidence of work done on his property that I saw was a small hole about three feet wide by six feet long, three feet deep, that any ordinary laborer would dig in two hours.

While it is possible that something may show up in the vicinity that may pay to work by modern methods that would not be profitable to work by olden methods, several of the tributaries of Mills and Twin Creek were prospected and mined years ago.

A man named Pat Collins is the only one left of the early miners, he traps a little in the wintertime.

A man named Hugger has been in the district three seasons, he is mining on Mills; these are the only two men attempting to mine, and I venture to say they do not average more than \$1,000.00 a year output between the two of them.

In returning down the Yentna River to Susitna Station, I found very little activity except for trappers and furfarmers, who are located on an average every six miles or so along the river bank.

The white men seemed to be ambitious and energetic, building trails, cabins and doing other work in readiness for the trapping season.

As far as I could ascertain, there appeared to be no activity in prospecting or mining, probably the high prices paid for fur during recent years made trapping more profitable.

There appears to be no need for any road, trail, or shelter cabin work; the main artery of travel is water, and the trappers living along the river are glad to welcome occasional travelers, who bring recent news, and are available for carrying mail.

The Yentna River, from Youngtown to the mouth, is very easy to navigate in a small boat, there being no rapids or other places where there is any hazard. The sweepers along the bank, and the snags in the channel, are easily seen and avoided.

The only place encountered was on the Susitna River, after leaving the mouth of the Yentna, where whirlpools were active; these however, are plainly seen and there is ample room to steer clear.

The velocity of the current near the mouth of the Clearwater is about four miles per hour, while it is only around two miles near the mouth.

The trappers and an estimate of their earnings during the last season adjacent to the river, is as follows:

Name	No. men	River	Estimated Earnings
Gasnon and one	2	Kichatna	\$5,500.00
Mike Stripka	1	East Fork	3,000.00
McLain and Patterson	2	Yentna	5,000.00
Corigan	1	"	2,200.00
Briggs	1	"	3,000.00
Jones and wife	1	"	1,500.00
Sholbarger, wife, 3 children	1	Skwentna	5,000.00
Reamer, McElroy and one	3	"	5,000.00
Ross, wife, 1 child	1	"	2,000.00
Link	1	Yentna	5,000.00
Nelson	1	"	500.00
Oman	1	"	800.00
Zorn (does no trapping, a little prospecting)			
Meller	1		1,500.00
Unknown	1		1,500.00
Madison Bros.	2		<u>2,500.00</u>

About six of these people go to Talkeetna, over the trail, with their furs during the winter, the remainder come down the river either taking the Nancy-Susitna trail over the snow, or going by boat to Anchorage and the railroad.

Route 51-E. Cache Creek - Mills Creek 35 miles trail.

This is a summer trail, used as a means of communication between the people of the upper Yentna river, including the Fairview mining district, with the Cache Creek mining district, and by means of the system of roads leading from there, with Talkeetna and the Alaska railroad.

It is suitable for foot and pack trail travel.

In the winter time there is no need of any trail; swamps, lakes and rivers, which constitute the country South of the summer trail, freeze over, and one can go in any direction, and the several cabins belonging to trappers provide places where one may obtain shelter.

The winter travel connects with the Cache Creek trail by means of the Mile 32 Spruce Creek trail, route no. 51-D.

The summer travel leaves Cache Creek by means of two routes, horse travel goes up Dollar Creek to the junction with Little Dollar, and foot travel follows Short Creek for a distance of one mile, then drops over the bench to the mouth of Little Dollar Creek, from this point one trail is followed.

The trail follows up Little Dollar Creek for one quarter of a mile, then climbs on the left limit of the creek, following the creek which drains a flat plateau, until it forks, near the head. The creek is crossed at this point, near the top of a steep slope leading down to a large flat drained by the Kahiltna River. The rim is then followed for one mile until an old camp is reached, known as the Barrenburg or Shell camp, about eight miles from Cache Creek.

From this camp an old trail is followed, known as the "Hughes" trail, over which attempts were made to haul supplies to the Cache Creek diggings from the Yentna, in the early days, before the road was built from McDougal.

The trail was also used by Dr. Cook, during the time he was scouting around when attempting to climb Mt. McKinley.

The trail for the first eight miles is fairly good, except some willows need cutting, and it is inclined to be wet for a couple of miles until the rim, on the left limit of the Kahiltna watershed, is reached.

From the Shell camp the trail drops down to the level of the Kahiltna flats, descending 1200 feet in the course of a mile through a well timbered slope covered with spruce, willows and alders, then continuing for two miles through the timber, skirting lakes and beaver dams to the edge of the timber, the horse trail coming out about one mile below the cable crossing on Granite Creek, about twelve miles from Cache Creek.

Granite Creek drains the left or East side of the Kahiltna Glacier, and the cable tramway spanning this stream is located about two hundred yards above the end of the glacier, where the stream is in one channel, which is not subject to change.

The tram was in good condition, and no difficulty was found in making the crossing.

The left side of Granite Creek, at the cable crossing, is in timber, while the right side runs alongside the glacier, the cable being anchored to rocks and the landing being on rocks, forming part of the glacier.

The trail on the West side of the crossing follows the glacier for two hundred yards until dropping down on the flat, but no difficulty is found in getting over this stretch.

There is no timber between Granite Creek and the Glacier stream which drains the West side of the Kahiltna Glacier, except for some scattered willows, a distance of four miles, the trail keeping about two hundred yards South of the end of the glacier.

The water of the Kahiltna River, draining the glacier, was in three channels, about 75 feet wide, the depth at the deepest place where a ford was made being 18 inches.

A cable tram is to be put across this stream this season, materials were being freighted there during the time I passed through.

The stream draining the West side of the glacier was forty feet wide and 12 inches deep, and easily crossed, at mile 16.

West of the stream the trail goes through a dense growth of willows and alders, but the trail is well defined, and once on it, it is easily followed.

Continuing along the trail a distance of three miles, Treasure Creek is reached, at mile 119, where the Alaska Road Commission shelter cabin is located, on a small bench about twenty feet above the level of the creek.

Spruce timber has been gradually getting thicker, until there is good timber where the cabin is located.

The cabin is located about 250 yards off the trail, to the North, and 300 yards from water, but is well supplied with dry wood, and is in a dry location.

Signs are placed on the main trail, so that it is readily seen by travelers.

Owing to the difficulty of getting material on the site, the roof was made out of poles, with moss and dirt, which did not prove very satisfactory this last season, during the continual rain.

During the night I spent there, the roof leaked all night, and it kept the three of us busy keeping the fire going, in order to try and keep warm.

Arrangements were made for putting galvanized iron roof and a floor in the cabin, the work to be done in the spring when conditions were favorable for hauling the material.

Leaving Treasure Creek cabin the trail traversed level ground for one mile through timber, then climbed for one half mile on a ten percent grade, which increased to about twenty per cent towards the top, to a level plateau, with an elevation of 1500 feet, formed of grassy meadows, (some wet and swampy) small lakes, and high mounds covered

with green spruce, which made a picture very pleasing to the eye, but not so attractive when considered from the viewpoint of the trail situation.

Keeping in a Westerly direction, with the trail now getting very indistinct through the meadows, we reach Lake Creek, at mile 24.

Lake Creek is crossed by means of a cable tram, which was in good working order. A fjord is located just above the cable, where horses can cross the stream, while below the water from different channels collects, and runs through swampy ground.

There is no timber of any size on Lake Creek.

From Lake Creek the trail continues in a South Westerly direction, following timber and high ground where possible, to Sunflower Creek, at mile 28, where another cable crossing is located.

The crossing is located at the head of a canyon, in an ideal location, about one mile below the place forded by horses.

Spruce and cottonwood is plentiful along the banks of Sunflower Creek.

There is a trappers cabin about three miles below the cable crossing on Sunflower Creek, also one on the right limit of Chelantna Lake about two miles above the tram, which are available for shelter for travelers.

Leaving the Sunflower cable, and keeping in the same general direction for a distance of two miles, Camp Creek is reached at mile 30.

Camp Creek is forded just above the mouth of Cottonwood Creek, it was about 75 feet wide and 15 inches deep at the time I crossed.

There was very little water in Cottonwood Creek, it was about six feet wide and 12 inches deep.

There was a good growth of Cottonwood timber along the course of both streams, and some spruce up to 10 inches diameter.

A camp belonging to C.J. Lincke is located on the right limit of Cottonwood Creek, about 1/4 mile above the mouth, which is available for shelter for mushers traveling through.

A bear or wolverine had visited the place, and made a mess of things generally; one of the articles chewed up being a Corona typewriter which they must have considered to be out of place in the wilds.

After leaving Cottonwood Creek the trail crosses a grassy meadow to the left limit of Little Skookum Creek, about one mile distant, and then follows through dense willows and alders the left limit of the

creek until near the head, when the creek is crossed, and the trail follows along high ground, on the Southeast side of Fairview mountain, to Skookum Pass, at mile 34.

Skookum Pass is the divide between Mills Creek and Twin Creek, near the summit of Fairview mountain. It is a good location for a trail as the ground is firm; there are several patches of willow growths along the mountain side, but generally these can be avoided.

From the pass the tripods of the Yentna-Mills Creek trail can be seen along the skyline of the Clearwater slope, which is fifteen miles from the Yentna river.

There is one miner, Matt Hugger, mining on Mills Creek, about one mile from the head, working by the open cut method, with sluice boxes running through the cut into which dirt is shoveled by hand; he was the only man doing any work on Mills Creek.

Another man is working on Notobac Creek, a tributary of Twin Creek on the right limit, using the same method of mining. He had everything in good order, and appeared to be working to advantage; he was the only man working on Twin Creek. His name is Pat Collins.

There is gold scattered all around the South slope of Fairview mountain, which is formed of gravel, work has been done on the different creeks since 1906, and several men have taken out small amounts varying from \$3,000.00 to \$5,000.00, but no big money has been made.

Water is very scarce, which is a detriment to small miners, but would not effect the working of the ground by a large company, who could bring water for many miles, but a large company is not liable to start operations unless much more prospecting and development is done.

In addition to the two miners mentioned, whom I do not believe take out \$1,000.00 a year between the two of them, there are other people interested in the district who call themselves prospectors, who have a lot of ground staked, but do no development work to ascertain whether the ground can be worked or not.

These speculators are a detriment to the district, as they tie up a lot of ground that other people who want to dig might file on, and develop something.

At present time there are possibly ten trappers, the two miners mentioned, and a few others using this trail.

Until more development work is done, or something else shows up, the present trail, with the four cable crossings, and the shelter cabins on Treasure Creek and Spruce Creek, which ensures safe travel during the summer and winter, is sufficient, with a little additional cutting and staking.

Despite a perpetual shortage of funds, the Commission undertook much exploratory work. Should monies become available, roads and trails could be constructed quickly because informal surveys had already been accomplished.

Footnotes

1. Northwestern Alaska Chamber of Commerce, "An Appeal to the Federal Government of the United States for the Extension of the Nome-Shelton Tramway to Candle, Alaska, and for Adequate Harbor Facilities at Nome, Alaska," November 1, 1927, R.G. 30, HRC, box 65637, Federal Records Center, Seattle, Washington.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Operations, Part II, 1929, p. 143.
9. Stansfield to Steese, July 3, 1926, Oliver to Stansfield, July 14, 1926, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.
10. Stansfield to Oliver, July 25, 1926, Oliver to Stansfield, August 9, 1926, Ruby E. Allen to Alaska Road Commission, September 4, 1926 Steese to Allen, September 20, 1926, R.G. 30, A.R.C., box 65637, Federal Records Center, Seattle, Washington.
11. Petition, residents of Haines, to the Alaska Road Commission and the Territorial Board of Road Commissioners, March, 1927, Steese to Stansfield, April 4, 1927, Stansfield to Steese, April 8, 1927, R.G. 30, ARC. box 65637, Federal Records Center, Seattle, Washington.
12. Steese to Stansfield, April, 13, 1927, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.
13. Stansfield to Steese, May 1, 1927, Steese to Stansfield, May 14, 1927, Stansfield to Steese, August 29, 1927, Steese to Stansfield, September 14, 1927, Stansfield to Elliot, December 5, 1927, Gillette to Stansfield, December 6, 1927, R.G.30, ARC, box 65637, Federal Records Center, Seattle, Washington.
14. Gillette to President of the Board, October 19, 1928, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.

15. The Alaska Year Book, 1927 (Seattle: The Alaska Weekly, 1927), p. 13.
16. Ibid.
17. Ibid; Operations, Part II, 1928, p. 13.
18. Lottsfeldt to Engineer Officer of the Board, February 21, 1928, R.G. 30, A.R.C., box 65637, Federal Records Center, Seattle, Washington.
19. Guthrie to Alaska Road Commission, February 17, 1928, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
20. Rustgard to Parks, March 28, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
21. Malcolm Elliott, "Statement of the Alaska Road Commission's Attitude on Anchorage-Matanuska Road, "March 26, 1928, Elliott to Territorial Alaska, March 26, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
22. Malcolm Elliott, Statement of the Alaska Road Commission's Attitude on Anchorage-Matanuska road, March 26, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
23. Rustgard to Parks, March 28, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington, Anchorage Daily Times, April 13, 1928.
24. Parks to Rustgard, July 24, 1928, Rustgard to Parks, July 30, 1928, R. G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
25. Anchorage Daily Times, March 5, 1929.
26. Major Malcolm Elliott, "The Road System of Alaska," The Alaska Year Book (Seattle, Washington: The Alaska Weekly, 1928), p. 34.
27. Ibid.
28. Ibid.
29. Ibid.
30. Ibid.
31. Ibid.
32. Edmunds to Gillette, October 20, 1928, R. G. 30, A.R.C., box 65479, Federal Records Center, Seattle, Washington.

CHAPTER NINE

THE LAST FEW YEARS UNDER THE WAR DEPARTMENT, 1929-1932

It had become customary for Commission personnel to use the early spring to inspect various routes and make recommendations for improvements. Donald MacDonald, a Commission engineer, reported on the condition of the winter trail from Chatanika to Fort Yukon in February, 1929. There were two sections of the trail, one leading from Chatanika to Circle, and from the latter point to Fort Yukon.

The Chatanika Winter Trail

The Chatanika winter trail originated at the little mining community by the same name, situated on the Steese Highway. It followed the highway to Mile 45, about 17 miles from Chatanika, crossed the river by the same name to the winter trail on the left limit of the river and went along the old winter trail to Sourdough Creek at Mile 66.5, some 38.6 miles from Chatanika. The winter trail then again followed the Steese Highway to an Alaska Road Commission tent cache at Mile 82.6. Since the Steese Highway drifted over with snow, at this location, the winter trail avoided this difficulty and dropped into McManus Creek, followed it to its head, and climbed up the McManus 12 mile Divide. From here it followed the highway for a short distance along the divide, and then dropped down to the head of the North Fork and to the old Twelve Mile Roadhouse. It joined the highway again at Mile 88, followed it to Mile 102, and then left it again to avoid the deep snow drifts on Eagle summit. It followed Eagle Creek to its head and then crossed the Eagle Summit about 1.5 miles east of the highway. The trail descended to Miller and Mammoth Creeks and intercepted the Steese Highway again at Mile 89.5. From here it followed the highway to Mile 162.5 at Circle on the Yukon River.¹

While there were some rough spots along the winter trail, MacDonald considered it unwise to spend any funds on improvements because of the slight winter traffic. With the completion of the Steese Highway to

Circle, all residents with access to the road made every effort to ship supplies in the late fall before the highway closed for the winter. In addition, Fairbanks citizens had asked that the mail for the district be carried by plane during the winter months, thereby eliminating expensive delivery by dog sled. He proposed, however, that a relief cabin and stable be built at the junction of the highway and winter trail at Mile 82.6. Travelers used the highway over Twelve Mile Summit up to December 15 in most winters. If more snow fences were put in, MacDonald reasoned, the highway over the summit could probably be used throughout the winter in an ordinary year. There was a relief cabin opposite Mile 85 at the foot of Twelve Mile Summit, but it was located about 300 feet from the trail and not easily seen. MacDonald pointed out that the proposed relief cabin and stable could be a real life savers, because violent winds and blizzards often closed Twelve Mile Summit and shelter then became absolutely necessary.²

Eagle Summit Hazardous

Eagle Summit, MacDonald continued, was notorious throughout the interior for the hazards it presented to winter travelers. Blizzard and wind conditions here were worse than on Twelve Mile Summit. A five feet wide trail cut into the side hill on the north side of the summit for a distance of about 2,000 feet made this stretch very dangerous. The slightest winds blocked the trail, and it frequently had happened that in a blinding blizzard travelers had slipped into a deep gulch on the west side of the trail. MacDonald proposed that the Commission widen the trail to eighteen feet, and also install a telephone in a suitable shelter at the summit. The Rasmussen telephone line already passed the summit at this point, so the improvement would be inexpensive, involving only the purchase of a telephone and the construction of a shelter for the instrument. This would allow travelers to summon aid when necessary.³

A Few Miles of Telephone Lines

Telephone lines extended from Fairbanks to Mile 70 of the Steese Highway. The Fairbanks Exploration Company owned the line from Chatanika to Mile 70. Another telephone line ran from Circle to Mile 106, owned by a Mrs. Rasmussen of Circle. Thus there existed a 36 mile gap, and residents along the road had repeatedly requested that this distance be bridged. In fact, they had volunteered the labor cost of construction and winter maintenance if the Commission paid for the phones, lines and tripods. MacDonald estimated that these materials would cost about \$2,000. He recommended that the expenditure be made because not only would it serve the public but the Alaska Road Commission as well.⁴

Trail From Circle To Fort Yukon

The second part of the trail extended from Circle to Fort Yukon. It had been built in 1924 to avoid the dangerous ice conditions of the Yukon River trail which followed the bends and turns of the river channels. It was unnecessarily long and difficult to follow. The 1924 trail consisted of a series of long tangents ranging from two to fourteen miles. It took advantage of all existing shelter, and had reduced the distance from 85 to 67 miles. From Circle the trail headed in a straight line through some light timber and wide open spaces to the first shelter cabin, some 20.5 miles from Circle. The open windy stretches, and grass clumps and swampy conditions made this the most difficult part of the trail. The second shelter cabin was 33 miles from Circle, and the third some 47.5 miles on a slough of the river. At Mile 45.5 the trail left the land and followed sloughs to the main channel of the Yukon and then into Fort Yukon. The last part of the trail, past the third cabin, changed yearly with the river. MacDonald had inspected the trail because residents for Fort Yukon had petitioned the Commission to have the trail widened and raised to double ender standards. MacDonald estimated that the requested improvements would cost \$4,700, unwarranted by the weekly mail carrier, a few passengers and the transportation of furs.⁵

MacDonald recommended, however, that the Commission build a shelter cabin ten miles out of Circle in the open flats where strong winds and snow drifts rendered travel difficult and slow. In fact, the mail carrier and several other travelers "have had to Siwash at or near this point and several times men have arrived in Circle in dangerously exhausted condition."⁶

Inspecting the Richardson Highway

Personnel of the Commission also inspected the Richardson Highway, the most highly developed transportation link in the territorial system which the Commission had constructed. By 1929, it had developed into a 371 mile long gravel-surface wagon and automobile road, connecting Valdez and Fairbanks. There were two main branches, the Chistochina, then under construction which was designed to give access to the highly mineralized Shushanna area located north of the Wrangell mountains. The Chistochina road branched off at mile 128 at Gulkana. The Edgerton Cutoff branched off at mile 92.4 at Willow Creek and connected the Richardson Highway with Chitina, and little tow located 39 miles away at Mile 131 of the Copper river and Northwestern Railway. The latter originated at the seaport of Cordova and ran to the Kennecott copper mines situated to the south of the Wrangell mountains.⁷

Development of the Richardson Highway

The Richardson Highway, the Commission pointed out, was still in a development status. The Commission had completed the route as a winter sled road in 1907, and by 1913 upgraded it to a wagon road. After World War I the Commission had worked diligently to improve the road to automobile standards. As a result, in certain newly improved sections, thawing, ground settlement and drying were still incomplete. Those sections, as a result, had an unfinished appearance. Still, much had been accomplished since 1920. Almost all the steep grades had been eliminated, most of the narrow places widened, bridges and culverts rebuilt, soft spots drained

and graveled, and dangerous stretches had either been removed, fenced, or properly marked with standard United States highway warning signs⁸.

Funds Expended On The Richardson Highway

In twenty-five years of operating in Alaska, the Commission had expended \$6,158,000 on the Richardson Highway. Of this sum, \$2,842,000 had been spent on construction and \$3,316,000 for maintenance and improvements for an average total per mile cost of about \$15,900. In 25 years the Commission had \$14,400,000 available for its Alaskan work. It spent 43 percent of that amount on the Richardson Highway. In short, the Commission now attempted to place the entire highway on a purely maintenance basis, and in 1929 only 20 percent of the route required more than annual maintenance.⁹

The Kuskokwim District

The Richardson Highway had opened the areas adjacent to it for settlement and development. The Kuskokwim district, where Commission headquarters were located at Takotna, comprised the most inaccessible parts of Alaska, including the Kuskokwim River valley, extending eastward along the coast to Bristol Bay and west as far as the Yukon River. It thus included the valleys of the Iditarod and Innoko Rivers. The chief mining operations were centered about Iditarod, Takotna, and Ophir. Although the Commission had constructed shelter cabins, aviation fields, and the Yukon-Kuskokwim portage, the remoteness of the district and high costs had prevented the building of any through wagon or automobile routes. Freight destined for Takotna and vicinity reached Bethel by ship from Seattle. Reloaded on river boats, it was shipped from there to the communities along the Kuskokwim River. Goods for Iditarod and environs went by ship from Seattle to Seward, and then via the Alaska Railroad to Nenana. Reloaded on railroad-owned river boats, supplies then were shipped to Holy Cross. There they were unloaded once again into smaller craft and sent up the Innoko and Iditarod Rivers. There were two important

winter trails, one via McGrath, Telida, Diamond, Knights to Kobi or Nenana, and another one extending from McGrath to Aniak, Bethel, Goodnews Bay, Togiak, Dillingham, and Naknek to Kanatak.¹⁰

Superintendent C. F. Lottsfeldt

C. F. Lottsfeldt occupied the position of superintendent for this far-flung district. It was his responsibility to determine the need for roads connecting mining operations with supply centers. Miners had proposed the construction of a ten mile wagon road between Cripple and the Cripple Mountain District. Lottsfeldt traversed the route and reported two dragline and two hydraulic operations at work, making the location one of the most active mining areas in the district, employing twenty-three men. Summer transportation to the mines was impossible because of the 3.5 miles of swampy tundra encountered when leaving the town of Cripple. Even pack horses, he observed, had a difficult time reaching the camps because of the swamp. Lottsfeldt recommended the construction of the road, estimating that it would cost \$5,000 per mile, or \$50,000 for the whole project. Since both the Takotna-Ophir and Iditarod-Flat roads were on a maintenance basis, practically the entire funds for his district could be allocated for this new project. He suggested that \$30,000 be made available the first year, and the other \$20,000 for the second year.¹¹ The Commission, however, found that the mining activities did not warrant the expenditure of \$50,000.

The Eagle District

In the meantime, J. G. Christianson, a military member of the Commission, examined the transportation system and resources of the Eagle area. He observed that Eagle was a dying town. Only a substantial goldstrike could revive the town, but the prospects for such a discovery were slight. Eagle had a population of 50 whites, the 40 mile District had 125, and the 70 mile District only 20 residents. The average age of the men and women in the district was approximately 60 years. Christianson

reported that "the chief industry seems to be the holding of claims of low-grade placer ground and hoping that some day someone may come who will buy their claims, and many are still waiting after 30 years of such hoping."¹²

Imports and Exports

The district imported about 200 tons of supplies annually and exported furs and gold. Eagle received 55 tons, the 40 mile District 125 tons, and the 70 mile District 20 tons. John B. Powers, a teamster, handled about 90 percent of the freight. He had 15 horses and mules, and about 40 buildings scattered over the district. Powers had the mail contract which called for three monthly trips. Christianson predicted that if Powers should go out of business it would deal the death blow to the district because there was nobody with enough capital to replace him. Powers, in fact, was the "only real user" of the road and trail system which the Alaska Road Commission had built and maintained. Some supplies, he reported, moved into the district avoiding Eagle altogether. Dropped off in Canada at the confluence of the 40 Mile River with the Yukon River, miners picked up the goods and sledged them up the 40 Mile River. In fact, the mine at Walker's Fork, the largest in the district employing 25 men, received its supplies directly from Dawson.¹³

Mines In The Eagle District

Christianson also listed the mining locations. As preciously noted, the biggest operation in the 40 Mile District was at Walker's Fork which used both dragline scraper and hydraulics. There also were smaller operations at Chicken Creek, Jack Wade, Dome and Moose Creeks, and Discovery Fork. At several other placers he observed mining operations run singly or by two men. In the 70 Mile District, small placer mines operated at Crooked, Broken Neck, Bryant, Fox, and Alder Creeks. Christianson pointed out that, although considerable quantities of low grade placer ground existed, to really profitably utilize them required modern ma-

chinery. This, in turn, necessitated capital which was in short supply. In conclusion, he stated that the Commission intended to spend \$2000 in the 70 Mile and \$4500 in the 40 Mile Districts for the 1929 season. Considering the low freight volume moving over the roads and trails each year, the Eagle District received a generous allotment of road funds for the season.¹⁴

Never Enough Funds

Unfortunately, Congress never appropriated the funding level which the Alaska Road Commission desired. As already mentioned, the Commission, in cooperation with the governor of Alaska, the Territorial Board of Road Commissioners and other interested federal and territorial officials had submitted to Congress a long-range program of operations in 1920. It had proposed three types of work in order of their priority: first, the construction of approximately 700 miles of arterial or feeder highways principally following old routes, at an estimated cost of \$7 million; second, the building of development road where most needed, at a cost of about \$1 million; third, the maintenance of the existing road and trail system at a ten-year cost of approximately \$2 million. This brought the total cost for the ten year period to \$10 million.¹⁵

For the first five years of the program, however, Congress had appropriated less than half the estimates. Of this sum, three-fourths had been required for maintenance and repairs. In 1924, the Commission revised its 1920 ten year program. For the next five years, it requested \$4,350,000 for the maintenance and improvement of 9,736 miles of existing routes, and \$1,735,000 for the completion of projects already underway. It requested another \$1,780,000 for the completion of projects already approved but not yet undertaken, and another \$1,135,000 for constructing transportation components likely to arise with economic development during the next five years. In short, the Commission requested a total of nine million dollars for the five year period, but Congress appropriated only \$4,325,000 for a short-fall of \$4,675,000.¹⁶

New Ten Year Program

Finally, the Commission submitted a new ten year program which was to become effective in fiscal year 1932. For maintenance and improvements it asked for \$9,047,000, and another \$7,500,000 for new construction for a total outlay of \$16,547,000. Of this amount, the Commission asked Congress to appropriate \$15,547,000, and the territorial legislature to contribute \$1,000,000.¹⁷

The War Department advised the Alaska Road Commission next that it needed to prepare yet another expenditure projection and submit it to the Federal Employment Stabilization Board in accordance with the Employment Stabilization Act of 1931. A six year program, from 1933 through 1938, it asked for \$740,000 for maintenance and improvements and \$290,000 for new construction in 1933 for a total of \$1,030,000. For the next five years, from 1934 through 1938, it asked for \$650,000 for maintenance and improvements and \$480,000 for new construction for each year for a total annual federal budget of \$1,230,000, or for a six year total of \$7,180,000.¹⁸

1932 Annual Report

In 1932, before the transfer of the Alaska Road Commission from the War Department to the Department of the Interior, Commission members proudly issued their annual report celebrating 28 years of service to the Territory. It had built and maintained 1,701.5 miles of wagon and tram roads, most suitable for automobile travel; 1,495.5 miles of winter sled road, 7,322 miles of trail and 712 miles of flagged trail. This had been accomplished at a total cost of \$18,015,848.47, of which \$9,393,369.68 went for new construction and \$8,622,478.49 for maintenance and improvements. The Commission had expended a total of \$18,312,825.40 of which \$12,694,859.28 Congress had appropriated. Some \$5,617,966.12, or over 30 percent of the total had come from territorial sources.¹⁹

New Equipment

Over the years, the Commission had acquired many pieces of mechanical equipment, and was now able to handle engineering construction anywhere in the territory. The equipment included the following:

- 3 graders, motor
- 1 shovel, three-eighths-cubic yard, gasoline
- 3 scrapers, automatic, tractor drawn
- 1 hoist, for attachment to "30" tractor
- 2 auto trucks, Dodge
- 145 auto trucks, Ford
- 27 auto trucks, G.M.C.
- 1 auto truck, Pierce Arrow
- 1 auto truck, White
- 9 boilers, steam
- 1 boiler, pile driver
- 2 cars, gasoline section
- 11 cars, roller bearing push
- 4 compressors, air, portable
- 2 crushers, stone
- 1 drum, hoisting
- 21 drags, road
- 2 ditches, road
- 1 engine, donkey
- 6 engines, hoisting
- 37 graders, road, tractor drawn
- 12 graders, road, horse drawn
- 10 graders, motor
- 11 hoist, Allison, for attachment to Fordson tractor
- 1 hoist, double drum for attachment to "30" tractor
- 11 jack hammers
- 7 levels, surveying
- 1 loader, belt, conveyor, portable
- 2 locomotives, gasoline
- 2 machines, mowing, horse drawn
- 6 machines, mowing, tractor drawn
- 12 maintainers, tractor drawn
- 5 pile drivers, complete
- 50 plows and 3 plows, reversible back-filler attachment for "30" tractor
- 1 plow, snow, lateral rotary type
- 8 rollers, road
- 7 saws, power driven
- 1 sawmill, portable
- 1 scarifier
- 51 scrapers, slip
- 5 scrapers, wheel, 1 scraper, self-loading, tractor drawn

11 scrapers, Fresno
28 scrapers, automatic, tractor drawn
11 shovels, three-eighths-cubic-yard, gasoline
47 sleds, bole
30 tractors, caterpillar "30"
4 tractors, caterpillar "60"
2 tractors, monarch "35", 1 tractor, Holt
1 tractor, Case, 3 tractors, Fordson
28 trailers, highway, 2 trailers, crawler type
9 transits, surveying
63 wagons, 5 welding outfits, 13 windres, hand.

Added Responsibilities

Over the years, the War Department added to the responsibilities of the Commission. For example, effective April 1, 1921, the office of the Chief of Engineers created the Alaska Engineer District. The Chief of Engineers appointed the president of the Commission district engineer, and placed the two other Commission members under the orders of the district engineer. The Commission's secretary and disbursing officer also became disbursing officer of the district. As a part of North Pacific division, the district engineer rendered an annual report of the operations of the Alaska district to the Chief of Engineers.²¹

Congress and the War Department also directed the president of the Commission to direct the construction or repair of any aid to navigation, authorized by Congress in the sixteenth lighthouse district which included Alaska. By an informal agreement, 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. This agreement became effective on April 1, 1922. In addition, the territorial government requested the president of the Commission to supervise a variety of territorial public works such as the construction of roads, aviation fields, shelter cabins, telephone lines, flood protection and terminals. The duties and responsibilities kept piling up. The Quartermaster General

of the Army requested the Commission to disburse funds and generally supervise the administration of the Sitka National cemetery, created by executive order of June 12, 1924, and at the request of the commanding general of the Ninth Corps Area, the Alaska Road Commission had built a water supply system for Chilkoot Barracks, the only Army post in Alaska. The Commission, on behalf of the Federal Power Commission, supervised and inspected hydroelectric developments in the territory; and finally, in conformance with an act Congress had approved on May 15, 1930, the president of the Alaska Road Commission was appointed a member of the Commission for studying the possible construction of the Pacific-Yukon Highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska.²²

Smooth Cooperation Among Bureaus

In short, over the twenty-eight year history of the Alaska Road Commission there had developed, without legislation, but through executive orders and interdepartmental and interbureau agreement, a harmonious working arrangement utilizing the facilities of all the organizations involved interchangeably. The Commission, however, kept a careful account of all funds so that each appropriation was eventually expended according to Congressional intent, and no appropriation was either increased nor diminished by such interchange of working funds or facilities. The Commission prepared separate accounts and reports to the departments under whose direction they performed the work. This coordination had made possible the economical construction of many public works without the expenditure of a large overhead. Had each organization acted independently, there would have been the expenditure of substantial overhead funds.²³

Activities In 1932

In 1932, the Alaska Road Commission conducted the following activities under its consolidated engineering direction: The construction,

repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works, in excess of 11,000 miles, and extending from year-around open ports on Alaska's south coast to all inhabited parts of the territory; territorial roads, bridges, ferries, aviation fields, telephone lines, and trails throughout Alaska, covered by cooperative agreements; shelter cabins; the seventy-four miles long Nome-Shelton tramway. Either engines or dogs pulled the tramway cars. There also was the Valdez Dyke, the Yukon-Kuskokwim portage, and the government float in Juneau. ²⁴

Improvements Accomplished

The Alaska Road Commission also had made improvements at the following location: Nome Harbor, Port Alexander, and Harbor of Refuge and Seward Harbor; it had conducted preliminary surveys or examinations of Sitka Harbor, Dry Pass, Nome Harbor; Egegik River, Kake Harbor, Stikine River, Petersburg Harbor, Keku Strates; Kodiak, Wrangell, and Craig, Harbors; it had built flood control devices on the Salmon River; and issued permits for fish traps and other structures in the navigable waters along Alaska's 26,000 mile long coast; it had improved the Sitka National Monument and maintained various aids to navigation. Also, larger available funds allowed purchase consolidation for supplies resulting in lower prices, and combined operations avoided conflicts in plans and work compilations. Very importantly, having funds available on a year-round basis avoided the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of each working season. All of this made the operations much more flexible and responsive to local needs.²⁵

Aviation

Alaskans had enthusiastically embraced aviation, largely because of the territory's huge size and difficult geography, and scarcity of other transportation needs. To keep pace with aviation developments, therefore,

the territorial legislature, since 1925, had authorized the expenditure of a portion of the territorial road funds for the construction of aviation fields. The Alaska Road Commission built these airfields under the existing cooperative agreement with the territory. By 1932, some seventy of these airfields had been constructed at a total cost of \$173,243.47. Some figures illuminated the importance of Alaskan aviation during the last fiscal year:

Planes in service.....	31
Plane miles.....	742,854
Passengers carried.....	6,637
Passenger miles.....	942,176
Mail and express carried.....	496,680 lbs.

A summary of the work the Commission had accomplished by 1932 follows:

Consolidated cost summary

No.	Subproject	Cost, 1932	Total cost to June 30, 1932	Cost maintenance and improvement 1932	Total cost maintenance and improvement to June 30, 1932	Cost construction, 1932	Total cost construction to June 30, 1932
1	Prince of Wales Island ¹		\$63,850.26		\$21,038.40		\$42,811.86
2A	Auk Bay extension ¹		60,404.43		12,300.30		48,104.13
2B	Mendenhall Glacier extension ¹		15,150.21		7,644.57		7,505.64
2C	Eagle River extension ¹		18,362.32		3,360.00		15,002.32
2D	Juneau-Duck Creek ¹		109,658.27		31,250.55		78,407.72
2E	Gastineau Channel Bar	\$240.00	30,007.83	\$240.00	1,386.00		28,621.83
2F	Gold Creek Bridge, Juneau		2,156.75				2,156.75
2G	Alaska Juneau Mine Trail		831.66				831.66
2H	Juneau Wharf	275.01	30,967.53	275.01	751.01	751.22	30,216.31
2J	Juneau Float	45.38	5,179.80	45.38	45.38		5,134.42
3A	Haines-Wells	6,044.27	243,206.34	6,044.27	119,576.35		123,629.99
3B	Pleasant Camp extension	5,685.68	170,710.20	5,685.68	28,516.00		142,194.20
3C	Porcupine extension		47,534.63		9,279.73		38,354.90
3D	Haines-Mud Bay	115.75	32,064.29	115.75	13,256.83		18,807.46
3E	Haines-Chilkoot	116.14	20,224.86	116.14	1,988.30		18,236.56
3F	Haines-Jones Point	34.75	2,353.20	34.75	799.75		1,553.45
3G	Chilkoot Barracks water supply	28,344.60	28,344.60			28,344.60	28,344.60
3H	Chilkoot Barracks Road	1,252.50	1,252.50	1,252.50	1,252.50		
4A	Donnelly-Washburn ²		33,460.05		14,594.66		18,865.40
4AA	Richardson-Democrat Creek		2,320.59				2,320.59
4AB	Donnelly Aviation Field	14.11	137.42	14.11	14.11		123.31
4BA	Valdez-Ptarmigan drop	44,030.24	1,067,894.63	44,030.24	597,338.08		470,556.55
4BA	Dyke	27,123.68	119,100.36	27,123.58	63,034.38		56,065.98
4BB	Ptarmigan Drop-Ernestine	9,424.92	451,562.55	9,424.92	280,334.99		171,227.56
4C	Ernestine-Willow Creek	4,491.07	363,086.10	4,491.07	185,586.25		177,499.85
4D	Willow Creek-Gulkana	17,270.64	606,055.01	17,270.64	359,660.43		246,394.58
4E	Gulkana-Sourdough	17,436.24	384,036.25	17,436.24	239,862.55		144,173.70
4F	Sourdough-Mile 168	20,712.18	324,881.94	20,712.18	188,623.65		136,258.29
4G	Mile 168-Delta River	19,963.90	538,024.51	19,963.90	379,408.62		158,615.89
4H1	Delta River-Rapids	40,465.49	723,227.62	40,465.49	463,262.02		259,965.60
4H2	Rapids-Grundler	35,089.23	403,186.04	35,089.23	282,799.92		120,386.12
4I	Grundler-Richardson	949.01	345,806.87	949.01	224,512.87		121,294.00
4J	Richardson-Salchaket	2,919.89	448,286.96	2,919.89	232,768.95		215,518.01
4JA	Lake Harding Road	15.73	5,068.96	15.73	1,968.21		3,100.75

Cost consolidated summary - Continued

Consolidated cost summary - Continued

4K	Salchaket-Fairbanks-----	\$12,040.75	\$548,781.48	\$12,040.75	\$293,818.61	-----	\$254,962.87
4KA	Salcha Bridge-----	4,555.65	81,206.87	4,555.65	30,836.20	-----	50,370.67
5	Ester-Dunbar ² -----		19,405.18	-----	6,781.00	-----	12,624.18
5A	Dunbar-Tanana-----	749.31	89,182.74	749.31	38,913.05	-----	50,269.69
5B	Nenana-Campbells-----		2,025.61	-----	106.60	-----	1,919.01
5C	Fish Lake-American Creek-----		\$7,501.43	-----	\$1,734.90	-----	\$5,766.53
5D	American Creek Aviaton Field-----		940.00	-----		-----	940.00
5E	Tanana Aviation Field-----	189.76	4,274.92	189.76	374.96	-----	3,899.96
5F	Illinois Creek-MoranCreek-----		1,178.89	-----		-----	1,178.89
6A	Willow Creek-Tonsina-----	3,783.70	229,458.59	3,783.70	119,797.81	-----	109,660.78
6B	Tonsina-Chitna-----	13,794.13	353,827.21	13,794.13	208,464.52	-----	145,362.69
6D	Chitina Depot-----	147.89	14,600.78	147.89	2,662.12	-----	11,938.66
6E	Chitina native school-----		599.66	-----	104.60	-----	495.06
6F	Lower Tonsina Aviation Field-----		1,587.15	-----		-----	1,587.15
6G	Copper Center Aviation Field-----	9.09	276.92	9.09	76.33	-----	200.59
6H	Chitina Aviation Field-----		110.85	-----		-----	110.85
7A	Summit-Chatanika-----	4,318.49	80,508.40	4,318.49	39,745.69	-----	40,762.71
7AA	Cleary Creek-----	186.81	8,375.56	186.81	4,057.75	-----	4,317.81
7B	Fox-Olnes-----	1,009.87	50,809.91	1,009.87	22,718.26	-----	28,091.65
7BA	Dome-Spaulding Mine-----		3,220.31	-----	380.94	-----	2,839.37
7BB	Fox-Steel Creek-----		855.75	-----		-----	855.75
7C	Summit-Fairbanks Creek-----	2,103.27	53,254.89	2,103.27	28,352.28	-----	24,902.61
7CA	Summit-Fish Creek-----	199.76	16,561.15	199.76	3,780.33	-----	12,780.82
7D	Ester Creek-----	3,131.49	85,005.60	3,131.49	46,348.67	-----	38,056.93
7DA	College Spur-----	28.25	1,391.52	28.25	861.52	-----	530.00
7DB	Ester-Dome-----	8.50	4,683.31	8.50	490.58	-----	4,192.73
7DC	St. Patricks-Happy-----	231.71	7,116.57	231.71	1,047.10	-----	6,069.47
7DD	Ester-Beegler-----	10.28	1,010.28	10.28	10.28	-----	1,000.00
7E	Vault Creek ¹ -----		4,875.20	-----	172.37	-----	4,702.83
7F	Vault Creek-Treasure Creek ¹ -----		1,379.09	-----	29.09	-----	1,350.00
7G	Fairbanks-Gilmore-----	17,267.67	183,377.92	17,267.67	112,975.17	-----	70,402.75
7GA	Lazelle Road-----	171.42	6,024.96	171.42	1,911.45	-----	4,113.51
7H	Little Eldorado Creek-----	9,778.20	21,826.89	9,778.20	13,248.58	-----	8,578.31
7I	Gilmore-Summit-----	7,867.30	54,187.23	7,867.30	35,023.91	-----	19,163.32
7IA	Gilmore Creek ² -----		1,562.00	-----		-----	1,562.00
7J	Fairbanks-Chena Hot Springs---	814.42	17,618.57	814.42	9,585.98	-----	8,032.59
7JA	Chena River Branch-----	181.72	1,653.37	181.72	1,039.36	-----	614.01
7JB	Palmer Creek Aivation Field---	14.11	839.11	14.11	264.11	-----	575.00
7JC	Colorado Creek-South Fork-----		600.00	-----		-----	600.00
7K	Olnes-Livengood-----	37,926.59	52,917.46	-----	2,170.39	\$37,926.59	50,747.07
7N	Farmers-Birch Hill-----	776.71	25,414.36	776.71	11,012.39	-----	14,401.97

7NA	Isabelle Creek-----		\$2,484.38	-----	\$809.38	-----	\$1,675.00
7NB	Ballaine-Rickert-----		1,926.76	-----	126.76	-----	1,800.00
7R	Goldstream-O'Connor Creek-----	\$399.00	553.64	\$399.00	399.00	-----	154.64
7S	Graehl Bridges-----	459.47	4,894.79	469.47	1,844.43	-----	3,050.36
7T	Farmers-Chena Slough-----	1,496.27	17,097.31	1,496.27	5,898.54	-----	11,198.77
7V	Fairbanks, wireless-----		495.46	-----	495.46	-----	
7X	Chena Hot Springs Aviation Field-----		1,739.58	-----	50.00	-----	1,689.58
7Y	Fairbanks Aviation Field-----	14.11	19,969.33	14.11	498.11	-----	19,471.20
7Z	Fairbanks Aviation Field Road-----		766.65	-----		-----	766.65
8	Nome-Council-----	10,593.80	422,411.60	10,593.80	243,028.64	-----	179,382.96
8D	Council-Ophir Creek-----	1,195.68	7,804.82	1,195.68	7,804.82	-----	
8H	Casa de Paga-----	175.50	32,357.27	175.50	14,917.62	-----	17,439.65
8J	Shovel Creek-----		66.55	-----	8.05	-----	58.50
8K	Council Aviation Field-----	845.03	2,244.27	845.03	845.03	-----	1,399.24
8L	Port safety aids-----	120.00	616.50	120.00	616.50	-----	
9	Rampart-Eureka-----	1,091.92	52,312.66	1,091.92	23,198.30	-----	29,114.36
10	Seward-Kenai Lake ¹ -----		80,783.93	-----	34,523.10	-----	46,260.83
10A	Seward-Radio ¹ -----		5,594.04	-----	124.00	-----	5,470.04
10B	Seward-Nash ¹ -----		21,996.00	-----	8,753.70	-----	13,242.30
10C	Lowell Creek flood control-----	701.71	124,663.54	701.71	11,424.92	-----	113,238.62
10D	Seward Aviation Field-----	286.77	10,343.61	-----	245.75	\$286.77	10,097.86
11A	Eagle-Liberty-----	7,237.00	119,083.46	3,507.09	65,660.91	3,730.00	53,422.55
11B	American Summit-Forty Mile-----	345.50	26,945.31	345.50	6,694.12	-----	20,251.19
11C	Steel Creek, mouth of Walkers Fork	638.90	8,499.06	638.90	3,866.56	-----	4,632.50
11D	Steel Creek-Walkers Fork-----	249.50	6,446.20	249.50	2,336.20	-----	4,110.00
11E	Eagle-Seventy Mile-----	746.89	20,385.89	746.89	15,421.30	-----	4,964.59
11F	Liberty-Chicken-----	1,815.55	17,439.74	1,815.55	13,425.47	-----	4,014.27
11G	Steel Creek-Canyon Creek-----		914.00	-----	914.00	-----	
11J	Forty Mile-Chicken-----		44.75	-----	44.75	-----	
11K	Forty Mile-Steel Creek-----		80.00	-----	80.00	-----	
11L	Franklin-Chicken-----	117.00	1,843.75	117.00	1,843.75	-----	
11M	Jack Wade-Walkers Fork-Boundary	165.87	290.87	165.87	290.87	-----	
11N	Lilywig Creek-----		909.50	-----		-----	909.50
11P	Chicken Aviation Field-----	49.00	2,749.14	49.00	49.00	-----	2,700.14
11Q	Eagle Aviation Field-----	443.48	2,762.98	443.48	742.23	-----	2,020.75
12A	Mile 34-Lynx Creek ² -----		22,192.66	-----	8,239.03	-----	13,953.63
13A	Nome-Bessie-----	918.43	86,629.09	918.43	48,087.14	-----	38,541.95
13B	Bessie-Snake River-----	5,127.84	82,475.02	5,127.84	52,941.90	-----	20,533.12
13BA	Snake River-Monument Creek-----	371.38	1,788.05	371.38	371.38	-----	1,417.27
13C	Bessie-Sunset Creek-----	16,674.63	36,414.10	1,242.00	15,141.82	15,432.63	21,272.28
13D	Bessie-Dry Creek ¹ -----		3,280.20	-----	1,706.73	-----	1,582.47
13E	Dry Creek-Newton ² -----		523.74	-----	223.86	-----	399.88
13F	Nome-Osborne-----	187.21	56,827.92	187.21	41,434.13	-----	15,393.79

270

Consolidated cost summary - Continued

13G	Grass Gulch ² -----	\$1,125.73	-----	\$338.94	-----	\$786.79
13H	Center Creek ² -----	1,538.80	-----	1,455.15	-----	83.6
13J	Wonder-Flat Creek ² -----	2,803.72	-----	2,633.22	-----	170.50
13K	Bessie-Buster----- \$563.89	53,836.81	\$583.89	36,332.83	-----	17,503.98
13L	Nome buoys-----	585.00	-----	585.00	-----	-----
13M	Nome Depot----- 307.22	4,832.42	307.22	4,832.42	-----	-----
14	Sitka-Indian River ¹ -----	9,610.88	-----	3,336.16	-----	6,274.72
14	Sitka-Indian River----- 129.15	6,771.76	129.15	3,208.76	-----	3,563.00
14A	Sitka National Monument----- 1,291.69	12,196.08	1,291.69	10,646.08	-----	1,550.00
14B	Sitka National Cemetery----- 1,072.33	9,233.02	1,072.33	5,733.02	-----	3,500.00
14C	Sitka-Pioneer Cemetery Road--- 45.00	4,399.16	45.00	1,058.14	-----	3,341.02
14D	National Cemetery Road----- 200.41	1,993.30	200.41	1,195.83	-----	697.47
15	Circle-Miller House----- 25,591.20	583,981.73	13,330.20	151,293.70	\$12,261.00	432,688.03
15A	Central House-Circle Hot Springs 884.52	32,181.54	884.52	9,680.84	-----	22,500.70
15B	Central House-Deadwood----- 8,160.92	12,051.88	-----	-----	8,160.92	12,051.88
15C	Circle Hot Springs Aviation Field 64.11	1,702.21	64.11	385.71	-----	1,316.50
15D	Leech cut-off-----	224.75	-----	-----	-----	224.75
15E	Miller House spur----- 206.05	2,206.22	206.05	335.69	-----	1,870.53
16	Chatanika-Miller House----- 98,687.12	752,743.38	41,160.00	217,134.87	57,527.12	535,608.51
16A	U.S. Creek Branch----- 706.81	12,362.79	706.81	1,990.66	-----	10,372.13
16B	Eagle Creek spur-----	306.03	-----	224.86	-----	81.17
16C	Chatanika-Miller House (winter) 71.78	23,262.11	71.78	8,647.37	-----	14,614.74
16D	Sourdough Creek Branch----- 206.29	2,970.41	206.29	206.29	-----	2,764.12
17	Tanana-Kaltag----- 386.40	34,235.33	386.40	10,497.53	-----	23,737.80
17A	Lewis Landing-Dishkaket ² -----	483.37	-----	-----	-----	483.37
17B	Nulato-Dishkaket ² -----	735.88	-----	250.00	-----	485.88
17C	Nulato Aviation Field----- 14.13	5,026.02	14.13	14.13	-----	5,011.89
17D	Tanana-Kaltag telephone line-----	6,683.59	-----	6,683.59	-----	-----
18	Kaltag-Nome----- 1,758.09	70,535.17	1,758.09	42,397.78	-----	28,137.39
18A	Bonanza-Kotzebue----- 717.94	9,741.30	717.94	8,511.30	-----	1,230.00
18B	Golovin-Council----- 13.09	386.94	13.09	386.94	-----	-----
18D	Unalakleet Aviation Field----- 571.90	1,641.17	171.90	199.50	400.00	1,441.67
18E	Solomon Aiviaton Field----- 267.55	719.83	267.55	624.83	-----	95.00
18F	Golovin Aviation Field----- 167.80	1,751.97	167.80	172.90	-----	1,579.07
18G	Moses Aviation Field-----	254.20	-----	29.20	-----	225.00
18H	Kaltag-Unalakleet telephone line-----	2,454.00	-----	2,454.00	-----	-----
18J	Spruce Creek-----	287.50	-----	-----	-----	287.50
19	Kern Creek-Knik ² -----	13,891.95	-----	3,615.73	-----	10,276.22
19A	Kenai Lake-Kern Creek ² -----	6,833.20	-----	-----	-----	6,833.20
19B	Mile 27, mile 29, A. N. R. R. ² -----	741.66	-----	-----	-----	741.66

19C	Kenai Lake, mile 27 A. N. R. R. ² -----		\$1,595.81	-----		\$1,595.81
19D	Kern Creek-Indian Creek ² -----		3,758.26	-----		3,758.26
19E	Girdwood-Crow Creek ¹ -----		3,434.15	-----	\$2,542.50	891.65
20A	Knik-Susitna ² -----		8,437.44	-----	629.59	7,807.85
20B	Susitna-Rainy Pass-----		32,876.98	-----	6,598.69	26,278.29
20C	Rainy Pass-Big River-----		16,436.46	-----	1,927.39	14,509.07
20D	Dishkaket-Kaltag ² -----		4,290.00	-----	38.60	4,251.40
20DA	Takotna-Ophir (winter)-----	\$8.98	4,896.47	\$8.98	1,096.47	3,800.00
20DB	Ophir-Dishkaket-----		4,335.00	-----	760.00	3,575.00
20E	Susitna-McDougal ² -----		8,640.21	-----		8,640.21
20F	McDougal-Cache Creek ² -----		7,350.00	-----	347.10	7,002.90
20G	Lakeview-McDougal ² -----		3,675.00	-----		3,675.00
20H	Nancy-Susitna-----	1.00	2,773.36	1.00	2,773.36	-----
20J	Susitna-Tyonek-----	51.40	4,122.45	51.40	1,478.52	2,643.93
20K	Susitna Aviation Field-----		931.10	-----		931.10
21	Unalakleet-St. Michael-----		8,896.33	-----	6,293.70	2,602.63
21A	St. Michael Aviation Field-----		110.00	-----		110.00
22	Hot Springs-Sullivan Creek-----	354.00	60,168.37	354.00	32,344.53	27,823.84
23A	Snowshoe-Beaver-----		14,163.03	-----	3,227.58	10,935.45
23B	Beaver-Caro-----	375.45	65,198.90	375.45	34,958.00	30,240.81
23C	Big Creek-----		9,614.77	-----	3,294.77	6,320.00
23D	Caro-Flat Creek-----	1,233.94	16,517.56	1,233.94	12,494.30	4,023.26
23E	Caro-Coldfoot-----		13,167.46	-----	5,607.59	7,559.87
23F	Chandalar Aviation Field-----		8,335.74	-----	120.00	8,215.74
24	Mile 29, A.N.R.R.-Sunrise ¹ -----		57,850.94	-----	27,123.00	30,727.85
24A	Lynx Creek-Six Mile ¹ -----		10,882.40	-----	3,800.00	7,082.85
24B	Sunrise-Hope ¹ -----		1,085.00	-----	200.00	885.00
25A	Cripple River ² -----		8,801.79	-----	3,743.82	5,057.07
25B	Penny River ² -----		1,967.08	-----	691.05	1,276.03
25C	Nome wireless-----	202.02	3,638.64	202.02	1,873.73	1,764.91
25D	Mouth of Center Creek-----	286.66	26,229.45	286.66	18,728.38	7,501.07
25DA	Little Creek Branch-----	281.50	4,078.20	281.50	281.50	3,796.70
25E	Submarine Paystreak-----	437.90	35,556.33	437.90	11,186.00	24,370.33
25H	Otter Creek ² -----		1,802.52	-----	652.98	1,149.54
25K	Nome City Dock-----		2,966.65	-----		2,966.65
25L	Nome Aviation Field-----		8,982.43	2,062.27	5,459.73	3,522.70
25M	Telephone lines, Seward Peninsula-----		13,149.20	-----	11,449.20	1,700.00
25N	Nome city Streets-----		1,319.57	-----	1,319.57	-----
25P	Nome Harbor lights-----	173.81	815.29	173.81	815.29	-----
25R	Radio telephones-----	6,477.34	6,477.34	-----	-----	\$6,477.34
26	Candle-Candle Creek-----	2,642.88	83,480.75	2,642.88	48,486.68	34,994.07
26A	Kugruk River approach ² -----		488.00	-----	488.00	-----

Consolidated cost summary - Continued

26B	Bear Creek Trail-----		\$613.09	-----	\$273.09	-----	\$340.00
26C	Candle-Kiwalik-----		1,027.91	-----		-----	1,027.91
26D	Kiwalik Aviation Field-----	\$432.40	873.50	\$432.40	573.50	-----	300.00
26E	Candle Aviation Field-----		1,355.00	-----		-----	1,355.00
26F	Telephone line reconnaissance-----		148.00	-----	148.00	-----	
26G	Candle radio rod-----		575.00	-----		-----	575.00
27	Deering-Inmachuk-----	4,654.79	99,914.28	4,654.79	69,022.38	-----	30,891.90
27A	Deering Aviation Field-----	10.40	1,159.65	10.40	137.65	-----	1,022.00
28	Shelton-Candle-----	100.84	12,368.89	100.84	4,161.87	-----	8,207.02
28A	Nome-Serpentine Hot Springs---	2,546.36	15,994.93	2,546.36	10,755.93	-----	5,239.00
29	Tanana-Bettles-----	81.52	12,252.29	81.52	5,240.18	-----	7,012.11
29A	Bettles-Coldfoot-----	2,334.84	18,734.89	2,334.84	13,604.89	-----	5,130.00
29C	Mile 70-Hughes-----		2,167.02	-----	458.45	-----	1,708.57
29D	Wild River Trail-----		1,425.76	-----	1,425.76	-----	
29E	Bettles River Aviation Field-----		500.00	-----		-----	500.00
30	Hot Springs Landing-Eureka----	5,826.11	76,263.16	5,826.11	55,837.35	-----	20,425.81
30A	Hot Springs-Tofty-----		6,683.47	-----	2,374.21	-----	4,309.26
30B	Manley Hot Springs Aviation Field	24.98	1,189.98	24.98	49.98	-----	1,140.00
31	Caribou Creek-----		13,634.62	-----	5,053.70	-----	8,580.92
32A	Takotna-Flat (summer)-----		9,247.94	-----	3,810.65	-----	5,437.29
32AA	Takotna-Flat (via Moore Creek)	62.80	123.83	62.80	123.83	-----	
32AB	Flat-Moore Creek-----		15.00	-----	15.00	-----	
32AC	Candle Creek-Takotna-----		1,216.09	-----	1,216.09	-----	
32B	Iditarod-Flat-----	3,660.50	120,589.49	3,550.50	64,703.22	-----	55,886.27
32BA	Iditarod River improvement-----		100.00	-----		-----	100.00
32C	Ophir-Iditarod-----	53.91	7,747.26	53.91	2,747.26	-----	5,000.00
32D	Flat-Crooked Creek-----	391.78	5,932.57	391.78	4,452.57	-----	1,480.00
32DD	Flat-Georgetown-----		150.00	-----	150.00	-----	
32E	Takotna Aviation Field-----	1,479.25	3,859.87	-----	437.43	\$1,479.25	3,422.44
32F	Takotna Depot-----	3,235.01	13,064.12	3,235.01	5,454.85	-----	7,609.27
33A	Otter Creek Towpath ² -----		448.23	-----		-----	448.23
33B	Summit-Otter Creek-----		5,047.66	-----	5,047.66	-----	
33C	Flat City-Flat Creek-----	741.53	4,754.68	741.53	4,754.68	-----	
33D	Head Flat Creek-Willow Creek-	1,507.13	7,241.88	1,507.13	5,998.88	-----	1,243.00
33E	Willow Creek-Chicken Creek----	3,022.35	9,108.19	3,022.35	7,608.19	-----	1,500.00
33F	Flat City-Otter Discovery-----	3,503.62	20,665.29	1,500.00	8,850.59	2,003.62	11,814.70
33G	Candle Landing-Candle Creek-----		6,572.00	-----	975.00	-----	5,597.00
33H	Flat Aviation Field-----	223.42	3,123.42	223.42	223.42	-----	2,900.00
34	Iditarod-Dishkaket ² -----		4,830.98	-----	100.00	-----	4,730.98
34A	Flat-Holy Cross-Anvik-----	118.48	1,920.14	118.48	1,920.14	-----	
34B	Iditarod-Shageluk-Anvik-----	89.91	1,123.78	89.91	623.78	-----	500.00
35A	Archangel extension-----	296.08	31,113.28	296.08	13,915.36	-----	17,197.92
35AA	Sherry Branch-----		1,768.49	-----	649.17	-----	1,119.32

Consolidated cost summary - Continued

35AB	Fairangel extension-----		\$104.20				\$104.20
35B	Palmer-Fishhook-----	\$93.40	38,892.28	\$93.40	\$14,204.36		24,687.92
35C	Palmer-Matanuska River-----	31.17	34,702.33	31.17	11,046.17		23,656.16
35D	Willow Creek extension-----	3,190.34	108,868.29	3,190.34	70,734.15		38,134.14
35DA	Gold Chord Branch-----	179.21	11,617.49	179.21	1,026.25		10,591.24
35DB	Lucky Shot-St. Peters-----	28,544.59	54,341.28			\$28,544.59	54,341.28
35E	Wasilla-Fishhook-----	3,619.90	127,167.24	3,619.90	93,754.61		33,412.63
35F	Wasilla-Knik-----	243.98	52,346.51	243.98	25,911.04		26,435.47
35G	Palmer-Springer-----	97.82	3,173.76	97.82	1,600.44		1,573.32
35H	Wasilla-Finger Lake-Palmer----	2,110.85	36,280.38	2,110.85	17,223.15		19,057.23
35I	Moose-Palmer-----	133.95	2,520.62	133.95	627.53		1,893.09
35J	Wasilla-Matanuska-----	516.82	26,383.58	516.82	17,107.35		9,276.23
35K	Matanuska Trunk Road-----	7,419.23	47,366.38	7,419.23	32,314.92		15,051.46
35L	Palmer-Matanuska-----	345.98	15,579.65	345.98	7,174.95		8,494.70
35N	Houston-Willow Creek-----		1,212.32		272.00		940.32
35O	Fishhook-Goldmint-----	2,407.79	24,982.28	2,407.79	7,445.45		17,536.83
35P	Moose Creek-Baxter ² -----		2,218.62				2,218.62
35Q	Edlund Road-----	63.73	3,153.02	63.73	601.33		2,551.69
35R	Bogard Road-----	84.89	13,514.11	84.89	1,285.53		12,228.58
35RA	Engstrom Road-----		1,020.00				1,020.00
35S	Moose Creek Trail-----		2,118.44		77.43		2,041.01
35T	Werner connection-----		486.94				486.94
35U	Moose Creek Aviation Field-----		481.75		20.25		461.50
35V	Fishhook Aviation Field-----		917.49		68.75		848.74
35W	Wasilla Aviation Field-----		459.50				459.50
35X	Wasilla Aviation Field Road---	22.45	1,191.11	22.45	55.17		1,135.94
36	Mineral Creek-----	257.64	60,633.37	257.64	25,318.36		35,315.01
36A	Granby Road-----		3,431.35		349.44		3,081.91
36B	South Second Street, Cordova-----		3,373.15				3,373.15
36C	Eyak Lake Road ¹ -----		7,735.85				7,735.85
36CA	Cordova Aviation Field-----		941.90		15.75		926.15
36D	Valdez-Quartz Creek ² -----		524.75				524.75
36E	Valdez-Glacier ² -----		616.91				616.91
36F	Shoups Bay ² -----		3,457.25				3,457.25
37	Topkok-Candle-----		1,026.56		210.00		816.56
37A	Bluff-White Mountain-----		3,273.23				3,273.23
37B	Bluff Aviation Field-----		80.00				80.00
38A	Ruby-Long-----	10,413.65	237,807.24	10,413.65	105,786.89		132,020.35
38B	Poorman-Cripple-----	307.20	3,757.04	307.20	2,254.08		1,502.96
38C	Ophir-Cripple-----	44.15	4,001.58	44.15	2,102.58		1,899.00
38D	Ophir-Takotna-----	7,204.47	264,146.31	7,204.47	89,638.81		174,507.50
38DA	Little Creek Road-----		13,185.52		2,537.48		10,648.04
38E	Long-Poorman-----	7,588.85	158,145.17	7,588.61	40,952.61		117,192.56

Consolidated cost summary - Continued

38EE	Long-Poorman-----		\$5,378.00		\$110.00		\$5,268.00
38EEE	Tamarack-Poorman-----		22,322.69				22,322.69
38F	Poorman-Ophir-----		3,030.44		3,030.44		
38G	Takotna Aviation Field Road---	\$559.56	8,934.24		1,000.00	\$559.56	7,934.24
38H	Ganes Creek Road-----	3,515.50	14,930.71	\$3,515.50	11,526.86		3,403.85
38K	Ruby Aviation Field-----	23.76	2,098.51	23.76	898.51		1,200.00
38L	Ruby Aviation Field Road-----		500.00				500.00
38M	Ophir Aviation Field-----		1,825.12				1,825.12
39	Juneau-Sheep Creek ¹ -----		45,929.40		20,539.27		25,390.13
40	Douglas-Gastineau Channel ¹ -----		18,616.56		6,596.68		12,019.88
41	Kiana-Klery Creek-----	146.87	3,905.94	146.87	891.18		3,014.76
41A	Kotzebue-Shungnak-----	245.13	3,993.31	245.13	3,993.31		
41AA	Kiana-Selawik-Shungnak-----	791.40	791.40			791.40	791.40
41B	Kotzebue-Point Barrow-----	147.57	6,065.59	147.57	1,665.57		4,400.02
41C	Kiwalik-Noorvik-----	454.25	454.25	454.25	454.25		
41D	Kotzebue Aviation Field-----	110.40	1,955.45	110.40	537.90		1,417.55
41E	Kobuk Aviation Field-----	300.00	2,299.00			300.00	2,299.00
42	St. Michael-Kotlik-----		2,385.51		2,385.51		
43	Petersburg-Scow Bay ¹ -----		23,466.23		9,968.56		13,497.67
44	Skagway Valley ¹ -----		11,124.83		2,320.88		8,803.95
44A	Skagway Trails-----	1,899.53	17,833.41	1,899.53	6,674.70		11,158.71
44B	Skagway Aviation Field-----	263.34	7,048.87	263.34	263.34		6,785.53
45	Silver Bow Basin ¹ -----		23,466.21		17,527.59		5,938.62
46	Kobi-Eureka-----	94.74	16,437.54	94.74	3,865.91		12,571.63
46A	Roosevelt-Kantishna-----		61,686.53		19,723.84		41,962.69
46B	Lignite-Kantishna-----		13,130.00		1,163.09		11,966.91
46C	Nenana-Knights Roadhouse-----	157.30	3,651.03	157.30	2,058.45		1,592.58
46D	McKinley Park Road-----	96,237.79	721,437.38	25,194.94	87,907.28	71,042.85	633,530.10
46E	Diamond-Telida-----	69.70	10,276.40	69.70	3,464.84		6,811.56
46F	Nenana Cemetery Road-----	47.70	7,606.51	47.70	3,787.88		3,818.63
46G	Kobi-Bonnifield-----		5,767.51		69.90		5,706.61
46H	Lake Minchumina Aviation Field	14.11	914.11	14.11	164.11		750.00
46J	Kantishna Aviation Field-----		775.00		100.00		875.00
46K	Telida Aviation Field-----		850.00		250.00		600.00
46M	Nenana Aviation Field-----	65.48	1,108.04	65.48	388.04		720.00
47	Coldfoot-Wiseman-----	83.48	16,255.34	83.48	7,312.73		8,942.61
47A	Wiseman Aviation Field-----	623.33	6,434.02	623.33	2,320.77		4,113.25
47B	Nolan Branch-----	3,808.67	25,729.83	2,608.67	7,095.00	1,200.00	18,634.74
47C	Wisemann-Hammond-----	856.42	7,897.70	845.42	3,930.03		3,907.07
48	Iliamna Bay-Iliamna Lake-----	14,738.49	71,749.37	3,000.00	7,506.46	11,738.49	64,242.91
49	Davidson Landing-Taylor-----	1,518.16	19,930.25	1,518.16	12,217.08		7,713.17
50	Stilkine River ¹ -----		2,256.75				2,256.75
51	Talkeetna-Cache Creek-----	10,329.54	277,143.00	10,329.54	111,803.74		165,339.35

Consolidated cost summary - Continued

51A	Cache-Creek Trail-----		\$4,533.11	-----	\$2,283.11	-----	\$2,270.00
51B	Peters-Creek Trail-----	\$2,281.07	14,632.70	-----	2,144.81	\$2,281.07	12,487.89
51C	Yentna-Mills Creek-----		5,174.80	-----	44.36	-----	5,130.44
51E	Mills Creek-Cache Creek-----	107.22	2,253.83	\$107.22	946.38	-----	1,307.45
51F	Cache Creek Aviation Field-----		170.90	-----	-----	-----	170.90
52	Ketchikan-Wards Cove ¹ -----		26,120.42	-----	5,000.00	-----	21,120.42
52A	Ketchikan-Charcoal Point ¹ -----		15,500.48	-----	3,000.00	-----	12,500.48
53	Eagle-Circle-----		5,816.59	-----	4,161.87	-----	1,681.72
53A	Circle-Fort Yukon-----	77.00	7,929.98	77.00	3,763.41	-----	4,166.57
53B	Fort Yukon Aviation Field-----	14.11	3,096.00	14.11	557.11	-----	2,540.00
54	Chisana-Nizina-----	337.16	10,303.37	337.16	2,976.47	-----	7,327.30
54A	Chisana Aviation Field-----		1,744.63	-----	250.00	-----	1,494.63
54B	Nabesna Aviation Field-----		2,001.48	-----	524.90	-----	1,476.56
55	Kenai-Russian River-----	1.00	14,186.56	1.00	7,627.32	-----	6,559.26
55A	Kenai Aviation Field-----		901.51	-----	-----	-----	901.51
56	Tasnuma ² -----		1,658.14	-----	-----	-----	1,658.14
56B	Katalia-Chilkat ² -----		7,752.56	-----	-----	-----	7,752.56
57	McCarthy-Dan Creek-----	13,642.91	230,544.32	7,642.00	79,102.00	6,000.00	151,352.23
57A	Nizina River Bridge-----	774.63	108,749.63	774.63	42,807.80	-----	125,941.80
57B	Nizina Chitina River-----	1,438.01	7,726.62	-----	888.04	1,438.01	6,838.58
57C	McCarthy-Kennecott River-----	75.00	516.27	75.00	516.27	-----	-----
57D	Chititu Branch-----	221.29	7,865.42	221.29	1,636.94	-----	6,228.48
57E	McCarthy-Green Butte-----		2,178.42	-----	2,178.42	-----	-----
57F	McCarthy Aviation Field-----		2,923.11	-----	344.23	-----	2,580.88
57G	Copper Creek Trail-----		301.98	-----	-----	-----	301.98
57H	Chitina River Aviation Field-----		735.00	-----	-----	-----	735.00
58	Hyder-Salmon River ¹ -----		63.50	-----	-----	-----	63.50
59	Fairbanks Bridge-----	227.14	73,947.03	227.14	12,247.73	-----	51,690.30
59A	Fairbanks Depot-----	5,380.51	29,463.84	1,180.51	6,453.84	4,200.00	23,010.00
60A	Valdez Aviation Field-----		2,558.24	-----	206.50	-----	2,351.65
60B	Upper Tonsina Aviation Field-----		1,747.47	-----	47.50	-----	1,699.97
61	Strelna-Kuskulana-----		17,106.28	-----	4,589.73	-----	12,536.55
61A	Kotsina Trail-----		16,095.29	-----	1,523.74	-----	14,571.55
61B	Nuggett Creek Extension-----		1,630.00	-----	1,630.00	-----	-----
61C	Elliot-Kotsina-----		6,858.42	-----	-----	-----	6,858.42
61E	Farnan Trail-----		941.96	-----	15.80	-----	926.16
61F	Bremner Trail-----	1,695.49	5,215.47	-----	46.73	1,695.49	5,168.74
61G	Bremner Aviation Field-----	500.00	500.00	-----	-----	500.00	500.00
62	Dime Creek-----	1,172.34	78,869.24	1,172.34	35,166.28	-----	43,702.96
62A	Haycock-Bear Creek-----		517.82	-----	301.82	-----	216.00
62B	Haycock Aviation Field-----	2,010.40	2,115.40	-----	-----	2,010.40	2,115.40

62C	Koyuk Aviation Field-----	\$285.90	\$312.98	\$285.90	\$285.90	-----	\$27.08
63	Dunbar Brooks-----	115.64	31,525.72	115.64	12,296.13	-----	19,220.59
63B	Brooks-Livengood Creek-----	191.50	33,223.88	191.50	13,159.02	-----	20,064.86
63BA	Army Creek Branch-----		2,368.45	-----	300.00	-----	2,068.45
63C	Brooks Tram ² -----		63,455.30	-----	45,144.09	-----	18,311.30
63D	Brooks Aviation Field Road-----		713.00	-----		-----	713.00
63E	Livengood Aviation Field-----	164.12	2,778.87	164.12	624.87	-----	2,154.00
64	Cripple Lewis Landing ² -----		100.00	-----	100.00	-----	
64A	Cripple-Cripple Mountain-----		553.65	-----	261.65	-----	292.00
64AA	Cripple-Cripple Mountain (winter) 8.08		860.03	8.98	248.98	-----	611.05
65A	Gulkana-Chistochina-----	45,191.00	350,435.66	22,101.00	82,572.16	\$24,000.00	267,863.50
65B	Chistochina-Slate Creek-----	2,946.18	7,132.91	-----	109.50	2,946.18	7,023.41
65C	Chistochina-Slam-----	77,007.55	126,274.51	5,006.00	5,008.20	72,001.85	121,176.31
65D	Kechumstuk-Tanana Crossing-----		1,669.82	-----	1,669.82	-----	
65E	Chicken-Ketchumstuk-----		1,663.50	-----	1,663.50	-----	
65F	Grundler-Tanana Crossing-----	176.90	12,174.17	176.90	2,801.46	-----	9,372.71
65G	Slana-Chisma-----	4,384.91	16,717.80	-----	950.12	4,384.91	15,737.77
65H	Tanana Crossing Aviation Field-----		550.00	-----		-----	550.00
65K	Chistochina Aviation Field-----		2,067.97	-----		-----	2,067.97
66	Matanuska-Chickaloon ² -----		1,268.30	-----		-----	1,268.30
67	Nome-Teller-----	960.89	11,497.69	960.89	11,197.69	-----	300.00
67A	Teller-Cape Prince of Wales---	27.90	2,970.98	27.90	2,970.98	-----	
67B	Teller-Bluestone-----	1,694.13	11,950.27	1,694.13	6,273.82	-----	5,676.45
67C	Teller-Pilgrim Hot Springs----	21.55	3,138.05	21.55	1,338.05	-----	1,800.00
67D	Teller-American River-----		906.34	-----	56.67	-----	849.67
67E	Teller Aviation Field-----	110.40	1,071.20	110.40	318.40	-----	762.80
67F	Tin City-Goodwin-----	202.50	2,659.42	292.50	561.60	-----	2,097.82
67G	Lost River Aviation Field-----		121.40	-----		-----	121.40
67H	Wales Aviation Field-----		121.40	-----		-----	121.40
67J	Woolley-Gold Run-----	4.25	29.25	4.25	29.25	-----	
68	Flagging Trails-----	1,895.94	98,835.12	1,895.94	98,835.12	-----	
70	Misc. Surveys & Reconnaissances 6,159.72		21,503.84	-----	1,008.76	6,159.72	20,465.08
72	Wrangell Oil Dock ¹ -----		4,964.97	-----		-----	4,964.97
72A	Wrangell Cemetery Rd ¹ -----		8,630.22	-----	2,350.00	-----	6,280.22
73	Marshall Road-----	1,102.48	23,569.93	241.48	8,000.88	921.00	15,470.05
73A	Kotlik-Marshall-----	82.15	3,614.65	82.15	2,704.65	-----	850.00
73B	Stayabok-----		1,660.00	-----		-----	1,660.00
73C	Old Hamilton-Scammon Bay-----	62.00	2,440.18	62.00	586.73	-----	1,853.45
73D	Marshall Aviation Field-----	100.00	2,100.00	100.00	100.00	-----	2,000.00
75	Anchorage Loop-----	7,756.55	121,541.34	7,756.55	64,537.55	-----	57,003.79
75A	Anchorage-Lake Spenard-----	1,968.20	21,942.81	1,908.20	11,932.58	-----	10,010.23

Consolidated cost summary - Continued

75C	Chester Creek boat landing----	\$122.90	\$1,341.18	\$122.90	\$558.75	-----	\$782.42
75D	Anchorage Depot-----	161.27	7,383.93	161.27	3,417.58	-----	3,966.35
75E	McDonald Road-----	165.18	2,820.03	165.18	1,714.90	-----	1,105.13
75G	East First St., Anchorage ² -----		1,023.46			-----	1,023.46
75H	Lake Spenard Aviation Field-----		277.45			-----	277.45
75I	Oilwell Road-----	902.99	7,297.77	902.99	2,707.78	-----	4,589.99
75J	Anchorage Aviation Field-----	154.20	4,768.20	154.20	154.20	-----	4,614.00
75L	Anchorage Loop-Eklutna-----	192.29	2,717.75	192.29	192.29	-----	2,525.46
75M	Anchorage Radio Road-----		448.09			-----	448.00
76	Cantwell-Valdez Creek-----		10,793.95		2,953.75	-----	7,840.20
76A	Valdez Creek Aviation Field-----		1,337.10			-----	1,337.10
78	Valdez Depot-----		5,266.56		5,266.56	-----	
79	Seward Depot-----	57.50	4,171.55	57.50	4,171.55	-----	
80A	McGrath-Takotna-----		368.05		368.05	-----	
80AA	McGrath-Takotna(winter)-----	137.80	5,075.15	137.50	2,803.15	-----	2,182.00
80B	McGrath-Telida-----	253.74	12,376.50	253.74	5,108.38	-----	7,178.21
80C	McGrath-Candle Creek-----		305.20		305.20	-----	
80D	Nixon Fork-Nixon Mine-----	36.78	2,384.78	36.78	36.78	-----	2,348.00
80E	Takotna-Twin Peaks-----		213.16		100.00	-----	113.16
80F	Medfra-Nixon Mine-----	93.60	3,553.20	93.60	1,753.20	-----	1,800.00
80G	Takotna-Nixon Fork-----		610.56		610.56	-----	
80GG	Takotna-Nixon Fork (winter)-----		183.16		183.16	-----	
80H	McGrath Aviation Field-----	63.50	14,400.93	63.50	63.50	-----	14,346.43
80J	Medfra Aviation Field-----		345.00		60.00	-----	285.00
81	Good Creek-Salmon River-----	255.10	13,084.03	255.10	3,993.89	-----	9,900.14
81A	Rink River-----		1,550.00			-----	1,550.00
82	Taku River ¹ -----		20,208.95			-----	20,208.95
84	Fairbanks-Council Survey-----		41,528.75			-----	41,528.75
86	Fourth of July Creek-----	556.60	4,751.26	556.60	3,590.03	-----	1,161.23
87	Woodchopper Creek-----		872.00		810.00	-----	62.00
88	Perry-Eva Creek-----	7,008.65	24,175.33	7,008.65	9,815.64	-----	18,350.89
89	Kougarok Reconnaissance-----		4,312.11			-----	4,312.11
89A	Seward Peninsula Railroad-----	12,200.94	197,540.06	12,200.94	133,000.14	-----	64,539.92
89B	Pilgrim Aviation Field-----	10.40	1,126.40	10.40	410.40	-----	716.00
89C	Iron Creek-American Creek-----	292.50	2,478.67	292.50	723.75	-----	1,754.92
90A	Shelter Cabins, First Division-----		340.35			-----	340.35
90B	Shelter Cabins, Second Div.---	1,424.03	39,197.96	1,000.70	7,286.66	\$383.33	31,911.30
90C	Shelter Cabins, Third Div.---	21.55	24,720.02	21.55	2,328.90	-----	22,391.12
90D	Shelter Cabins, Fourth Div.---	1,254.30	42,419.33	504.30	5,495.15	750.00	36,954.18
91	Yakutat ¹ -----		50.55			-----	50.55
92A	Bethel-Quinhagak-----	268.00	2,979.21	268.00	1,181.71	-----	1,797.50

Consolidated cost summary - Continued

92B	Bethel-Tulusak-----	\$966.89	\$3,755.13	\$966.80	\$2,276.65	-----	\$1,478.48
92C	Akiak-Russian Mission-----	150.75	1,734.75	150.75	150.75	-----	1,584.40
92D	Bennett's Cut-Off-----		396.00			-----	396.00
92E	Yukon-Kuskokwim Portage-----	89.83	27,541.66	89.83	1,025.68	-----	26,515.98
92F	Quinhagnak-Goodnews Bay-----	80.86	2,863.27	80.86	445.50	-----	2,417.77
92G	Goodnews Bay-Togink-----		2,428.57		225.24	-----	2,203.33
92H	Togiak-Nushagak-----		8,492.98		4,300.82	-----	4,192.16
92I	Lewis Point-Naknek-----	382.56	4,171.66	382.56	1,539.32	-----	2,632.34
92J	Naknek-Egegik-----	166.34	2,082.84	166.34	877.84	-----	2,105.00
92K	Egegik-Kanatak-----		1,168.50		818.50	-----	350.00
92L	Crooked Creek-Aniak-----	196.56	1,940.74	196.56	1,129.74	-----	820.00
92M	Anink-Tuinksak-----	205.04	3,927.35	205.04	1,412.39	-----	2,514.96
92N	Akiak-Canyon Creek-----		306.00		306.00	-----	
92O	Tuluksak-Foothills-----	27.80	1,471.94	27.80	286.82	-----	1,185.12
92P	Holy Cross-Kaltshak-----	242.67	1,362.77	242.67	862.77	-----	500.00
92Q	Upper Landing-Bear Creek-----	2,691.04	8,210.02	2,691.04	4,119.04	-----	4,100.00
92R	Dillingham-Snag Point-----	14,511.27	16,417.58			\$14,511.27	16,417.58
93	Chulitna Trail-----	72.00	8,809.44	72.00	1,943.00	-----	6,956.44
93A	Bull River Trail-----		4,515.60		983.28	-----	3,582.82
93B	Indian River-----		6,579.63		13.40	-----	6,566.23
93C	Curry Aviation Field-----	3.84	4,221.05	3.84	844.45	-----	3,376.60
93D	Chulitna Tram-----	3.34	523.71	3.34	3.34	-----	520.37
93E	Hidden River Tram-----	135.92	135.92			135.92	135.92
94	Kodiak-Abberts-----	2,171.85	62,619.07	2,171.85	15,810.56	-----	46,808.51
95	Kanatak-Becharof Lake-----		30,276.74		6,394.43	-----	23,882.31
95B	Larsen Bay-Kariuk River-----		962.05			-----	962.05
96	Chickaloon-King River-----	37.00	1,870.68	37.00	1,070.68	-----	800.00
96A	Chickaloon Cable-----	20.22	404.44	20.22	132.15	-----	272.29
96B	Chickaloon-Nelchina-----	366.66	8,283.83	366.66	783.45	-----	7,500.37
97	Suntrana Footbridge-----		413.80			-----	413.80
97A	Healy Aviation Field-----		491.79			-----	491.79
98	Homer Spit-----	250.45	37,474.75	250.45	4,605.00	-----	32,869.75
98A	Nuka Bay-----		5,757.75		2,106.77	-----	3,650.98
98B	Ninilchik Aviation Field-----		384.18			-----	384.18
98C	Kasilof Aviation Field-----		674.52			-----	674.52
98D	Kasilof Road-----	1,012.10	18,158.45	1,012.10	1,012.10	-----	17,146.35

Consolidated cost summary - Continued

100	Office & General Overhead-----	\$30,453.65	\$580,323.20	\$19,242.31	\$307,483.97	\$11,241.34	\$272,839.29
101	Territorial General Overhead-----		71,521.31	-----	31,584.89	-----	39,936.42
	Total Costs-----	1,122,750.79	18,948,120.03	678,803.87	8,669,576.71	443,946.92	10,278,552.32
110	Book Value of Plant-----	39,500.25	90,347.56	-----	-----	-----	-----
111	Supplies & materials on hand	44,219.76	206,620.27	-----	-----	-----	-----
	Total Expenditures---	1,030,030.78	19,245,105.86	-----	-----	-----	-----

¹Transferred to Department of Agriculture.

²Abandoned

³Includes \$932,280.46 of supervised funds.

⁴Includes \$1,312.40 General Accounting Office settlements. Does not include \$3,858.13 reimbursements and receipts from sales.

280

²⁶At the conclusion of twenty-eight years of service, the Alaska Road Commission could look back on a solid record of achievement.

Footnotes

1. Donald MacDonald, "Report on Winter Trail Conditions Chatanika to Fort Yukon, February 28, 1929, R. G. 30, ARC, box 65480, Federal Records Center, Seattle, Washington.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. "Condition of the Richardson Highway, Alaska, May 10, 1929," RG30, ARC, box 65481, Federal Records Center, Seattle, Washington.
8. Ibid.
9. Ibid.
10. Annual Report of the Alaska Road Commission, 1932, p. 37.
11. Lottsfeldt to Gillette, May 29, 1929, R.G.30, ARC, box 65479, Federal Records Center, Seattle, Washington.
12. Christianson to Engineer Officer, ARC, June 10, 1929, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
13. Ibid.
14. Christianson to Engineer Officer, June 10, 1929, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
15. Report Upon The Construction and Maintenance of Roads, Bridges and Trails, Alaska, Extract From the Annual Report of the Chief of Engineers, 1931 (Washington, D.C.: Government Printing Office, 1932), pp. 2274-2275.
16. Ibid., p. 2275.
17. Ibid.
18. Annual Report of the Alaska Road Commission, 1932, p. 20.
19. Ibid.
20. Ibid., pp. 3-4.

21. Ibid., p. 11.
22. Ibid., pp. 11-12.
23. Ibid, p. 12.
24. Ibid.
25. Ibid., pp. 12, 11.
26. Ibid., pp. 45-55

CHAPTER TEN

THE ALASKA ROAD COMMISSION AND ALASKAN AVIATION

Major James G. Steese, the president of the Commission, submitted his annual report in October 1927. He obviously took pride in the achievements of his organization. From 1905 to 1927, the Commission had constructed 1,487.5 miles of wagon road, 100 miles of tramroad, 1,221.5 miles of sled road, 6,925.5 miles of permanent trail, and 712 miles of temporary flagged trail, for a total of 10,446.5 miles. Considering Alaska's huge size of 586,600 square miles, the total mileage was not impressive, but when taking into account the territory's rugged terrain, extremes in temperatures, and the relatively modest Congressional appropriations over the years, the ten-thousand odd miles of roads and trails did look imposing.¹

Steese noted the continued cooperation between Territorial officials and the Commission, based on section 17 of the Territorial road law of April 21, 1919. Under this section, Commission personnel had also performed territorial functions. For example, Anton Eide, the assistant superintendent of the Commission for southwestern Alaska had acted as chairman and secretary of the Territorial Divisional Road Commission for the third division, while Hawley Sterling, the superintendent for the Fairbanks district, had filled the same position for the Territorial Divisional Road Commission for the fourth division. In fact, the territory had not maintained its own road organization since March 31, 1921.²

During fiscal year 1927, Eide and Sterling, under the supervision of the Commission had expended \$13,052.15 and \$13,844.42, respectively. In addition, the Commission had been responsible for the expenditure of the following Territorial monies:

	Allotted	Expended
Cooperative Projects	\$127,550.00	\$127,550.00
Shelter cabins	25,000.00	8,624.34
Aviation fields	23,926.38	10,366.74

Telephone lines	7,468.40	1,382.50
Nome Harbor	2,500.00	2,500.00
Valdez Dike	10,000.00	10,000.00

When bills needed to be paid, the Commission charged the territory for work performed, while local banks disbursed divisional funds, but the Commission audited all vouchers under the same restrictions applying to federal vouchers before being certified to the territorial treasurer for payment.³

The Commission also had continued its cooperative effort with the territory on the rehabilitation and operation of the Nome to Shelton tramroad, situated on the Seward Peninsula and approximately 87 miles long, and the Tolvana tramroad, located about 50 miles northwest of Fairbanks and extending from the town of Brooks about 13 miles south to the head of navigation on the Tolovana River. The Commission had spent \$22,073.16 on the rehabilitation of the former, and \$6,932.08 on the latter. In addition, the Commission had assumed the repair and maintenance of 400 miles of telephone lines for the territory, and the construction and maintenance of 24 aviation fields.⁴

"The aviation," as Alaskans called it, had become very important in the Territory by 1927. The first plane to fly in Alaska took off from Fairbanks on July 4, 1914. Fairbanksans always celebrated the Fourth of July with foot, horse, and bicycle races, tugs of war, and baseball games - and this time they added an aerial circus. Arthur Williams, the owner of the Arcade Restaurant, and two other merchants hired aviator James Martin from the states, and paid his and his wife's transportation as well as the shipment of his small tractor biplane. It was an expensive undertaking and cost the three men several thousand dollars. They made a good choice, in picking Martin, for he was one of the earliest aviation pioneers in the United States and had invented the first successful tractor biplane in 1911 with which he set a world speed record of seventy miles per hour. An Army consulting engineer during World War I, he became a good friend of General Billy Mitchell, the Army advocate of air power, and subsequently invented numerous

other aeronautical products and manufactured those together with planes and automobiles at a factory in Garden City, Long Island, and New York.⁵ That was in the future, however.

The promoters planned to hold the aerial circus at the ball park. They planned to charge five dollars a head for admission, expecting a large crowd. But when Martin went up in his plane, the ball park was almost empty, but spectators all over town covered rooftops and wood-piles, watching the show for free. After one false try, Martin's biplane lifted into the air, and flew some 400 feet above the baseball diamond for nine minutes before it settled down. He flew four times, but the promoters lost a bundle of money.⁶

In 1920 General Mitchell sponsored the flight of the Army Air Service's Black Wolf Squadron from New York to Nome. This flight showed Alaskans what airplanes could do. It took the squadron, under the command of Captain St. Clair Streett, almost six weeks to reach Alaska. Finally, they landed at the ball park in Fairbanks joyously greeted by a large crowd of residents. "Wrong Font" Thompson, the editor of the Fairbanks Daily News-Miner, wrote that "adventurers of an earlier day take their hats off to the advance guard of the new generation who are blazing a pioneer trail by means of locomotion which seems almost super human and uncanny in its marvelous accomplishment."⁷

Several individual pilots followed the Army fliers, but Carl Ben Eielson probably was the most important figure for the development of Alaskan aviation. He arrived in Fairbanks in 1922 to teach school. A graduate of North Dakota State University, he taught mathematics and general science and coached basketball at the red frame high school on Eighth Street. But what Eielson wanted to do was to fly, not teach. He had learned flying in the Army Air Service during World War I. And soon Eielson persuaded Fairbanksans to buy a plane for him, a Jenny with an OX-5 engine. Dick Wood, a pioneer banker, gave most of the money. The plane arrived in Fairbanks on July 1, 1923, and three days later he climbed into the wicker seat of the open cockpit plane and made the first commercial flight in interior Alaska. Wood, his princi-

pal financial backer, climbed in behind him, well fortified with "Alaska Mule", a vicious local moonshine liquor. The two flew to Nenana, fifty miles from Fairbanks on the Alaska Railroad. That summer Eielson made several more cross-country trips, hauling passengers and light freight to nearby towns.⁸

Late in November of 1923, the United States Post Office gave Eielson a contract for ten twice-monthly mail trips from Fairbanks to the town of McGrath, more than three hundred miles distant. The Department also shipped him a Liberty-powered DeHavilland for the flights and agreed to pay him two dollars a mile - less than half the cost of transporting mail by dogsled. "The Aviation" had arrived in the north, and it was destined to revolutionize transportation, helping to tie together a vast subarctic subcontinent.⁹

With aviation established in the north, it became necessary to build aviation fields. As early as 1925, G. R. Jackson investigated landing fields in Nome on behalf of Alaska's first bush pilot, Noel Wien, a Minnesota farm boy who had arrived in Fairbanks in 1924. Soon Wien compiled a list of aviation firsts which was almost endless. And since he was Alaska's first bush pilot, almost every flight he made was an inaugural. He was the first to fly the 350 miles from Anchorage through the Alaska Range alongside Mount McKinley's 20,300-foot height to Fairbanks in the Interior. He was the first to fly over and land beyond the Arctic Circle; to fly commercially between Fairbanks and Nome; and to pilot the first passenger flight from Seattle to Fairbanks. The list is indeed a very long one.¹⁰

For the first flight to Nome, Jimmy Rodebaugh, one of the owners of the Fairbanks Airplane Company, bought a very large Fokker F.III which arrived in the town on two train flatcars early in the summer of 1925. Noel Wien and his brother Ralph assembled the aircraft with a curious crowd watching their every move. The assembly was uncomplicated, because the Fokker fitted together easily, but it took some time because of the size of the parts. Rodebaugh and the other officers of the company were anxious to get the Fokker flying because it promised to double the revenue taken in from any of the company's three biplanes.

The Fokker carried five instead of two passengers at an average of one dollar per mile, and 500 pounds of freight averaging 40¢ a pound on short flights and 75¢ on flights longer than sixty miles. In addition, there still was room for any mail the owners could contract from the post office in the future.¹¹

The Fairbanks Daily News-Miner was enthusiastic about the plane, stating that "Pullman equipment has nothing on the interior of this airship." The reporter was impressed by the "red upholstered chairs and settee, easily opened windows, vases for flowers and drapes and leather fittings" which all combined to make the airplane look comfortable and beautiful. The dull green exterior finishing gave the airship an aristocratic look and gave "one the feeling that all the equipment is safe and substantial." In this aircraft Wien planned to make a round trip to Nome on the Bering Sea, some 570 miles from Fairbanks. It was a most ambitious undertaking because the traditional method of traveling to Nome in the summer took about three weeks. The trip by boat down the Tanana and Yukon Rivers and across Norton Sound, is a distance of about 1,100 miles. In the winter it was traveled by dog team, 735 miles and four weeks to reach the town. The air distance to Nome was 570 miles which the Fokker could cover in less than seven hours. Wien's flight to Nome, the first long-distance effort accomplished in the territory, advanced northland transportation from the stone to air age.¹²

Norman C. Stines, a Bostonian and mining engineer for the Fairbanks Exploration Company, chartered the Fokker for \$1,500 to fly him and two women members of his party, Midge Downer and Mrs. Mayo, to Nome. But before Wien could fly to Nome he needed a place to land and take off again. G. R. Jackson, together with an employee of the Alaska Road Commission who understood aviation field requirements, scouted Nome and vicinity for a suitable location. They discovered two: the highpoint on Bessie Road between where Osborne Road branched off and Bourbon Creek was located, which offered a strip about 500 feet long and 25 feet wide. It could easily be smoothed out and all side obstructions removed without expense. The second was the parade grounds of the Army's old Fort

Davis, covered with driftwood and with a telephone line running through its center. Jackson estimated that clearing a 1,000 foot strip along the south side between the sea and the telephone line would cost fifty dollars. This sandy field had a length of 1,800 feet from the bridge to the first building at the fort and offered no overhead obstructions. It was 200 feet wide with a five percent slant dipping toward the sea; and across the Nome River from this field there was a 500 foot long meadow, about 75 feet wide, covered with goose grass which required no work and extended the strip. The Fokker needed a 900-foot run after touchdown. It had no brakes and its skid was a shovel type, three inches wide and six inches long. A sharp skid would not have dug in deep enough, because the craft was so light on the empennage that Wien could pick it up and walk the tail around without help. So Noel chose the Fort Davis field, provided it did not consist of loose sand, and that it be cleared of all driftwood, making it 1,400 by 500 feet without obstructions at either end.¹³

To comply with Wien's specifications, Jackson hired Billy Rowe for \$1,100 to clear, level, roll and generally put the field into the same condition army aviators enjoyed when they landed in Nome in 1920. It would be 1,400 feet long, he assured Noel, but only 300 feet wide because that was the distance from the sea to the Nome River. The telephone line was to be removed, and although there was some loose sand, the field's center was fairly firm. The Fairbanks Airplane Company guaranteed the \$1,100 payment to Rowe, and informed Jackson that the Territorial legislature had appropriated \$5,000 for the Nome field and asked the Alaska Road Commission to accomplish the work.¹⁴

On June 7, 1925, hundreds of Fairbanks citizens watched as thirteen people lined up to have their photograph taken standing in front of the Fokker. There was Jimmy Rodebaugh, dressed in coveralls, Norman C. Stines, in breeches and matching jacket, boots, white shirt, and tie, and his two companions, Midge Downer and Mrs. Mayo. Others posing in their Sunday best were Mayor Frank de la Vergne of Fairbanks, airplane company stockholders, Mr. and Mrs. Wood, and Mr. and Mrs. Frank Gordon, store owners, and Frank Struthers. Ralph Wien in coveralls stood be-

side his pilot brother in boots, breeches, leather jacket, and cloth cap. A uniformed conductor of the Alaska Railroad pretended to dispatch the historic flight. Then the Stines party climbed aboard, and the photographer shot one more picture with Mayor de la Vergne handing Noel a letter addressed to the Mayor of Nome. Noel started the engine, and after a long takeoff run between lines of autos and trucks, the Fokker was airborne at 10:45 p.m. on June 7, 1925, carrying 1,350 pounds which placed it over the aircraft's posted gross weight of 4,800 pounds. Noel climbed to 4,000 feet and cruised west at ninety miles an hour, passing Nenana on the left, Manley on the right, and picking up the Yukon at Tanana Village. From there on Noel did not know the country below him. He planned to follow the Yukon to where it just turned sharply south after receiving the Koyukuk River, 300 miles west of Fairbanks. There he would leave the Yukon and continue westward over the mountains between Nulato and Norton Bay and follow the coast to Nome. Wien carried Coast and Geodetic Survey charts of the Yukon and the Bering Coast, and he believed old-timers who had told him that the Yukon had many sand bars suitable for emergency landings along its entire length. That faith proved to have been misplaced.¹⁵

Wien was to land on a sand bar at the little mining settlement of Ruby, but when he got there at 12:45 in the morning there was no sand bar. In fact, since the river ran high after breakup, Wien had seen no sand bars at all on the trip. So he continued on, but about forty miles from Ruby Wien ran into heavy weather covering the whole Nulato range from north to south. Since he did not know how much rain the engine could take, and did not know the country ahead, he turned back. Wien had seen a cleared place on top of a hill above Ruby and there landed the plane. It ran uphill a couple of hundred feet and got to the top. It was a baseball field, and just over the highest point the plane rolled down, hit a soft spot and nosed over and slowly somersaulted onto its back. Noel and Ralph Wien helped the passengers out of the cabin. Fortunately, nobody had been hurt, and the damage to the plane was slight. The propeller was shattered, and approximately a foot of the balanced rudder was crushed down. Wien

had landed in four hundred feet a plane which needed a nine-hundred-foot landing run, and instead of smashing it and killing all five people aboard, had left it needing only a new propeller, some tube straightening, and a piece of petticoat to make it flyable again.¹⁶

Many of Ruby's population of 125 souls gathered at two in the morning and took the unexpected visitors down the bluff to the roadhouse where they slept a few hours. After these few hours of rest, Stines decided to forego any further flying, and hired a small boat to try to catch up with the regular Yukon steamer going to Saint Michael on Norton Sound, and from there take another scheduled boat along Norton Sound to Nome. As soon as the Army Signal Corps radio station opened later in the morning, Wien contacted Fairbanks Airplane Company and reported the accident and damage. Dick Wood promised to rush a spare propeller via gasoline launch to Ruby, hoping that he could cover the 220 miles to Ruby in two days. While Stines and his party departed downriver, Wien and Ralph set to work repairing the Fokker. The entire village helped right the plane, and village women supplied cloth for patching the fabric. Wood arrived with the propeller on the second day, having covered the distance to Ruby in a record thirty hours. Soon they were airborne again, and after a flawless flight of three hours and forty minutes out of Ruby the Fokker swooped down over Nome, and landed on the newly prepared strip on June 9, pronouncing it to be "satisfactory for use during this season flights...." Another \$500 had to be spent to make the field safe, but the Commission planned to construct a new one about one mile north of Nome - which was to be the permanent air-field.¹⁷

The Territorial legislature had indeed appropriated \$5,000 for "aeroplane landing fields in the Second Division of Alaska," directing the Territorial Board of Road Commissioners to select appropriate sites for such construction. The latter, as already stated, turned the responsibility over to the Commission under the terms of the 1919 cooperative agreement. At the suggestion of Noel Wien, the Commission then built a permanent airfield at the Bessie Road site. It consisted of two runways, an east-west and north-south one, the first 1,300 by 200 feet

and the second 1,400 by 200 feet. The construction task was easy and inexpensive because the area was underlain with gravel and covered only with bunches of moss which had to be removed, the runways dragged, and then smoothed and rolled.¹⁸

Alaskans quickly realized that the airplane was the ideal mode of transportation for the huge and rugged territory. Trips that would have taken weeks could now be covered in hours, and soon requests for construction of aviation fields poured in. William H. Hesse, the superintendent of the Chandalar Gold Company, made one of these in the summer of 1925. R. J. Sommers, the territorial highway engineer, told Hesse that \$600 was available for such work. Sommers also established procedures for such construction projects. The Territory and the Alaska Road Commission had adopted a standard size for aviation fields, 1,400 by 600 feet, extending in the general direction of the prevailing winds in order to permit planes to take off and land against the wind. Fields were to be smooth and firm, and this required a location with good drainage. It had to be absolutely free from soft spots, Sommers explained, because the planes in use weighed between three to five thousand pounds, and "when the plane comes to rest the entire weight is supported on the two-wheel landing gear and a plane in landing hitting a soft spot on the field is almost sure to result in a wreck." Hesse was to spend no more than \$600 for the work, and Sommers expected that the citizens of the area served would provide any additional funds needed.¹⁹

In the summer of 1925, the Territorial Board of Road Commissioners authorized funds for airfield construction in a number of locations. The Alaska Road Commission was to construct fields at Takotna (\$1,500) and Flat (\$1,000). The Board asked that citizens form local aviation committees in various communities which were to select the sites, receive Territorial funds, and raise local contributions. The estimated cost of the Fort Yukon field amounted to \$900, and of this amount the community had agreed to contribute \$600 in cash or work. The local aviation committee in Wiseman laid out the field, contributed \$1,000 and the Board paid \$2,000. Brooks was to receive \$300 and Lake

Minchumina \$700, while no final arrangements had yet been made for Ruby, Circle and Chena Hot Springs.²⁰

On January 30, 1928, the Fairbanks district of the Alaska Road Commission reported that fifteen airfields had been constructed for a total cost of \$13,963.03. The territory had funneled \$11,018.03 into the work, cash contributions had amounted to \$1,500 and donated labor had been worth \$1,445.00. Work on aviation fields progressed rapidly hereafter. At the end of 1934, Hawley Sterling, the acting chief engineer of the Alaska Road Commission, submitted a summary of existing and proposed airfields to Captain Murray Hall, the inspector of the Aeronautical Division of the Department of Commerce. By that time the Commission also had established class "A" fields, having two runways, each 300 by 3,000 feet, and emergency landing fields with an estimated size of 200 by 1,500 feet with only one runway. Sterling estimated that it would cost \$905,000 to improve existing fields, upgrade others and build additional emergency fields. This cost estimate, he warned, included only construction costs of the field but nothing for radio, lights, accommodations, depots or hangers. The Alaskan aviation community, the Commission, and the Territorial Board of Road Commissioners all hoped that the Department of Commerce would allocate the estimated funds for airport improvement and construction in the north.²¹

EXISTING AND PROPOSED AVIATION FIELDS IN ALASKA (ALPHABETICAL LIST)
AS OF 1934

Name	Route No.	Item No.	Miles From	Est. Cost to Complete	Remarks
Akiak	3	3	Ketchikan	1535	3500
American Creek	1	1	Ketchikan	1000	1000
Anchorage	2	2	"	1020	25000
Aniak	3	3	"	1465	3500
Bear Creek	3-C	1	Bethel	75	2000
Bethel	3	4	Ketchikan	1555	50000
Bettles River	1-D	1	Fairbanks	230	2000

Big Delta	1	3	Ketchikan	890	2000
Birches	1	3	"	1155	4000
Boundary	1 & 2	4	"	715	35000
Bramner	4-A	1	Cordova	110	5000
Bluff	1 & 2	1	Ketchikan	1475	2500
Cache Creek	5-A	1	Seward	200	3000
Candle	1-C	1	Koyuk	75	5000
Cantwell	5	1	Seward	255	5000
Chandalar	1-DA	1	Fairbanks	260	4000
Chena Hot Springs	1-B	1	"	50	3000
Chicken	1-A	1	Ketchikan	860	3000
Chisana	4-A	1	Cordova	215	3000
Chistochina	2	1	Ketchikan	320	2000
Circle Hot Springs	1-C	1	Fairbanks	100	2000
Copper Center	4	2	Cordova	150	20000
Cordova	4	1	Fairbanks	350	25000
Council	1-I	1	Nome	60	2500
Cripple	2-D	1	Anchorage	300	3000
Crooked Creek	3	3	Ketchikan	1395	3500
Curry	5	1	Seward	185	2000
Deering	1-J	1	Nome	135	2000
Damenti	2	3	Ketchikan	1395	5000
Dillingham	2-C	4	Anchorage	360	40000
Donnelly	4	3	Cordova	275	2000
Eagle	1-A	1	Ketchikan	920	2000
Egegik	2-CA	3	Anchorage	350	4500
Fairbanks	1	2	Ketchikan	970	25000
Flat	2	2	"	1345	20000
Fort Yukon	1-C	1	Fairbanks	180	3000
Ganes Creek	2-B	1	Anchorage	265	3000
Gold Run	1-K	3	Nome	40	3500
Golovin	1-H	1	Koyuk	65	3500
Gun Creek	4	3	Cordova	255	2000
Haines	1	3	Ketchikan	330	2500
Haycock	1-G	1	Koyuk	25	2000
Healy	5	1	Seward	285	1500
Homer	2-B	3	Anchorage	140	2000
Iliamna	2-C	4	"	205	30000
Johnson River	1	3	Ketchikan	840	3000
Juneau	1	2	"	260	15000
Kaltag	1-F	3	Nulato	35	3500
Kasilof	2-B	1	Anchorage	80	2000
Kenai	2-B	1	"	70	2000
Ketchikan	1	1	Nome	1525	----
Kiwalik	1-G	1	Koyuk	85	2000
Kobuk	1-JA	1	Nome	310	3000
Koggiung	2-C	3	Anchorage	295	4000
Kotzebue	1-G	1	Koyuk	150	3000
Koyuk	1	2	Ketchikan	1385	35000

Water Landing
only

Koyukuk Station	1-B	3	Ruby	70	3500
Livengood	1-D	1	Fairbanks	55	2000
Louden	1	3	Ketchikan	1250	3500
Lucky Shot	2-A	1	Anchorage	50	2000
Manley Springs	1	3	Ketchikan	1060	5000
Marshall	3-B	1	Bethel	75	3000
Matanuska	2	3	Ketchikan	990	3000
McCarthy	4-A	1	Cordova	145	2000
McGrath	2	2	Ketchikan	1255	20000
McKinley	5	1	Seward	275	3500
Medfra	3	3	Ketchikan	1220	3000
Minchumina	3	1	"	1110	3000
Moose Creek	2	1	"	970	2500
Moses Point	1-B	1	Koyuk	20	3500
Momtrak	2-C	3	Anchorage	470	5000
Nabesna	2	1	Ketchikan	765	1000
Naknek	2-CA	3	Anchorage	320	4000
Napamute	3	3	Ketchikan	1425	3500
Nelchina	2	3	"	895	4500
Nenana	3	2	"	1015	35000
Ninilchik	2-B	1	Anchorage	105	2000
Nome	1	2	Ketchikan	1525	25000
North Fork	3	3	"	1175	5000
Nulato	1	2	"	1295	35000
Ophir	2-D	1	Anchorage	270	3000
Palmer Creek	1-B	1	Fairbanks	65	3000
Paxson	4	3	Cordova	225	5000
Petersburg	1	1	Ketchikan	130	----
Pilgrim Springs	1-J	1	Nome	45	2000
Poorman	2-D	3	Anchorage	340	5000
Portage	1	3	Ketchikan	1335	5000
Rainy Pass	2	3	"	1145	5000
Reindeer	2	3	"	1310	3500
Ruby	1	1	"	1215	3000
Saint Michael	1-F	3	Nulato	155	5500
Salcha	1	3	Ketchikan	930	3500
Seldovia	2-3	3	Anchorage	155	10000
Seward	5	2	Fairbanks	375	25000
Skagway	1	1	Ketchikan	350	5000
Skwentna	2	4	"	1100	37000
Solomon	1	1	"	1495	2000
South Fork	2	4	"	1180	37000
Spencer	5	3	Seward	45	2000
Steel Creek	1-A	3	Ketchikan	885	4000
Susitna	2	1	"	1055	2000
Takotna	2	1	"	1270	2200
Talkeetna	2	4	Seward	165	30000
Tanana	1	2	Ketchikan	1105	15000
Tanana Crossing	1	2	"	795	10000

Water Lan
only

Talida	3-A	1	Fairbanks	195	3000	
Teller	1-K	1	Nome	65	2000	
Tetling	1	3	Ketchikan	760	3500	
Thompson Pass	4	3	Cordova	80	3000	
Tolovana	1	3	Ketchikan	1030	3500	
Tonsina	4	1	Cordova	125	2000	
Ugashik	2-CA	3	Anchorage	400	5000	
Unalakleet	2	1	Ketchikan	1475	2500	
Valdez	4	1	Cordova	60	10000	
Valdez Creek	5-B	1	Seward	305	3000	
Wales	1-X	1	Ketchikan	120	2000	
Wasilla	2-A	1	Anchorage	30	2000	
White Mountain	1	3	Ketchikan	1455	5000	
Whitney	2	3	"	1015	2000	
Willow	2	3	Seward	130	3000	
Wiseman	1-D	1	Fairbanks	195	2000	
Wrangell	1	1	Ketchikan	85	----	Water Landing only

Total\$905,000

NOTES:

Item Numbers are 1, 2, 3, and 4 and Designate Following:

- 1 - Existing fields to be improved
- 2 - Existing fields to be made Class "A"
- 3 - Emergency fields to be built
- 4 - Class "A" fields to be built

Hall used Sterling's summaries and maps in preparing his recommendations for the Department of Commerce. He considered the size of the emergency landing fields at only 200 by 1,500 feet to be too small, but understood that Sterling had reduced the requested estimates on 500 by 3,000 foot fields because of the tremendous costs involved. Hall recalculated the costs for the larger fields, and together with other revisions this increased the entire proposal from Sterling's \$905,000 to \$2,269,000. The Department of Commerce should spend this suggested amount, he maintained, because a complete and comprehensive airport network would be of immeasurable importance to the territory. The other means of transportation, Hall exaggerated, were "but little better and no faster than walking," and this alone should make the advantages of the airplane apparent. Commercial aviation had increased rapidly in the last few years, he asserted, "and its curtailment would be a calamity" for the territory. During

the fiscal year ending June 30, 1934, Alaska's aviation industry had transported 10,194 passengers, carried 869,000 pounds of freight, and flown a total of 1,126,610 miles -- a truly magnificent achievement.²²

Hall then developed a comprehensive airways system for Alaska which included a series of airfields lying along the best routes of travel. He also suggested the construction of five additional weather stations to be located at Anchorage, Bethel, McGrath, Boundary, Ketchikan, and perhaps a sixth one at Cordova, capable of forecasting and distributing weather reports like the two existing stations in Fairbanks and Juneau. The one-man station at Nome, inadequately equipped, needed to be upgraded. That was not all, for there also was a need for approximately thirty radio stations erected at locations commensurate with the airways system to be served. The United States Army Signal Corps, already operating more than fifteen radio stations in Alaska, could take over the operation of these additions with only a relatively small increase in personnel and funds. This would create a distinct airways radio system and avoid duplication of efforts by the Department of Commerce. Best of all, from the Alaskan perspective, Hall recommended that the federal government construct and maintain such a system, not only for the benefit of Alaskans but for the nation at large. What Hall apparently did not know was that federal funds already had been used for airfield construction in Alaska. Prior to 1933, such projects had been financed jointly by the territory, the municipalities and settlements, and to a lesser degree the Alaska Road Commission, although the latter, had, for the most part, been in charge of construction. In 1933, the Public Works Administration allotted \$110,000 for building and improving territorial airfields. The largest chunk of money, \$55,000, had been used for an airfield near Cordova, another \$5,000 for one near Nome, and the rest for some fourteen other fields in different parts of Alaska.²³

Hall's framework for the development of an Alaskan aviation system follows:

AIR FIELD CONSTRUCTION AND AIR NAVIGATIONAL DEVELOPMENT IN ALASKA

It is proposed by a series of air fields lying along the best routes of travel and tying in the principal towns and settlements of Alaska, to serve commercial development and to some extent to facilitate the travel of military aircraft and thus harmonize with the requirements of national defense.

Route No. 1. Ketchikan - Fairbanks - Nome. This route contemplates the building of Class A fields and improvement of existing fields to make them Class A fields, at the following places: Ketchikan, Juneau, Boundary (a field to be constructed in Alaska near the international boundary between the Territory of Alaska and Yukon Territory, Canada, on one of the tributaries of the White River or between the tributaries of the White River and those of the Tanana), Tanacross (formerly known as Tanana Crossing), Fairbanks, Tanana, Nulato, Koyuk and Nome, with auxiliary fields approximately every 100 miles in between dependent upon the topography of the country. Fields of a sort already exist at Juneau, Tanacross, Fairbanks, Tanana, Nulato, Koyuk and Nome, but none of these fields is sufficiently good to be entitled to Class A status. No land field whatever exists at the present time at Ketchikan or Boundary.

Route No. 2. This route ties in with Route 1 at Boundary and extends thence southwest to Anchorage and thence northwest via Rainy Pass to McGrath, Flat, Unalakleet, Koyuk and Nome, with part of the route, from Koyuk to Nome, being identical with a part of Route 1. On this route it is contemplated to improve the existing fields at Anchorage, McGrath and Flat to make them first class fields and to build two fields of the same type, one at Skwentna River and one on the South Fork of the Kuskokwim and an auxiliary field about half way between near the summit of Rainy Pass. The construction of Class A fields on the Skwentna and the South Fork of the Kuskokwim is strongly recommended by Mr. Murray Hall, inspector for the Bureau of Aeronautics in Alaska, on account of the difficulties at times in getting through Rainy Pass.

If these fields are not built, a plane approaching Rainy Pass from either direction, in the event the Pass is found to be closed, would be obliged to fly back in one direction to Anchorage and in the other to McGrath. A number of auxiliary routes also branch off from Route 2 as shown by the map, to serve the surrounding country.

Route No. 3. This route may be described as starting at either Fairbanks or Anchorage. If the route is considered as starting at Fairbanks, the Class A fields would be Fairbanks, Nenana, McGrath (which is on Route 2), Flat (also on Route 2) and thence southwest to Bethel, with intermediate auxiliary fields. If the route is considered as starting from Anchorage, it will follow Route 2 as far as Flat and then proceed to Bethel. Bethel

is the principal settlement on the lower Kuskokwim and mail is now carried there on one of the star routes by air.

Route No. 4. This route, commencing at Ketchikan with a projected Class A field, proceeds over Route 1 as far as Juneau to another Class A field, and thence northwesterly along the coast of the Gulf of Alaska to Cordova, with a number of auxiliary fields inbetween, and thence northerly to Valdez, Copper Center and Fairbanks tying into Route 1 again at McCarty about 100 miles from Fairbanks. This route between Ketchikan and Cordova will probably not be much used for several years to come but the establishment of auxiliary fields along the coast between Juneau and Cordova is highly advisable both for commercial use and from a military standpoint. The part of the route between Cordova and Fairbanks is now used quite extensively and will be flown much more in the future with the establishment of auxiliary fields. It is contemplated to build what would be substantially a Class A field at Cordova, to improve the existing field both for land and water landings at Valdez so that it too will be substantially a Class A field, and to improve the field at Copper Center to make it a Class A field. The auxiliary fields are indicated on the map.

Route No. 5. Seward to Fairbanks. There is an existing field at Seward which should be made a Class A field, the same with respect to Anchorage, a new field should be established on the Talkeetna and several intermediate fields along the route northerly to Nenana (on Route 2) and thence to Fairbanks.

Route No. 6. This may be considered as beginning at Anchorage and extending southwesterly with a Class A field to be built on Iliamna Lake, and continued thence to Dillingham where another Class A field should be constructed, and thence to Muntrak on Goodnews Bay where an auxiliary field will serve for the present, with a branch south through Koggiung to Naknek to Egegik and to Ugashik on the Alaska Peninsula. The four fields last named will, as indicated by the map, be auxiliary fields. No field whatever exists at present at Iliamna Lake or at Dillingham. There is a very considerable commercial traffic already in this region and fields at these two places have been found to be necessary.

Water Ports. It should be noted here that a great deal of the air commerce in Alaska is carried on either sea planes, amphibians or planes equipped with pontoons. Along the coast and even in the interior this has been found the best and perfect means of air travel since water landings can be had on lakes and rivers in many places where no land fields exist. Cordova, for example, has an excellent water port as well as a land field, and the same is true of Valdez and several other places. At Fairbanks water landings can be made on the Chena Slough but the stream is so

winding and so narrow that such landings usually entail a considerable degree of danger particularly to pilots who are not familiar with the region. At Anchorage the water landings are made either on Lake Spenard, which is too small for a takeoff with heavily loaded ships, or on Cook Inlet, which is frequently too rough in the summer time and in the winter is full of floating ice.

Therefore it is recommended at Anchorage an artificial lake be created by the construction of a dam in a nearby stream thus impounding the water and furnishing a lake considerably more than a mile in length; and that at Fairbanks either a lake be created or that the channel of the stream be straightened in order to permit a safe water landing for aircraft. The air traffic at both Fairbanks and Anchorage is such that the suggested water landings are necessary in addition to the Class A land fields.²⁴

While Hall had been preparing an aviation framework for Alaska, Lieutenant Colonel Henry "Hap" Arnold led ten Martin B-10 turn-engined bombers on a flight to Alaska. The Chief of the Army Air Corps, General Ben Foulois, had instructed Arnold to undertake a special assignment, namely to follow the early air trails pioneered by the Army in 1920 when General Billy Mitchell sent Captain St. Clair Streett in command of four DeHaviland 4-B biplanes on a flight from New York to Nome. Mitchell's objectives had been to keep his pilots sharp, give them experience at long-range navigation, and gather map information. Arnold's mission in 1934 was more complex, but no less daring, considering the large size of his planes in relation to the rather primitive existing landing facilities. His group was to take aerial photographs for navigation charts and future airway routes and to evaluate the feasibility of locating future defense bases in Alaska.²⁵

In the summer of 1934, Arnold and his flight group circled over Anchorage and then landed at Merrill Field where they were greeted by throngs of friendly residents. Arnold and his executive officer, Major Hugh Knerr, interviewed local pilots to accumulate information about air routes, and equipment used, such as instruments, radios, charts, maps, and navigation aids. In addition, the bush pilots gave Arnold important hints on winterizing aircraft and power plants. The Colonel gathered similar data at other Alaskan locations and then took his flight of bombers back to the states and reported to his superiors in the nation's capital. He emphasized the strategic value of the Territory, evidently skillfully; although bureaucracies work slowly,