

**THE BOARD OF ROAD COMMISSIONERS  
FOR ALASKA**

**1905 to 1917**

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by

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for

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## 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 became the Alaska Road Commission in the 1920's. 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 program. Though this legislation eliminated much of the uncertainty about future funding, thus facilitating planning, it also contained several far-reaching directives. As previously stated, it 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 possible 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 miles 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 earthmovers 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 1950's 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 1950's 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, some 1,234.6 miles of feeder roads, 1,361.3 miles of local roads, and many bridges, airstrips, trainways, 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"

which could not be taxed by the states and therefore produced no revenue, a more favorable matching ration than the dollar-for-dollar applicable in other states was devised. This formula was based on 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 1950's 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 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 cover even 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.<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> But despite this obvious inequity, Alaska at last participated in the Federal Aid Highway program.

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## THE BOARD OF ROAD COMMISSIONERS FOR ALASKA

Although United States citizens traded and undertook sealing and whaling voyages in the North Pacific and the Arctic in the early nineteenth century, the government only slowly joined other nations in exploring the Far North. Numerous nations had searched for the Northwest Passage, 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.<sup>1</sup> Although these explorers and their successors in the 1860's had no direct contact with Alaska, they established a tradition of scientific arctic exploration.

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 in 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.<sup>2</sup> 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.<sup>3</sup>

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 Kennicott as chief of the Scientific Corps, and 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.<sup>4</sup> This killed the commercial prospects for the overland telegraph line.

In the summer of 1867 the 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.<sup>5</sup> 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 issued 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.

In 1869 the government sent to Alaska Charles F. Raymond, a young army captain, to investigate trade and discover whether or not 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 biological 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.<sup>6</sup> 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's responsibility for mapping the Far West dropped in the early 1880's, and it again turned its attention to Alaska. Lieutenant Patrick Henry Ray, while attached to the Signal Service from 1881 to 1883, led a 10-man expedition to Point Barrow as part of 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.<sup>7</sup>

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."<sup>8</sup>

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.<sup>9</sup>

In 1885 the army ordered 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, then crossed the Alaska Range to the Yukon River. Allen 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.<sup>10</sup>

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 1886 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 Signal Service dominated the second phase, beginning before the army left Alaska and ending in the early 1880's. Army personnel made meteorological observations in the Aleutians and the Yukon-Kuskokwim Delta during this time, which 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 ambition of his energetic aides. This phase ended with Henry Allen's 1885 exploration of the Copper, Tanana, and Koyukuk rivers.<sup>11</sup> From 1886 until 1898 the only official U.S. expeditions to Alaska were to the Selawik and Kobuk River valleys by officers of the navy and the Revenue Service from 1883 to 1885. Geological studies of Alaska on a regular basis did not begin until 1898. 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 reorganization proposals before new programs worked smoothly.<sup>12</sup>

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.<sup>13</sup> 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 population, 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."<sup>14</sup>

But if the federal government's interest in Alaska was not continuous, the 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.<sup>15</sup>

In 1874 miners discovered gold in the Dease Lake region in 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, resulting in the construction of stores, bakeries, restaurants, and a saloon and dance hall.<sup>16</sup> In the early 1880's, numerous prospectors were examining 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 Stewart 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.<sup>17</sup>

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 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.<sup>18</sup> 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.<sup>19</sup>

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, which financed 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.<sup>20</sup>

The rush focused worldwide attention on Alaska 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, began 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.<sup>21</sup>

Congress also reacted to the gold rush, and between 1897 and 1899 it 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.<sup>22</sup> 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 for Alaska. It also included a tax system, the first levied in the district, and legalized the sale of liquor.<sup>23</sup>

Lawmakers introduced a great many Alaska measures between 1800 and 1901, including bills pertaining to Native welfare, reindeer herding, education, the fisheries, the judiciary, and a recurrent request for an Alaska 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.<sup>24</sup>

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.<sup>25</sup> 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.<sup>26</sup>

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.<sup>27</sup> The two officers arrived at St. Michael near the mouth of the Yukon River in August 1897. They observed stranded and destitute people and feared that the coming winter might bring starvation. Ray requested that a detachment of troops be sent to St. 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.<sup>27</sup> 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.<sup>28</sup> 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 of 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.<sup>29</sup>

The first of these expeditions was to drive reindeer north from southeastern Alaska and then to explore the mark 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 tributaries of the Tanana. 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 Service had loaned the latter two men to the War Department for the expeditions.<sup>30</sup>

Army explorers discovered suitable routes into the interior and recommended the construction of a military road. They also knew that prospectors 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.<sup>31</sup>

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 Low 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.<sup>32</sup>

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. Only the section of Glenn's expedition led by Joseph Herron made an important contribution when it accomplished the first official exploration of the upper Kuskokwim.<sup>33</sup>

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.<sup>34</sup>

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 Wm. 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 Saint 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 this purpose on May 26, 1900.<sup>35</sup>

Construction of the Washington-Alaska 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 12-mile stretch, 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 to be retelegraphed to any part of the contiguous United States.<sup>36</sup> 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.<sup>37</sup>

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 21-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 building of the Eagle-Valdez line to the Tanana River, some 153 miles, and the 204-mile segment of the Goodpaster line, all under rather difficult conditions.<sup>38</sup>

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. Telegraphic messages from southeast Alaska went through Skagway and Whitehorse and down the Canadian line after a new submarine cable was laid from Juneau to Skagway in the summer of 1902.<sup>39</sup>

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 mushed from Eagle to the confluence of the Goodpaster and Tanana Rivers, thus discovering an excellent route for the line. After incredibly hard work, Lieutenant Mitchell met Lieutenant Gibbs near the Salcha River on June 27, 1903, thus making the final connection in the trans-Alaska telegraph system. The men of the 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 spend approximately \$617 per mile for the overland lines and about \$452 per mile for the submarine cable.<sup>40</sup>

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.<sup>41</sup>

Completion of the system did not end the job. Now arose the difficulties of maintenance. Stationed at log cabins spaced 40 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.<sup>42</sup>

The gold discoveries had focused 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."<sup>43</sup>

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 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 land<sup>44</sup> (Figure 1).

During the course of their journey, the senators took testimony from 61 witnesses in 11 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 42 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.<sup>45</sup>

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 conditions and needs. Mitchell told the senators that it would cost more than \$2 million 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, 8½ 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.<sup>46</sup>

Abraham Spring of Fairbanks pointed out that next to the need for a comprehensive mining code ranked 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 knew the needs of the various districts. The lack of good trails and wagon roads made mining very expensive. Miners and trading companies had built many 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."<sup>47</sup>

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 and in the winter 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 at Bettles came to \$3.37.5. Transporting the same sack to Coldfoot cost an additional \$5.00 or a total of \$8.37.5. 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 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.<sup>48</sup>

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.<sup>49</sup>

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 packhorses and on 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 six to 12 horses.<sup>50</sup>

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 400 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, induce immigration, and even result in a permanent population "wedded to the soil." In conclusion, 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 con-

struction, 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."<sup>51</sup>

The subcommittee had distributed its report to the full Senate on January 12, 1904, and on the 15th 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.

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. The first two parties sailed from Seattle on May 31, 1904 for Skagway. From there they went via the White Pass and upper Yukon to Fort Egbert. The remaining two, together with 25 packhorses, left Seattle 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.<sup>52</sup>

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 Summer Hamlin, an assistant secretary of the Treasury between 1893 to 1897 and a commissioner at the convention between Great Britain and the United States in 1897 to determine the fur seal-fishery controversy. Situated 40 miles northeast of Rampart, the Yukon here 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 80 well-built cabins at Coldfoot, most of them deserted for the mining season. He estimated that Coldfoot had a winter population of about 60 souls, and the whole Koyukuk Valley a population of approximately 300 miners. He calculated that it would cost about \$6,000 to build the 126-mile trail, sufficient to meet the current needs of the miners (Figure 2).<sup>53</sup>

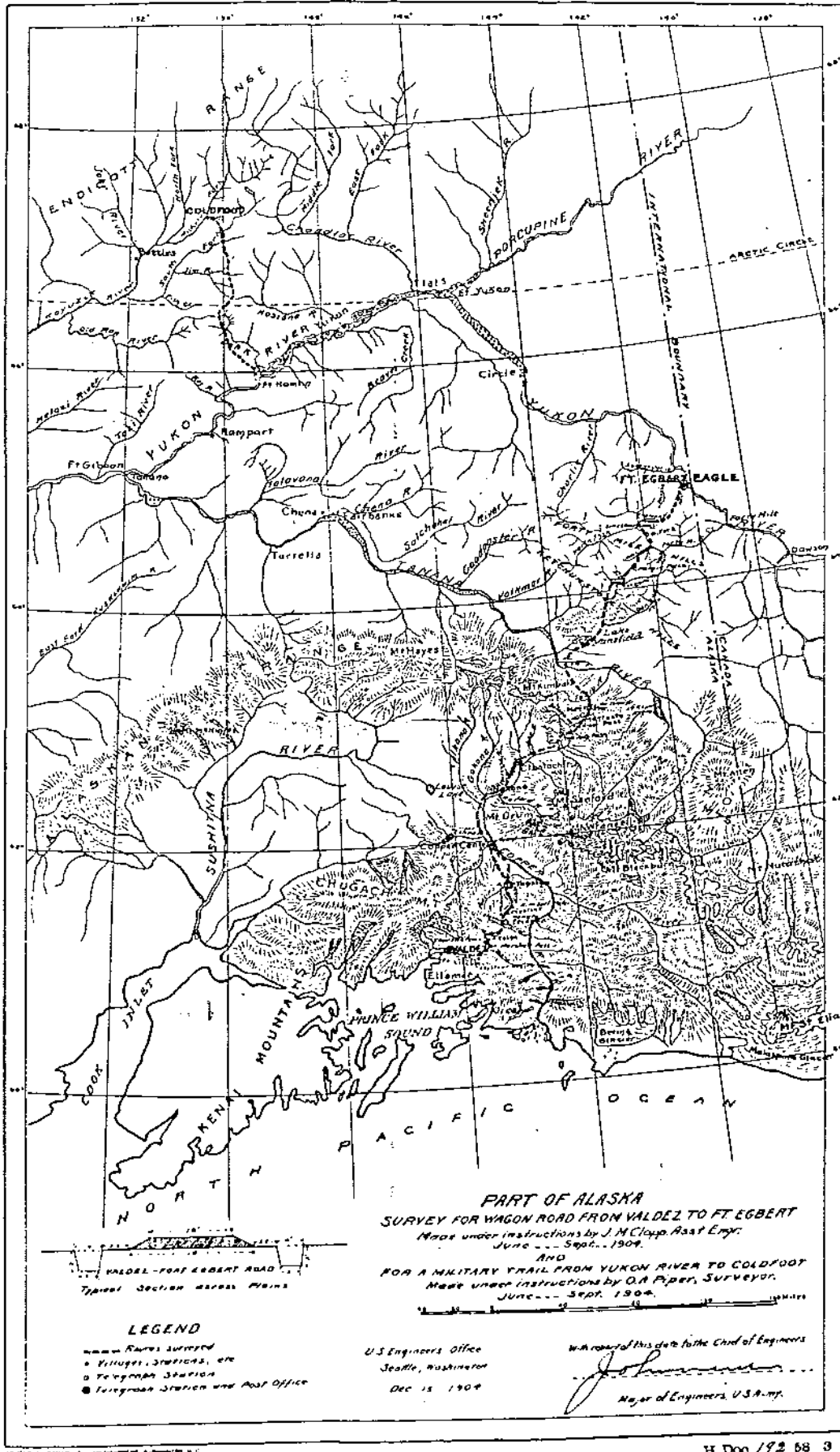
Knute Nelson, U.S. Senator from Minnesota since 1895 and the one most actively involved with Alaska legislation since his 1903 visit North, introduced a measure in 1904 reapportioning the money received for licenses outside of the towns. It designated such fees the "Alaska Fund" and gave five percent 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, layout, 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 judgement 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 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 required men. The board also was responsible for the maintenance of this transportation network.<sup>54</sup>

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

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



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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 County 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. 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 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 69 years of age.<sup>55</sup>

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 at Haines. The men made a preliminary inquiry into the road needs of southeastern Alaska. They 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.<sup>56</sup>

During the summer of 1905 board members 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 to St. Michael, Nome, the 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 the Chilkat and Klehini Rivers toward the international boundary. 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.<sup>57</sup>

Richardson estimated that the new town of Fairbanks had a population of approximately 3,000, with another 5,000 working mines 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.

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 worst places.<sup>58</sup>

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.<sup>59</sup>

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.<sup>60</sup>

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 ferry.

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 16 miles across to 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 14 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 175 miles. Although too expensive to construct all at once, Richardson

believed that short sections should be built where most needed as funds permitted.<sup>62</sup>

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 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 up 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.<sup>63</sup> 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 the 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.

The board could look back on a productive first year. It had directed various reconnaissances and surveys, undertaken some repairs and improvements, and 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.<sup>64</sup> Congress also made a direct appropriation of \$150,000 to be expended at the direction of the board.

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 suboffices 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.<sup>65</sup>

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 civil engineer J. I. McPherson, who selected a feasible route.<sup>66</sup>

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.<sup>67</sup> Another 40 miles of road had been improved, 285 miles of new trail had been cut, and another 200 miles already in use had been upgraded. Additionally, it had located and surveyed another thousand miles of roads and trails.<sup>68</sup>

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.<sup>69</sup>

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	<u>19 miles</u>
		475 miles

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 <sup>70</sup>	

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.<sup>71</sup>

In 1906 the board and the Signal Corps initiated 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.<sup>72</sup>

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.

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 5,000 tons of freight moved over this segment at a reduction of \$10.00 per ton, saving the Cleary miners \$50,000. 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.<sup>73</sup>

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 the 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. Each station was equipped with stables and feed for the stock.<sup>74</sup>

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.<sup>75</sup>

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 reconnaissances. Finally, the board encouraged monetary contributions from communities in order to stretch funds.<sup>76</sup>

In his report to the Secretary of War, board president Richardson differentiated between 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 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.



DISTRIBUTION OF WORK AND MILEAGE COMPLETED DURING SEASON

Wagon 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
		Miles	Miles	Miles	Miles
1	Portage road.....	2.00	1.96	3.96	0.31
3	Haines-Pleasant Camp.....	3.04	9.00	12.04	-----
4	Valdez-Copper Center.....	-----	.71	.71	-----
7	Gilmore-Summit.....	6.00	-----	6.00	-----
7a	Summit-Cleary.....	4.73	a1.33	a6.06	-----
7c	Summit-Fairbanks.....	9.22	a1.33	a10.55	-----
7b	Fox-Dome.....	6.88	a1.00	a7.88	-----
7d	Ridge-Vault.....	-----	a1.50	a1.50	-----
7e	Siding-Esther.....	-----	a6.00	a6.00	-----
9	Rampart-Big Minook.....	4.25	2.00	6.25	1.00
11	Eagle-O'Brien.....	-----	8.75	8.75	-----
15	Circle-Birch.....	-----	9.50	9.50	-----
8	East Fork-Council.....	31.00	-----	31.00	-----
10	Nome-Fort Davis.....	2.10	-----	2.10	-----
13	Nome-Dexter.....	7.00	3.00	19.00	-----
31	Anvil-Glacier.....	-----	.80	.80	-----
33	Penny River.....	-----	.80	.80	-----
32	Cripple River.....	-----	.80	.80	-----
27	Deering-Ininachuck.....	-----	.75	.75	-----
26	Candle Creek.....	-----	2.00	2.00	-----
12	Mile 35, Sunrise-Hope.....	-----	37.00	37.00	-----
12a	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 Doneleys, 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
4a	Valdez-Copper Center.....	24.75	-----	24.75	5.75
	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-Unalaklik.....	-----	52.00	52.00	-----
	Unalaklik-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.

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 per day. Board was provided, and subsistence costs ranged from slightly more than \$0.50 per day in southeastern Alaska to \$3 per day in the interior. The higher expenses reflect 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 differing regions. Superintendents, locating engineers, foreman, 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 from 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.<sup>78</sup>

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:

<u>1908</u>	<u>1909</u>	<u>1910</u>	<u>1911</u>
\$365,629.90	\$383,646.89	\$340,396.79	\$266,777.95 <sup>79</sup>

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 earth roads and therefore rutted badly during prolonged periods or 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.

In 1904 Congress had passed legislation that required all able-bodied Alaska males between the ages of 18 and 50 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 \$8. 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.<sup>80</sup>

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.<sup>81</sup>

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 had developed 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 similar appointive commission to rule Alaska. Ex-Governor Wilford Hoggatt and Governor 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.<sup>82</sup> If successful, Taft's scheme would have placed Alaska under the control of the Bureau of Insular Affairs in the War Department.

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 J. P. Morgan and Guggenheim fortunes. In Alaska, the principal mining venture of this organization consisted of the Kennecott-Bonanza copper mine. In order to tap this deposit it had begun construction of the Copper River and Northwestern Railroad. 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. 83

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, 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" or 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."<sup>84</sup>

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."<sup>85</sup> 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 denied any lobbying for the Alaska Railway Commission. He stated that he had merely been asked to supply some ideas involving coal lands, which 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." 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 between 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.<sup>86</sup>

Wickersham, however, was a contentious and scrappy individual and not to be deterred in his quest of 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 roadwork, 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.<sup>87</sup>

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.<sup>88</sup>

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 influence . . . 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. . . ."

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 chairman 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."<sup>89</sup>

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."<sup>90</sup>

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 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 the 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 a \$17,000 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 under way because the 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.<sup>91</sup>

Who was this 1st Lieutenant Samuel Chandler Orchard? He was born on August 31, 1868 in Fayette County, Texas and received a commission as a 1st Lieutenant in the 1st 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, in charge of 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 peculiar 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 and should be entrusted with important duties and that he had performed his responsibilities as disbursing officer well.

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. At his request, it adjourned for 10 days to enable him to prepare his defense. 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. To make matters worse, Orchard told friends that all of his troubles had arisen because Richardson had "turned against him and that it was due to politics." Then, 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 of employees who were compelled in the performance of their duty and under oath before the court to give testimony in the case.<sup>92</sup>

Wickersham, of course, was 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."<sup>93</sup>

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.<sup>94</sup> 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 commended his prison term at the federal penitentiary at Leavenworth, Kansas.

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 fully respond 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 has 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."<sup>95</sup>

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. . . ."96

While Richardson successfully battled to retain his duty assignment, more than 400 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 sixty days am sure 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.<sup>97</sup>

The years 1911 and 1912 had been difficult ones 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.<sup>98</sup>

Unfortunately, however, 1912 had experienced a 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 Railroad, the only other outlet to the ocean, had been damaged severely and had been 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.<sup>99</sup>

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 80-mile winter trail from Fairbanks to Chena Hot Springs and staked about 450 miles of trails for winter travel only.<sup>100</sup> 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.<sup>101</sup>

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.<sup>102</sup>

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 presi-

dential 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 begin 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.<sup>104</sup>

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 on public roads or the payment of \$8. In its stead it enacted a substitute, levying a flat tax of \$4 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.<sup>105</sup>

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 75 percent of forest revenues for this purpose.<sup>106</sup>



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.<sup>107</sup> 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.

In the meantime the administration's attitude toward Alaska had changed as well. 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. Biological Survey. The commission left Seattle on September 10, 1912 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 aggregate mileage to one thousand, and the other authorized a maximum expenditure

of \$35 million. 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.<sup>108</sup>

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 amounted 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, and some of the large mining companies had made cash donations of approximately \$20,000 to aid the work of the board.<sup>109</sup>

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, the truck had to be helped through soft spots on steep grades, but overall the trip had been successful.<sup>110</sup>

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	\$1,800,000
TOTAL	<u>\$7,250,000</u>

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.<sup>111</sup>

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."<sup>112</sup>

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. . .

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.<sup>113</sup>

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.<sup>114</sup>

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.

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 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 temperate 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 pangingi less--then you might get to the point where the people would have some confidence in you and less disgust at your failure.<sup>115</sup>

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 and influence 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 plied for 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.<sup>116</sup>

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."<sup>117</sup>

Much to the delegate's chagrin, however, the Senate restored the \$500,000 and, even worse, the War Department promoted Richardson to the rank of brigadier general in the National Army. But much to Wickersham's delight, the new general resigned as president of the Board of Road Commissioners for Alaska on December 29, 1917 and left Alaska 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. For his part in this difficult and trying situation he was awarded the Distinguished Service Medal in April 1922. 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. He died in May 1929 at the age of 68 at Walter Reed Hospital in Washington, D.C.<sup>118</sup>

Wickersham retired from the delegateship in 1920 but reentered politics in 1930 and served another term as delegate. He was defeated in the 1932 Democratic landslide and 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."<sup>119</sup>





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APPENDIX A

WORK PERFORMED DURING THE 1917 CONSTRUCTION SEASON\*

SOUTHEASTERN DISTRICT.

(Mr. J. C. HAYES, Superintendent.)

*Route 1—Prince of Wales Island Road (4.1-mile road, 6.8 miles trail).*—The work of the year was confined to the wagon-road section, the greater part of which is planked. Worn planks were replaced and the remainder leveled where necessary. An extension of 200 feet at the western end of the road was constructed at a cost of \$2 per linear foot. The total expenditure was \$676.09.

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\*SOURCE: War Department. 1917. Annual Report of the Board of Road Commissioners for Alaska, 1917. pp. 17-34.



*Route 2—Juneau-Eagle River Road (16 miles road, 14 miles trail).—*A branch road 3,600 feet in length was constructed during the year, connecting the main road with the bridge previously built over Mendenhall River. The new road was graveled throughout its entire length at a cost of 15 cents per linear foot, and a 200-foot framed trestle crossing a tidal slough was constructed at a cost of \$3 per foot. The work of continuing this branch to Auk Lake is now in progress.

General maintenance on the main wagon road included increasing the depth of surfacing to enable it to withstand the heavy automobile traffic, cleaning ditches, and replanking about 600 linear feet of bridges and culverts at a cost of \$1.50 per foot. A new bridge, consisting of one 50-foot pony-truss span and 50 feet of approaches, was built over Lemon Creek at a cost of \$650.

*Route 3—Haines-Pleasant Camp Road (47.5 miles).—*The year's work on this route was entirely maintenance and embraced resurfacing weak sections with gravel and repairing bridges and culverts. Gravel in place cost approximately 75 cents per cubic yard, the average haul being less than 3,000 feet. The total cost of all work averaged \$70 per mile.

*Route 14—Sitka-Indian River Road (3.4 miles).—*Approximately 3,000 feet of new road was constructed at a cost of \$1,300 in extending this route toward Sawmill Bay, and a small amount of work was done in protecting the piers of the Indian River bridge during high water.

*Route 20—Juneau-Sheep Creek Road (3 miles).—*The work of the year on this route consisted chiefly of widening the narrowest parts of the road and resurfacing it throughout the greater part of its length. Gravel in place cost \$1 per cubic yard, the average haul being about 1 mile. A 60-foot trestle bridge, destroyed by a snowslide during the winter, was replaced at a cost of \$600. The average cost of all work was \$1,864.80 per mile, the high cost being due to unfavorable weather conditions and the very heavy automobile travel over the road.

*Route 40—Douglas-Gostineau Channel Road (2 miles).—*A total of \$414.10 was expended for minor repairs to this road during the year.

*Route 43—Petersburg-Scow Bay Road (.5 mile road, 1 mile planked trail).—*Twenty-eight hundred feet of this road was graded during the year at a cost of \$2,285.70. The unusually high cost was due largely to the nature of the soil encountered, which was a blue glacial clay.

The completion of this road will be undertaken next year by the Forestry Service.

*Route 44—Skagway Valley Road (2.5 miles).—*The work of the year on this route was devoted chiefly to the construction of 2.5 miles of road extending north from the bridge previously built over the Skagway River. The new road is surfaced where gravel was available in the ditches. Some additional work was required during the year in protecting the bridge from damage by high water.

*Route 45—Silver Bow Basin Road (4 miles).—*This road extends from Juneau through the Silver Bow Basin to the Perseverance mine. It was constructed by the mining company, but was taken over by the board in 1915. The work of the past year consisted of

surfacing with gravel the softest parts of the road, cleaning ditches, and reconstructing 600 feet of planked roadway at a cost of \$1 per linear foot. The cost of gravel averaged \$1.25 per cubic yard.

The average cost of all work was \$571.42 per mile.

#### VALDEZ DISTRICT.

(Mr. J. H. ISAAC, Superintendent.)

*Route 4A—Donnelly-Washburn Sled Road (55 miles).*—The construction of temporary winter bridges on the Big Delta and Little Delta Rivers and a small amount of grading on approaches to streams not bridged comprised the year's work on this route. The bridges were constructed by contract, those over the Big Delta costing \$2 per linear foot, and that over the Little Delta \$2.50 per linear foot.

*Route 4B—Valdez-Ernestine Road (63 miles).*—Throughout a great part of its length this route is subject to attack by glacial streams, and its construction and maintenance have been difficult and expensive. The work of the past year has embraced the repair of damage caused by these streams, general maintenance, and improvements of substantial and expensive character.

The 3-mile section crossing the glacial moraine adjacent to Valdez has been built up to a grade above the highest stage of water, and the embankment protected by brush and rock revetment. Two men were kept on this section during the entire working season, and all threatened portions were strengthened before any serious damage could result.

Extremely high water in Lowe River during the late summer washed out short sections of the road at the head of Keystone Canyon and at the 5-mile post. The repair of these sections necessitated a considerable amount of rock work.

The bursting of glacial reservoirs at the source of a small stream near the head of Keystone Canyon twice destroyed a short section of the road and changed the channel of the stream, requiring the reconstruction of the section and the removal of the bridge to the new channel.

The usual maintenance work comprised the removal of slides and snow, cleaning ditches, repairing culverts and bridges, etc. In addition, about 3 miles of road was graded, and a total of 10,000 cubic yards of gravel surfacing placed. The cost of the gravel depended largely upon the length of haul but averaged approximately \$1 per cubic yard.

The average cost of all work on this route was \$688.34 per mile.

*Route 4C—Ernestine-Willow Creek Road (29.3 miles).*—The work of maintenance and improvement was carried on over the entire route during the year, and embraced cleaning ditches and removing slides and windfalls, repairing bridges and culverts, grading approximately 2 miles of road, and placing 1,200 cubic yards of gravel surfacing. The average cost of the work was \$283.22 per mile.

*Route 4D—Willow Creek-Gulkana Road (36 miles).*—Work on this route during the year included grading about 2.5 miles of road, laying 1,100 linear feet of corduroy, cleaning ditches, and general repairs to the road and bridges. A maintenance crew of two men was employed on this route for the last six weeks of the year drag-

ging the road and repairing culverts. The average cost of all work during the year was \$487 per mile, but the cost of maintenance should be materially less in the future, as the entire route is now in good condition.

*Tazlina Bridge.*—The Tazlina River bridge was in part reconstructed during the spring of 1917. As originally built, together with additions made necessary by changes in the main channel, this bridge, exclusive of approaches, consisted of three 75-foot spans, two 108-foot spans, and one 50-foot span. The 108-foot spans were constructed in 1906, and it was thought advisable to replace them and to repair the entire bridge. The work done was as follows: The two south 75-foot spans were raised 2 feet to conform to the elevation of the new part of the bridge, which was adopted in order to give greater security during extreme high water. The 108-foot spans and the 50-foot span were demolished and the north 75-foot span was taken down and replaced by two 100-foot spans of the new standard type (Pratt combination trusses). The 75-foot span was reerected north of the 100-foot spans and the bridge continued northward to the bank by a 60-foot pony-truss combination span and 170 feet of pile trestle. The truss timbers and stringers of the new spans are Douglas fir; the remainder of the timber used in the bridge is Alaska spruce cut in the vicinity of the bridge site. Below is an itemized statement of the field cost of the bridge:

Material (steel, lumber, pile shoes, etc.)	\$5,870.57
Equipment	751.05
Freight	1,566.11
Subsistence	1,484.96
Forage and care of animals	560.15
Labor	8,214.63
Miscellaneous	51.64
Total	18,499.11

*Route 4E—Gulkana-Sourdough Road (21.5 miles).*—This is a difficult section to maintain, as the soil is largely clay and muck, and there is but little gravel available within a reasonable distance. The work of the year was devoted to widening the clearing, where necessary, to allow the sun to reach the road, grading with a road grader about 3.5 miles previously ditched by hand, and general repairs. Further grading on this route is being carried on this season. Because of the soil conditions the road is given a higher crown than is usual, and it is thought that after completion of the grading it can be kept in fair condition by a small maintenance crew. The cost of the work done during the year averaged \$682.65 per mile.

*Route 4F—Sourdough-168 Milepost Road (18.2 miles).*—In addition to ordinary maintenance, approximately 9 miles of road was graded with a road machine to a width of 24 feet. The clearing was widened to 60 feet along the greater part of this 9 miles, to allow the sun to reach the road. A small amount of gravel surfacing was laid at a cost of approximately \$2.25 per cubic yard, the high cost being due to the scarcity of gravel and the long hauls necessary.

*Route 4G—168 Milepost-Delta River Road (3.8 miles).*—The work of the year on this route consisted chiefly of ordinary maintenance, embracing the removal of slides, cleaning ditches, and repairing culverts. Approximately 2 miles of road was graded and 9,200 feet

surfaced with gravel. A short pile bridge was built over the glacial stream near mile 202, and a dike 700 feet in length was constructed for the purpose of confining the stream to its present channel. The average cost of all work was \$306.72 per mile.

*Route 4H—Delta River-McCarty Road (73.4 miles).*—The work performed on this route during the year embraced the removal of slides, repairing bridges damaged by high water, grading 2 miles with a grader, and surfacing 1 mile with gravel.

The bridge over the glacier stream near Miller's was lengthened by the construction of two 60-foot spans and 66 feet of approach. The added spans are of the new pony truss type, with steel lower chords and native timber compression members. The cost of this work, exclusive of freight, was as follows:

Material	\$1,714.10
Labor:	
Cutting and getting out timber	831.29
Whipsawing timber	416.10
Constructing piers	506.30
Framing trusses	143.29
Erecting trusses	107.43
Placing floor system	206.15
Total	3,024.66

To confine this stream to its present channel, a dike 585 feet long and 5 feet high was constructed, with its upstream slope protected by a heavy layer of brush secured at the top to the dike and weighted with rock held in place by wire netting. The total cost of the dike was \$588.73.

*Route 4I—McCarty-Richardson Road (20.6 miles).*—In addition to general repairs to the road between McCarty and Shaw Creek, the work of the year was confined chiefly to the ferry and bridges in the vicinity of McCarty.

A new ferry scow, 16 by 35 by 3 feet, was constructed of native whipsawed lumber, at a cost of \$778.95.

Improvements to the bridge over the north slough near McCarty included replacing the existing 30-foot span by a standard 60-foot pony truss span, reerecting the 30-foot span north of the new 60-foot span, and constructing 56 feet of pile trestle approach. The total cost of this work was \$1,027.97, exclusive of freight from Seattle.

A pile bridge, 204 feet in length, constructed over the middle McCarty Slough, cost \$828.37.

*Route 6A—Willow Creek-Tonsina Road (2 1/2 miles).*—The greater part of this route was graded with a road grader during the year. Culverts were repaired and new ones built where necessary; ditches were cleaned out and a small amount of gravel surfacing placed. During May and June of this year two maintenance men, with a team, were employed in dragging the road, repairing culverts, etc. The cost of the year's work averaged \$328.27 per mile.

This route, which traverses naturally good soil, is now in good condition and should require little work in the near future outside that performed by a small maintenance crew.

*Route 6B—Tonsina-Chitina Road (15 miles).*—Ordinary maintenance work was done on this route, but the chief expenditure was for improvement, which is expensive, because of the rugged

and difficult country through which the road runs. The long grade leading to the Tonsina River Valley was widened and surfaced, involving the construction of 1,760 linear feet of corduroy, costing 78 cents per foot, and the removal of 1,400 cubic yards of solid rock, which was made use of in surfacing 5,570 linear feet of the road. Approximately 3,500 cubic yards of gravel surfacing was placed, at an average cost of \$1.10 per cubic yard. In addition, ditches were cleaned, slides removed, culverts repaired, driftwood removed from the Tonsina River Bridge, and 1½ miles of road graded.

The dike constructed last year above the Tonsina Bridge (see annual report for 1916, p. 11) was partly destroyed by high water during the summer of 1916. It was rebuilt and strengthened this spring, and has successfully withstood the high water and accomplished its purpose.

*Chisana Trail.*—This is a winter trail from McCarty, on the Copper River & Northwestern Railroad, to the Chisana mining district. The best route for travel varies from year to year, and the trail is marked each winter with temporary stakes. The staking last fall was done under the supervision of local parties, \$500 being expended by the board and \$500 contributed by interested persons in the vicinity.

SOUTHWESTERN DISTRICT.

(Mr. ANTON EIDE, Superintendent.)

*Route 10—Seward-Kenai Lake Road (14 miles).*—The work of improvement on this route begun in 1915 by the Territorial road commissioner was continued by the board during the past year. The first 3 miles were improved, and extensive new construction was undertaken between mileposts 3 and 7. A total of 4.4 miles was graded with the road grader, 0.8 mile graveled, 520 feet of bridges redecked, and 7 new culverts constructed. The work was greatly hampered by very heavy rains and high water. Unit costs of various classes of work were:

Clearing and grubbing (heavy), per acre	-----	\$250.00
Grading, per linear foot	-----	.12
Redecking bridges, per linear foot	-----	2.75
Graveling, per linear foot	-----	.15

Maintenance work during the spring, embracing the repair of washouts, surfacing soft spots, and dragging, cost \$1,339.60.

The reconstruction of the bridge over Resurrection River (annual report, 1916, p. 11) was completed during July. The three 75-foot spans are of Douglas fir and the remainder of the bridge of native spruce timber. An itemized statement of the field cost is given below; freight on material obtained in Seattle is not included.

Material:		
Piling	-----	\$227.50
Fir lumber	-----	631.40
Native lumber	-----	679.50
Nails, bolts, etc.	-----	200.00
Drift bolts and spikes	-----	105.50
Dynamite, fuse, and caps	-----	33.00
Tools	-----	10.00
Total	-----	2,386.90

Driving piles:		
Rent of driver with fuel and oil.....	\$100.00	
Labor.....	738.67	\$913.67
Planking and capping piers and lowering approaches.....		330.00
Getting out stringers and caps for approaches.....		317.00
Framing and raising trusses.....		340.00
Placing stringers and decking.....		235.20
Placing hand and guard rails.....		107.40
Cutting and blasting out old trestle.....		50.00
Total.....		4,722.18

A 72-foot Howe truss span of native spruce was constructed over a stream near the Ole Marrin ranch. The detailed cost was:

Getting out timber for crib abutments and lower chord.....	\$52.50
Constructing abutments.....	23.00
2,500 feet b. m. native lumber, at \$22 per M.....	209.00
Nails, bolts, and spikes.....	47.83
Framing and raising trusses.....	55.00
Placing decking and handrails.....	30.00
Total.....	417.33

*Route 12—Mile 3½ A. N. R. R.—Hope Road (31 miles road, 2 miles sled road).*—The usual maintenance work on the wagon-road section included the widening of the road, cleaning ditches, redecking 420 linear feet of bridges at a cost of \$2.75 per foot, and general repairs. On the sled-road section a small amount of work was done, principally in removing windfalls. The total cost was \$4,526.33, of which \$514 was expended in repairing and protecting the road during the spring.

*Route 19—Kern Creek—Knik Trail (86 miles).*—During the summer of 1916, forest fires and landslides caused by excessive rains destroyed a large part of this trail along Turnagain Arm. The work of repairing this damage covered about 20 miles, and included removing slides, replacing and repairing bridges and culverts, clearing windfalls and rebuilding cribbing. During the winter two men were employed on the Turnagain Arm section of the trail, repairing it, and keeping it clear of slides and dangerous accumulations of ice.

Upon completion of the new Government railroad from Seward to Matanuska the larger part of this route can be abandoned, but until the gap between Kern Creek and Anchorage is closed winter traffic over it will be very heavy.

*Route 20A—Knik—Susitna Trail (30 miles).*

*Route 20B—Susitna—Roiny Pass Trail (127 miles).*

Two hundred and fifty dollars was expended on route 20A during the year, chiefly in clearing windfalls and bridging small streams which are difficult to cross during the spring and fall.

*Route 20C—Roiny Pass—Tavolna Trail (130 miles).*

*Route 20D—Tavolna—Kaltay Trail (1½ miles).*

No work was done on these routes during the year.

*Route 24—Mile 29 A. N. R. R.—Moose Pass Road (20.5 miles).*—

The improvement of 14.5 miles of sled road to wagon road standards constituted the work of the year on this route. Grades were cut down, the road bed was widened and drained, culverts were con-

structed, and corduroy laid where necessary. The average cost of the work was \$592.64 per mile. The average unit costs were:

Clearing and grubbing, per acre.....	\$120.00
Ditching and grading, per linear foot.....	.07
Corduroy, per linear foot.....	.60

*Route 32A—Tacolna-Flot Creek Trail (87 miles).*—No work was done on this route during the year.

*Route 35—Knik-Willow Creek Road (24 miles).*—General repairs were made to the entire route during the year. A small amount of corduroy was laid, and a quantity of culvert timber was cut and hauled for future use on the section above timber line. One mile of new road was constructed to reduce a steep grade at mile 33.

A standard 60-foot pony truss bridge of native spruce was constructed over the Little Susitna River, replacing an old stringer bridge. The cost was as follows:

Material (steel and hardware, Seattle).....	\$408.00
Cutting and bowing timber.....	478.80
Hauling steel, etc., to bridge site.....	70.00
Constructing and filling timber abutments.....	75.00
Framing and raising trusses and placing decking.....	280.00

Total..... 1,812.13

The freight on steel and hardware from Seattle is not included in the above total.

Extensive improvement work on this road is now in progress from Wasilla, where it crosses the new Government railroad, in order that it may better serve the growing needs of the Willow Creek mining district.

*Route 35A—Archangel extension (2 miles).*—This route will connect mile 32 on the Knik-Willow Creek Road with the Archangel Creek Valley, where a number of lode mines are developing. The entire road will be above timber line, necessitating the transportation of all culvert material and wood for fuel from considerable distances, and thus increasing the cost. A total of \$1,003.50 was expended during the past year, and the work of completing the road is now in progress.

*McDougall-Cache Creek Trail.*—This trail leads from McDougall, on the Yentna River, to the Cache Creek placer mining district, a distance of approximately 30 miles, and was constructed by operators in the district. During September and October, 1916, a location for a wagon road following the same general route was made and a bridge 120 feet long was constructed over Cache Creek, at a total cost of \$1,329.15.

Travel to and from this district is dependent upon uncertain and slow, small boat service from Anchorage up the Susitna and Yentna Rivers. Upon the completion of the Government railroad a more suitable route will lead from some point on the railroad near Talkeetna overland to Cache Creek. A reconnaissance of this route is now being made, with a view to the probable construction of a sled road if a suitable location is found.

*Palmer-Mile 26 survey.*—During the late fall of 1916 a location survey was made for a road 8 miles in length from Palmer, on the Government railroad, to mile 26 on the Knik-Willow Creek Road.

to serve a considerable number of farmers who have taken up homesteads along the proposed route. The cost of the survey was \$96.20. Construction of the road is now under way.

## YUKON DISTRICT.

(Mr. R. J. SOMMEES, Superintendent.)

*Route 4J—Richardson-Salchaket Road (30 miles).*—Extensive improvement of that portion of the road between mileposts 312 and 330, except 1 mile, constituted the work of the year on this route. The road was straightened, widened to 30 feet, and graded with a road grader. A change in the location was made between mileposts 318 and 319, involving the construction of approximately a quarter of a mile of new road around a steep bluff. The old road at this point was located on the flat along the Tanana River, where it was subject to overflow during high water. Two other short relocations were also made, the road in each case being shifted from the flat to the hillside, where better soil and drainage could be obtained. Sixty-eight culverts were constructed at an average cost of \$29 each, and 560 linear feet of corduroy was laid at a cost of \$60 per foot. The average cost of all the work was \$1,955.95 per mile for the 17 miles improved.

*Route 4K—Salchaket-Fairbanks Road (40 miles).*—Eighteen and a half miles of this road, from mile 352 to mile 370, were reconstructed during the year. The road was widened, straightened, and graded with a road grader; fills were made across small swales, and 8,470 linear feet of drainage ditch constructed. Sixty-one culverts, two 36-foot pony truss bridges, and seven 16-foot stringer bridges were built, and 4,050 linear feet of corduroy laid.

Owing to the continuous cutting away of the road near mile 357, a relocation was made between mileposts 352 and 360. The new location is 0.5 mile longer than the old road, but it is on higher ground, with better soil conditions, and is well back from the river. This relocation also eliminated about 3 miles of narrow corduroy which is subject to overflow by the Tanana River during high water, and which could not be satisfactorily repaired except at great expense.

Average unit costs of the work were:

Clearing and grubbing to 30-foot width, per mile.....	\$280.20
Grading, including small fills, per mile.....	1,289.36
Drainage ditches, per foot.....	.15
Corduroy, per foot.....	.60
Culverts, each.....	20.00
Bridges, 16-foot, each.....	40.00
Bridges, 26-foot, each.....	200.00

*Route 5—Ester-Fort Gibbon Sled Road (148 miles).*—The year's work on this route consisted of general repairs and maintenance. Slides, windfalls, and stumps were removed between the 12 and 49 mileposts and 4 bridges, ranging in length from 19 to 31 feet, were constructed, at an average cost of \$5 per foot, the high cost being due to the scarcity of suitable timber. Repairs to bridges near Hot Springs cost \$157. Seven bridges near Tanana, varying from 18 to 26 feet in length, were reconstructed with sawed lumber, at a cost of \$558.78.



*Route 7A--Summit-Cleary Road (11 miles).*

*Route 7B--Fox-Olney Road (15 miles).*

*Route 7C--Summit-Fairbanks Creek Road (11 miles).*

*Route 7E--Vault Creek Road (2 miles).*

*Route 7F--Vault Creek-Treasure Creek Road (1.5 miles).*

*Route 7H--Little Eldorado Creek Road (1.5 miles).*

*Route 7I--Gilmore-Summit Road (6 miles).*

These routes were maintained by the Territorial road commissioner for the fourth judicial division, and no work was done on them by the board.

*Route 7D--Ester Creek Road (19 miles).*—The work of the year on this route consisted of the improvement of 2,900 feet of the road on mile 3, where it traverses a mattress of decayed vegetable matter, or peat, several feet deep, for a distance of over 0.5 mile. Two thousand feet of corduroy was laid and covered, at a cost of 85 cents per foot. Four bridges, with an aggregate length of 89 feet, were built, at a cost of \$239.

During the present year the improvement of the road is being continued as far as the Government experimental farm.

*Route 7G--Fairbanks-Gilmore Road (19 miles).*—The work done by the board on this route was confined to the construction of a pile bridge over Noyes slough to replace a 70-foot Howe truss span, which collapsed. A part of the material from the old bridge was used in the new construction, and other material was furnished by the Territorial road commissioner, who also performed general maintenance work on the road.

*Route 7J--Fairbanks-Chena Hot Springs Trail (64 miles).*

*Route 7K--Olney-Livengood Sled Road (54 miles).*

No work was done on these routes during the year.

*Route 9--Rampart-Eureka Road (6.5 miles road, 21.5 miles sled road).*—General maintenance work on this route was carried on during July and August, and included redecking 19 culverts and 3 bridges, the reconstruction of 2 bridges, aggregating 54 feet in length, and widening and repairing the road between the 6 and 10 mile-posts.

*Route 11A--Eagle-O'Brien Creek Road (17 miles).*

*Route 11B--O'Brien Creek-Fortymile Sled Road (30 miles).*

Work on these routes during the year consisted of general repairs and maintenance. On the wagon-road section, culverts were rebuilt, bridges repaired, and one new bridge constructed, ditches cleaned and extended, and a small amount of gravel surfacing placed. Maintenance work on the sled-road section included the removal of rock slides, widening the road, and ditching some sections.

*Route 11C--Steel Creek-Jack Wade Road (2.5 miles).*

*Route 11D--Canyon Creek-Walkers Fork Sled Road (10 miles).*

No work was done on these routes during the year.

*Route 11E--Eagle-Seventy Mile Sled Road (20 miles).*—A total of \$502 was expended on this route, chiefly in constructing three bridges, repairing culverts and bridges, and ditching.

*Route 15--Circle-Miller House Road (49 miles).*—Annual maintenance work on 34 miles of this route was performed during the summer and included cleaning and constructing ditches, laying 1 mile of light corduroy, repairing damage caused by washouts, and re-

decking and repairing culverts and bridges. The average cost of the work was \$137 per mile for the 34 miles on which work was done.

*Route 16—Chatanika-Miller House Sled Road (81 miles).*—The year's work on this route consisted chiefly in repairing bridges and removing slides. Six bridges were repaired, and one new bridge 24 feet long was constructed. The total cost of the work was \$500.

*Route 17—Fort Gibbon-Kaltag Trail (257 miles).*—The temporary staking of this trail for the guidance of winter travel was done by contract, at a cost of \$300.

*Route 17A—Lewis Landing-Dishkaket Trail (108 miles).*

*Route 17B—Nulato Dishkaket Trail (90 miles).*

No work was done on these routes during the year.

*Route 22—Hot Springs-Sullivan Creek Road (9 miles wagon road, 6 miles trail).*—The work of the year on this route was confined to the wagon-road section. Bridges, culverts, and corduroy were repaired, ditches were cleaned, and a small amount of new ditching was done. Grading was done on sections between Kemperville and Sullivan Creek where the road had settled and a grader could be used to advantage. The average cost of the work was \$127 per mile.

*Route 23A—Chatanika-Beaver Trail (120 miles).*

*Route 23B—Beaver-Chandler Sled Road (25 miles).*

*Route 29—Fort Gibbon-Koyukuk Trail (100 miles).*

No work was undertaken on these routes during the year.

*Route 30—Hot Springs Landing-Eureka Creek Road (32 miles).*—The year's work on this route was confined to the section between the Landing and Hot Springs, and comprised laying 180 feet of corduroy, cleaning ditches, filling ruts, and repairing several small bridges and culverts.

*Route 31—Salchaket-Caribou Creek Sled Road (46 miles).*—No work was done on this route during the year.

*Route 22B—Iditarod-Flat Creek Road (8 miles).*

*Route 33A—Otter Creek Towpath (22 miles).*

*Route 33B—Summit-Otter Creek Road (6 miles).*

The work of the year on these routes was devoted to maintenance on the main Iditarod-Flat Creek Road, with some improvements on the first 6 miles of that road. Bridges and culverts were repaired, 4,910 linear feet of corduroy laid, and 9,481 feet of road graveled. The total expenditure was \$4,500.

*Route 38—Ruby-Long Creek Road (19.5 miles road, 10.5 miles sled road).*—The year's work on this route embraced repairs to the main street of Ruby, the maintenance and improvement of the 6 miles of wagon road previously constructed, and the improvement to wagon road standards of approximately 13.5 miles of sled road.

The extension of the road which forms the main street of Ruby (not an incorporated town) was reconstructed for a distance of 1,300 feet, or practically its entire length. The steep approaches at either end of the street were graded down and ditched and the entire street was surfaced with rock. Six culverts were constructed, the material for five of which was furnished by adjacent property owners. The total cost of this work was \$1,501.00.

From Ruby to milepost 6 extensive maintenance and improvement work was done. Sidehill cuts were widened, holes filled, corduroy

repaired and renewed, and 240 linear feet of road surfaced with rock. The average cost of the work was \$106.84 per mile.

From the 6 milepost to a point 0.5 mile beyond the 15 milepost, a wagon road was completed, largely following the old sled road. The work was accomplished under very trying weather conditions, the rainfall throughout the summer being without precedent in the history of Ruby. This heavy rainfall greatly increased the difficulty of overcoming the miles of glacial muck formation traversed, and was chiefly responsible for the unusually high cost of the work.

In the construction of the new road 183 culverts were constructed, 24,506 linear feet of corduroy laid, 46,603 linear feet of road graded and ditched, and two bridges having a total length of 298 feet built. The road varies in width from 16 to 30 feet, according to the formation of the ground. All of the culverts, with the exception of 12, were constructed of poles secured on the ground. Pole or brush corduroy was used, depending upon the timber available where required.

Average costs of the work were:

Clearing, grubbing, and grading, per linear foot.....	\$0.75
Corduroy, per linear foot.....	.90
Culverts, each.....	27.88
Bridges, per linear foot.....	1.81

A permanent cache or warehouse 16 by 48 by 10 feet, with a corrugated iron gable roof, was constructed near the 19 milepost for the storage of supplies, equipment, and forage, no building being available for the purpose along the entire length of the road. The cost was \$484.61.

Maintenance work during the past spring on the entire 19.5 miles of wagon road comprised thawing ice out of culverts, opening channels under bridges, and repairing damage done to the new work during the break-up. The soil in this region cuts very rapidly when the moss is removed, and it is subjected to the action of running water, and a large part of the corduroy was seriously threatened by cutting ditches. Where this was found to be the case, the inner sides of the ditches were thoroughly revetted with moss and sod covered with earth. It is thought that in the future any damage from this source can be largely eliminated by leaving a wider berm—at least 5 feet—between the ends of the corduroy and the inner edges of the ditches, and this will be done. The cost of this spring work can not be given, as part of the expenditures had not been reported at the close of the period of this report.

Prior to last year the prevailing summer freight rate from Ruby to Long Creek was 7 cents a pound, the freight being hauled over ridges which in wet weather became almost impassable, horses often sinking to their bellies in the mud. At the present time light motor trucks are delivering freight in ton lots at the 20 milepost under favorable weather conditions, for  $1\frac{1}{4}$  to  $1\frac{1}{2}$  cents a pound, and the rate to Long City when the road is completed will probably not exceed 2 to  $2\frac{1}{2}$  cents per pound, the saving resulting directly from the road thus amounting to at least \$70 per ton.

The work of completing the road to Long Creek is now in progress. A further extension from Long Creek to Poorman, a distance of approximately 24 miles, is urgently needed, but its construction will be expensive and can not be undertaken by the board with the funds now available or in prospect.

*Route 32B—Long Creek-Cripple Trail (60 miles).*—The work of the year on this route embraced the construction of a 25-foot bridge over Ophir Creek, repairing the bridge over Monument Creek, and filling in washouts between the Solatna River and Poorman. The total cost was \$196.

*Route 46—Kantishna Trail (75.75 miles).*—This is a trail constructed during the past winter from the Thirty-mile Roadhouse, 26 miles from Nenana on the proposed route of the new Government railroad, to the Kantishna mining district. From the initial point to the Toklat River, 26 miles, an old Indian or prospectors' trail was followed. This trail was widened where necessary, and tripods were placed at intervals of 200 feet in open country for the guidance of travel.

From the Toklat River to Diamond City, 37.75 miles, the work was entirely new construction. The trail was cleared for a width of 8 feet through all timbered sections, trees being cut as close to the ground as the depth of snow permitted, and other obstacles to traffic removed. All open country was staked with tripods, and 10 permanent bridges, aggregating 315 feet in length, were constructed.

Between Diamond City and Glacier, the terminus of the route (12 miles), the location follows an old trail, which was widened and straightened where most necessary.

The work was done during February and March of this year under the efficient supervision of Mr. Thomas Lloyd. The total cost was \$4,571.63.

*Route 47—Coldfoot-Wiseman Sled Road (11.25 miles).*—This is a winter sled road from Coldfoot, the ordinary head of navigation on the Koyukuk River for light-draft boats, to Wiseman, which is the supply point for the Koyukuk mining district. Freight is landed at Coldfoot during the summer and a small amount is transported to Wiseman on small gasoline or poling boats or on horse scows. The greater part of the freight, however, is stored at Coldfoot and hauled to Wiseman and the adjacent producing creeks during the winter.

Construction work was carried on during September and comprised clearing and grubbing over the entire distance, and the construction of 3 foot bridges, with a total length of 445 feet, and 18 wagon bridges, aggregating 384 feet in length.

The total cost of the work was \$5,000, or \$444.44 per mile.

*Eagle-Circle Mail Trail.*—A total of \$206 was expended on this trail during the year. The work consisted of grading approaches to streams and widening and clearing the trail between mileposts 6 and 10 and between mileposts 15 and 22 north of Eagle.

*Bridge over Chena Slough, Fairbanks.*—The project for this bridge was described in the annual report for 1916 (p. 15). The superstructure is a 360-foot steel span, with Petit trusses, designed for a uniform live load of 50 pounds per square foot or for two 8-ton motor trucks passing. The abutments are of concrete, each consisting of two columns with stepped reinforced footings, supported on piles. The columns are connected at the top by a reinforced concrete curtain wall. The north approach is a framed trestle 180 feet in length; the south approach, constructed by the city of Fairbanks, is combined earth fill and trestle.

Excavation for the abutments was commenced August 9, 1916, being delayed until that date by the difficulty of securing proper lumber

for the cofferdams, which were constructed of Wakefield sheet piling. Work on the south abutment, which was constructed first, was greatly hampered by a mass of brush and refuse extending to a depth of 15 feet below mean water level, through which the cofferdam and excavation had to be carried. As a consequence of the delays, cold weather set in before the north abutment could be completed, making it necessary to heat the concrete materials and to keep the abutment covered and heated until the concrete had thoroughly set.

The structural steel for the bridge reached Fairbanks on the last boat to arrive there during the open season of 1916, but seven eye-bars were found to have been so badly damaged as to make their use inadvisable. Duplicate bars were ordered immediately, shipped by express to Seattle and thence by freight to Chitina, from which place they were hauled on sleds to Fairbanks, arriving only two days before they were needed in the erection.

Pile falsework was driven, braced, and capped before the freeze up. The usual falsework employed in the interior of Alaska is merely a trestle supported on the ice, but in this case the weight of the bridge and the fact that several sewers discharging hot water have their outlets near the bridge site made the use of piles advisable.

A wooden gantry traveler for erecting the trusses was framed and erected during the latter part of February of this year. The cost of the traveler was considerably increased by the inability of local lumber dealers to furnish timbers of requisite size, which necessitated the use of many built-up members.

The erection of the trusses, starting at the north end, was begun March 1. No unusual difficulties were experienced, although the greater part of the crew had had no previous experience in such work. The bridge was swung March 22 and opened to vehicular traffic on April 19.

The total net cost of the bridge was \$51,489.19. This was much greater than the first estimate, the increase being due to various causes, some of which, such as the necessity for replacing damaged I bars, the difficulty of excavating for the south abutment, etc., have been mentioned above. It was originally intended to construct the bridge during the winter of 1915-16, but the destruction by fire of the almost completed plans in July, 1915, caused the postponement of the project for a year, during which time prices underwent a considerable advance, making the cost of all structural materials greater than had been anticipated.

A detailed report of the cost has not yet been received; the general distribution was as follows:

Material .....	\$23,190.14
Freight .....	7,689.88
Equipment .....	829.67
Engineering, superintendence, and inspection .....	2,941.61
Labor .....	15,395.22
Hire and care of animals .....	1,250.03
Fuel and power .....	1,062.31
Miscellaneous .....	662.21
<b>Total .....</b>	<b>53,001.27</b>
Received from sales .....	1,512.08
<b>Total net cost .....</b>	<b>51,489.19</b>

## NOME DISTRICT.

(MR. DANIEL A. JONES, Superintendent.)

*Route S—Nome-Council Road (approximately 82 miles; 57 constructed).*—Maintenance work on the Nome-Fort Davis section included blasting the ice under bridges in the spring and resurfacing 3,300 feet of road with gravel. The Rocker Creek Bridge was repaired by constructing two new crib supports and replacing old stringers.

No expenditure was made on the Fort Davis-Cape Nome section, which, as noted in previous reports, was very badly damaged by the storm of 1913. The Territorial road commission is now engaged upon the reconstruction of this section.

Work on the Cape Nome section, which was reconstructed in 1915 by the Territorial road commission, consisted of removing slides, cleaning ditches, and constructing 1,575 feet of approaches to the new road, at a cost of \$2,826.99.

General maintenance and the construction of 6,945 feet of gravel-surfaced corduroy constituted the year's work on the Solomon-East Fork section. The total expenditure was \$5,041.23.

Maintenance of the Fox River-Council section, which is entirely corduroy, cost \$445.10 per mile.

The maintenance and operation of the Safety Ferry cost \$885.80, of which \$385.80 was expended for new cable and minor repairs to the scow.

The cost of maintaining and operating the Bouanza Ferry was \$537.70; of this amount, \$162.70 was for new cable and repairs to the ferry scow.

*Route 13A—Nome-Bessie Road (3.3 miles).*—General maintenance on this route, including resurfacing 7,335 linear feet with gravel, cleaning ditches, and opening channels through the ice under bridges during the spring, cost \$696.97 per mile. In addition, 400 cubic yards of material in the fill over Dry Creek, washed out by high water, was replaced at a cost of 51 cents per cubic yard. The maintenance cost for the year was greater than usual, largely because of the heavy rains during the summer of 1916.

During June of this year 1,200 tons of freight were transported over this road, and the daily average freight movement throughout the year was approximately 30 tons.

*Route 13B—Bessie-Banner Road (3.5 miles).*—The work of the year on this route was confined to surfacing 2.3 miles with gravel, at a cost of \$3,797.07.

*Route 13C—Bessie-Little Creek Road (1.25 miles).*

*Route 13D—Bessie-Dry Creek Road (1.25 miles).*

No work was done on these routes during the year.

*Route 13E—Dry Creek-Newton Road (0.33 mile).*—Repairs to culverts on this road cost \$27.

*Route 13F—Nome-Osborne Road (4 miles).*—General maintenance work on this route cost \$45.18 per mile.

*Route 13G—Grass Gulch Road (1.75 miles).*—No work was undertaken on this route during the year.

*Route 13H—Center Creek Road (1.37 miles).*—The cost of resurfacing 625 feet of this road with gravel was \$339.54.

*Route 13I—Nome River Road (5 miles).*—The protection of this road during the spring break-up cost \$13.05 per mile. No other work was done during the year.

*Route 13J—Wonder-Flat Creek Road (2 miles).*—General repairs and maintenance on this route cost \$178.05 per mile.

*Route 13K—Bessie-Baster Road (5 miles).*—The work of the year on this route consisted of general maintenance and surfacing 1 mile with gravel 12 inches thick, at a cost of \$0.36 per foot.

*Route 18—Kaliag-Solomon Trail (2.48 miles).*—On the Topkek-Unalaklik section of this trail 2,818 permanent stakes, each 3 inches in diameter at the butt and 9 feet long, were cut and set. In addition the permanent stakes on 79 miles were repaired and reset where necessary and 4 1/2 miles of new trail cleared through timber. The total cost was \$961.85.

*Route 21—Unalaklik-St. Michael Trail (approximately 65 miles).*—The temporary staking of 18 miles on the ice between St. Michael and Klikitarick cost \$16. The remainder of the work embraced restaking 27 miles with permanent stakes and the construction of a light tram over the Golsovin River, at a total cost of \$381.40.

*Route 25A—Cripple River Road (13.5 miles, total A and B).*

*Route 25B—Peanut River Road.*

*Route 25C—Nome-Wireless Road (0.25 mile).*

No work was done on these routes during the year.

*Route 25D—Mouth of Center Creek Road (2 miles).*—General maintenance and repairs on this road cost \$87.06 per mile.

*Route 25E—Submarine Paystreak Road (2.5 miles).*—As originally built this road extended from near the mouth of Snake River for a distance of approximately 1 mile along the submarine paystreak. A total of only \$620.84 has been expended on it since its location in 1907, and no work has been done on it for several years. At the present time a new road, following a better location, is being constructed from the Snake River bridge to the submarine paystreak. This road will be designated by the same name and route number as the old road, which has been abandoned.

The work of the year consisted chiefly in the construction of fills leading to the Snake River bridge approaches, containing 1,400 cubic yards of material. A branch road 1,200 feet in length was also constructed from the west approach to a point near the mouth of Snake River. The total cost of all work was \$1,765.07.

*Route 25F—Anvil-Glacier Road (3 miles).*—General repairs to this route included cleaning ditches and hauling 480 cubic yards of gravel surfacing. The average cost was \$395.85 per mile.

*Route 25G—Snake River Extension Road (3 miles).*—The work of the year on this route embraced general repairs and the surfacing of 2,380 linear feet of road with gravel. A suspension foot bridge over Snake River at the mouth of Boulder Creek, having a span of 130 feet, and two 18-foot bridges over Sledge Creek were constructed at a cost of \$294.73. The material used was largely obtained from the old Snake River bridge.

*Route 25H—Otter Creek Road (1.25 miles).*—No work was done on this route during the year.

*Route 25—Sinrock Ferry.*—The total cost of maintaining and operating this ferry was \$321.90, of which \$71.90 was expended for minor repairs to the scow.

*Route 26—Candle-Candle Creek Road (5 miles).*—The year's work on this route consisted of cutting and tying 3,382 fifty-pound bundles of willows, which were hauled and distributed along the road during the winter for use in constructing corduroy this year.

*Route 27—Deering-Inmachuck Road (25 miles).*—General maintenance covering the whole route, together with some new construction on the left bank of the Inmachuck River, eliminating seven crossings of the river, constituted the work of the past year. The center pier of the bridge over the lagoon near Deering had been undermined and was removed and replaced by piles. Eight new culverts were constructed, 0.5 mile of road graded and ditched, and 2,700 feet of corduroy laid and graveled.

*Route 28—Dahl Creek-Candle Trail (140 miles).*—The repair and replacement, where necessary, of permanent stakes throughout the entire length of the route cost \$1 per mile.

*Route 37—Topkok-Candle Trail (141 miles).*—Twenty-six miles of this route were restaked with permanent stakes and 3 miles cleared through timber, at a total cost of \$460.

*Route 42—St. Michael-Kotlik Trail (approximately 70 miles).*—Those portions of this route not on the ice were marked with permanent stakes, 40 to the mile. The work was done by contract and cost \$350.

*Route 49—Davidsons Landing-Taylor Creek Road (40 miles; 24 constructed).*—This road extends from the head of navigation on Marys River to Taylor Creek, in the Kongarok mining district. Only light construction work was undertaken, covering the first 24 miles of the route, and consisting of clearing out the road, eliminating creek crossings by grading, and laying gravel-surfaced willow corduroy over soft spots. Since the work was done teams have been able to haul loose loads 1,500 pounds greater than the average before the improvement was made.

*Marshall Road.*—This road when completed will extend from a tributary slough of the Yukon to the placer mines of the Marshall district and will be about 3 miles in length. The work done during the past year consisted of cutting and hauling poles for approximately 2 miles of corduroy. Only a part of the accounts covering this work have been received, and the total cost can not be reported.

This project has been taken over and will be completed this year by the Territorial road commission.

*Flagging trails.*—Approximately 350 miles of trails, in addition to those permanently marked, were temporarily staked or flagged for the guidance and safety of winter travel. The total cost, including cost of inspection trips by the superintendent of the district, was \$4,225.39.

*Snake River Bridge.*—The construction of this bridge (see annual report 1916, p. 18) was begun June 17 and completed August 19, 1916. Nearly all of the material used, including piles, lumber, and steel, had to be obtained and shipped from Seattle, largely increasing the cost. The two 100-foot spans are of the combination Pratt truss type. All truss timbers, stringers, and planks are Douglas fir.



The total cost, including the expenditure reported last year, was \$16,949.93, distributed as follows:

Material.....	\$5,046.77
Equipment.....	490.27
Freight on material and equipment.....	3,441.02
Engineering.....	690.00
Labor.....	6,188.25
Hire of animals.....	458.31
Miscellaneous (fuel, telegraph, etc.).....	220.22
Total.....	16,949.93

Of the above amount \$526.50 was expended during the winter in protecting the piers by cutting away the ice and placing riprap around them.

APPENDIX B

LAWS RELATING TO THE CONSTRUCTION OF ROADS IN ALASKA

May 26, 1900. An Act making appropriation for the support of the Regular and Volunteer Army for the fiscal year ending June thirtieth, nineteen hundred and one. (31 Stats., 214).

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Transportation of the Army and its supplies; . . . . . thirty million dollars; Provided, That one hundred thousand dollars of this sum may be used in Alaska, and shall be immediately available, for the construction of military roads and bridges in Alaska.

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June 30, 1902. An Act making appropriation for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and three. (32 Stats., 507).

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Transportation of the Army and its supplies; . . . . . twenty-five million dollars; Provided, That the balance of the appropriation of one hundred thousand dollars made by the Act of May twenty-sixth, nineteen hundred, for construction of military roads and bridges in Alaska remaining unexpended on June thirtieth, nineteen hundred and one, is hereby reappropriated, and made available for such construction; Provided further, That the number of draft animals purchased from this appropriation, added to those now on hand, shall be limited to such numbers as are actually required for the service.

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April 23, 1904. An Act making appropriation for the support of the Army for the fiscal year ending June 30, 1905, and for other purposes. (33 Stats. at Large, 271).

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For survey and estimate of cost of a wagon road from Valdez to Port [sic] Egbert on the Yukon River, to be made under the direction of the Secretary of War, twenty-five thousand dollars (\$25,000.00) to be immediately available; said survey and estimate, herein provided, shall be submitted to Congress at the earliest practicable day.

For surveying and locating a military trail, under the direction of the Secretary of War, by the shortest and most practicable route, between the Yukon River and Coldfoot, on the Koyukuk River, twenty-five hundred dollars (\$2,500.00) to be immediately available, and a report and estimate upon said trail to be submitted to Congress at the earliest practicable day.

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April 27, 1904. An Act to authorize the appointment of road overseers and to create road districts in the District of Alaska and for other purposes. (33 Stats., 391).

\* \* \* \* \*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That it shall be the duty of the commissioner in each precinct in the District of Alaska, on the first Monday in the month of April in each year, to appoint a road overseer for the precinct in which he resides, and create a road district in the inhabited part of said precinct, which said district shall not include incorporated cities and towns.

To fill all vacancies in the office of road overseer in his precinct.  
To cause a record to be made defining the boundaries of said road district.

Term of Office and Qualifications of Road Overseers.

All road overseers shall hold office for one year and until their successors are appointed and qualified.

Every person appointed to the office of road overseer of any road district shall reside in the road district to which he has been appointed, and shall, within thirty days after he shall have been notified of his appointment, take and subscribe to an oath of office obligating himself to the faithful performance of the duties of his office, and shall forthwith cause such oath to be filed in the office of the commissioner of his precinct, and in case any such road overseer shall become non-resident of his road district, his office shall at once become vacant.

Each road overseer shall, before entering upon the duties of his office, execute a bond to the United States in a sum not less than double the amount of money which will probably come into his hands at any time during his term of office, with two or more sureties, the amount and sufficiency of the bond to be approved by the commissioner of the precinct, conditioned for the faithful discharge of the duties of his office, which bond shall be by him forthwith filed in the office of the commissioner and ex officio recorder. The approval of such bond shall be indorsed thereon by the commissioner.

Duties of Road Overseer.

The duties of road overseer shall be such as may be prescribed by law.

Each road overseer shall keep an accurate account of all money received by virtue of his office and the manner in which the same has been disbursed, and to whom, and shall, on the last Saturday of March in each year, exhibit such account, together with his vouchers, to the commissioner for adjustment and settlement. Such account shall be in writing, verified by affidavit of the overseer that the same is in all respects a full and true account of all money received by him during the full term for which he should make settlement and the amounts expended and the manner in which they were expended.

If any person appointed to the office of road overseer, unless unable from disease or other infirmity to discharge the duties of such

office, shall refuse or neglect to serve therein, he shall be liable to a fine of twenty-five dollars; but no person so appointed who shall have served for a term next preceding such appointment shall be liable to such fine for refusing to serve if he shall have given notice in writing of refusal to the commissioner within twenty days after having been notified of his appointment.

Every road overseer who shall, after the expiration of his term of office, neglect or refuse to deliver on demand to his successor in office, after such successor shall have been duly qualified according to law, all moneys, records, books, papers, or other property appertaining to such office shall be liable to a fine of not less than fifty nor more than five hundred dollars.

Road overseers of the different precincts are authorized, and it is made their duty, to warn out all male persons between eighteen and fifty years of age who have resided thirty days in the District of Alaska, who are capable of performing labor on roads or trails, and who are not a precinct charge, to perform two days' work of eight hours each in locating, constructing, or repairing public roads or trails, under the direction of the road overseer within whose precinct they may respectively reside, or furnish a substitute to do the same, or pay the sum of four dollars per day for two days' labor, and said road overseer shall receipt for the same and shall expend it in location, construction, or repairs on the public roads and trails within his precinct; and any moneys so received and not expended shall be paid over to his successor in office, who shall expend the same as above provided.

The overseer of roads and trails in each precinct shall give notice to persons residing in his precinct liable to or charged with a road or trail tax of the time and place and the kind of work expected to be performed on the road or trail, and may direct what implements such persons shall bring with which to perform such work.

Whenever it shall happen, in consequence of sickness or absence from home, or any other cause, that the two days' work aforesaid shall not be performed within the time specified in this Act, the overseer shall be authorized to require the performance of such work at any time prior to the first day of October then next ensuing; and in case any person shall neglect or refuse to do the two days' work, or furnish a substitute, or pay in money the price of two day's labor, as provided in this Act, he shall be deemed guilty of a misdemeanor and shall be fined in the sum of ten dollars for each day refusing so to work upon conviction before any justice of the peace of the precinct.

If any person shall appear at the proper time and place as directed by the overseer and neglect or refuse to do a reasonable day's work according to his ability, he shall be liable the same as if he had neglected or refused to appear, or furnish a substitute, or pay the sum of money as provided herein.

Under the direction of the overseer, and at his discretion, the above road tax may be performed by one day's work, together with an able-bodied man, a two-horse team with wagon, or a dog team consisting of not less than five dogs and a sleigh, or a reindeer team of not less than two reindeer and sleigh or cart.

It shall be the duty of each road overseer to receipt to each person who performs labor on the public roads and trails of his precinct under the provisions of this Act for the amount of labor so performed, and no person shall be compelled to pay road tax except in one precinct in the District of Alaska during one calendar year.

Each road overseer shall, on or before the first day of April in each year, report to the commissioner of the precinct the names of all persons subject to the two days' road tax for the preceding year, the names of those who have worked out said tax, the names of those who have paid the said tax money, and the names of those delinquent, and also all moneys received by him from all sources, and how expended, and the account of said road overseer of the work performed by himself, which report shall be approved by said commissioner before any final settlement shall be made with such road overseer.

Each and every road overseer who shall neglect or refuse to perform the several duties enjoined upon him by this Act, or who shall, under any pretense whatsoever, give or sign a receipt or certificate for labor performed or money paid, unless the labor shall have been performed or money paid prior to the signing or giving of such receipts or certificates, shall forfeit for every such offense not less than five nor more than fifty dollars, to be recovered by an action before any justice of the peace within the precinct where such overseer may reside, and it is hereby made the duty of every United States attorney or assistant to prosecute all offenses against the provisions of this Act not otherwise provided for.

Per Diem.

Road overseers shall be allowed four dollars per day for all services required by this Act and actually performed in their respective precincts, to be retained out of money paid said road overseers from persons paying money or fines in lieu of two days' labor, upon the certified statement of the overseers, approved by the commissioner of the precinct; Provided, That no overseer shall receive pay for more than ten days in any one year, and not until he has made the return as provided in the preceding section, in duplicate, one copy to be retained by the commissioner and one copy filed with the clerk of the district court in the division in which the said precinct is situated.

Any oath required to be taken by said overseer, acknowledgment of bond, or the filing or recording of any paper or plat authorized by this Act shall be free of cost to said overseer.

Upon application of road overseers, it shall be the duty of the clerk of the district court to furnish copies of this Act and blank forms of notices warning persons to perform road work, receipts for road work, bond, and oath, and for overseer's report to commissioner, the expense of which shall be paid out of the fund for paying the incidental expenses of the court.

The Attorney General of the United States is hereby directed to furnish clerks of the district courts in the different judicial divisions of Alaska a sufficient number of copies of this Act and other road and trail laws that may now be upon the statutes relating to roads and trails in the District of Alaska for use of road overseers in each judicial division.

Repealed by Act December 16, 1930

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January 27, 1905. An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the district of Alaska, and for other purposes. (33 Stats., 616).

\* \* \* \* \*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That all moneys derived from and collected for liquor licenses, occupation, or trade licenses outside of the incorporated towns in the district of Alaska shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska fund" and to be wholly devoted to the purposes hereinafter stated in the District of Alaska. One-fourth of said fund, or so much thereof as may be necessary, shall be devoted to the establishment and maintenance of public schools in said district; five per centum of said fund shall be devoted to the care and maintenance of insane persons in said district, or so much of said five per centum as may be needed; and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said district.

SEC. 2. That there shall be a board of road commissioners in said district, to be composed of an engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the Army stationed in said district and to be designated by the Secretary of War. The said engineer officer shall, during the term of his said detail and appointment, abide in said district. The said board shall have the power, and it shall be their duty, 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 of said district to any town, mining or other industrial camp or settlement, or between any such town, camps or settlements, therein, if in their judgment such roads or trails are needed and will be of permanent value for the development of the district; but no such road or trail shall be constructed to any town, camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. The said board shall prepare maps, plans, and specifications of every road or trail they may locate and lay out, and whenever more than five thousand dollars in the aggregate shall have to be expended on the construction of any road or trail, contract for the work shall be let by them to the lowest responsible bidder upon sealed bid, after due notice, under rules and regulations to be prescribed by the Secretary of War. The board may reject any bid if they deem the same unreasonably high or if they find that there is a combination among bidders. In case no responsible and reasonable bid can be secured, then the work may be carried on with material and men procured and hired by the board. The engineer officer of the board shall in all cases supervise the work of construction and see that the same is properly performed. As soon as any road or trail laid out by the board has been constructed and completed they shall examine the same and make a full and detailed report of the work done on the same to the Secretary of War, and in such report they shall state whether the road or trail has been completed conformable to the maps, plans, and specifications of the same. It shall be the duty of said board, as far

as practicable, to keep in proper repair all roads and trails, constructed under their supervision, and the same rules as to the manner in which the work of repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expenses of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of the Treasury out of the road and trail portion of said "Alaska fund" upon vouchers approved and certified by said board. The Secretary of the Treasury shall, at the end of each month, send by mail to each of the members of said board a statement of the amount available of said "Alaska fund" for the construction and repair of roads and trails, and no greater liability for construction or repair shall at any time be incurred by said board than the money available therefore at that time in said fund. The members of said board shall, in addition to their salaries, be entitled to receive their actual traveling expenses paid or incurred by them in the performance of their duties as members of the board.

SEC. 3. That the governor of the District of Alaska shall be ex officio superintendent of public instruction in said district, and as such shall have supervision and direction of the public schools in said district and shall prescribe rules and regulations for the examination and qualification of teachers, and shall make an annual report of the condition of the schools in the district to the Secretary of the Interior.

SEC. 4. That the common council of the incorporated towns in said district shall have the power, and it shall be their duty, in their respective towns to establish school districts, to provide the same with suitable schoolhouses, and to maintain public schools therein and to provide the necessary funds for the schools; but such schools when established shall be under the supervision and control of a school board of three members, consisting of a director, a treasurer, and a clerk, to be elected annually by the vote of all adults who are citizens of the United States or who have declared their intention to become such and who are residents of the school district. The members of said board first elected shall hold their offices for the term of two, and three years, respectively, and until their successors are elected and qualified, and one member of such board shall be elected each year thereafter and shall hold his office for a period of three years until his successor is elected and qualified; and they shall each, before entering upon the duties of their office, take an oath in writing to honestly and faithfully discharge the duties of their trust. In case a vacancy in the membership of said board occurs from death, resignation, removal, or other cause, such vacancy may be filled by a special election, upon ten days' notice, called by the remaining members of the board upon the petition of five qualified voters. All money available for school purposes, except for the construction and equipment of schoolhouses and the acquisition of sites for the same, shall be expended under the direction of said board, and the treasurer of said board shall be the custodian of said money, and he shall, before entering upon the duties of his office, give his bond, with sufficient sureties, to the school district, in such sum as the common council may direct, and subject to its approval, but not less than twice the amount that may come into his hands as treasurer, conditioned that he will honestly and faithfully disburse and account for all money that may come into his hands as such treasurer. The said board shall have the power to hire and employ the necessary teachers, to provide for heating and lighting the schoolhouse,

and in general to do and perform everything necessary for the due maintenance of a proper school.

SEC. 5. That the clerk of the district court shall have the power, and it shall be his duty, in the division to which he is appointed, and in which he resides, upon petition as hereinafter specified, to establish by order in writing a school district at any camp, village, or settlement outside of the limits of any incorporated town, but such school district shall not embrace more than forty square miles of territory nor contain less than twenty resident white children between the ages of six and twenty years. The said petition shall specify as near as may be the location and boundary of the proposed school district, the number of people, the number of families, and the number of children between the ages of six and twenty years, resident therein, and such other material facts as tend to show the necessity for the establishment of the school district. Said petition shall be signed by not less than twelve persons of adult age who are citizens of the United States or have declared their intention to become such and who reside within the boundaries of the proposed school district. If the clerk of the court is satisfied that it is necessary and proper to grant such petition, he shall make an order in writing establishing the school district prayed for, describing the same and defining its boundaries, and he shall also in said order appoint three of the petitioners to supervise and give notice of the first election, and shall specify the time and place of the same. The original order shall remain on file in the records of the court, and a copy of the same shall be posted at three public places in the school district at least ten days before the election, and such posting shall be deemed a sufficient notice of such election. All persons qualified to sign said petition shall be qualified to vote at said election. The qualified voters of said school district shall at said election choose by a plurality vote a school board of three members, consisting of a clerk, a treasurer, and a director, who shall, before entering upon the duties of their trust, each take an oath in writing to honorably and faithfully discharge the duties of their office. In case a vacancy in the membership of said board occurs from death, resignation, removal, or other cause, such vacancy may be filled by a special election, upon ten days' notice called by the remaining members of the board upon the petition of five qualified voters. The treasurer shall be the custodian of the monies of the school district, and he shall, before entering upon the duties of his office, give his bond to the school district, with sufficient sureties, to be approved by the clerk of the court, and in such sum as he may direct, but not less than twice the amount of money that may come into his hands as treasurer, conditioned that he, the treasurer, will honestly and faithfully disburse and account for all the money that may come into his hands by virtue of his office. Said board shall have the power to build or rent the necessary schoolhouse or schoolroom, to equip the same with the necessary furniture and fixtures, to provide fuel and light, to hire and employ teachers, and in general to do and perform everything that may be necessary for the maintenance of a public school. The members of said board shall hold office for the term of one year and until their successors are elected and qualified. An annual election shall be held each year, after the first election, for the election of members of said board. As soon as the members of said school board have been elected and qualified, they shall send to the clerk of the court and file in his office a certificate of their



election under the hand and seal of the judges or supervisors of election, their oaths of office, and the bond of the treasurer, and the clerk of the court shall file said papers and carefully keep them as part of the files and records of his office, and he shall at once send to the governor of the District of Alaska a certified copy of said papers, together with a certified copy of the order establishing the school district, and the governor shall duly file and preserve the same. The said board, as soon as they have complied with the requirements aforesaid, shall immediately report in writing to the governor the number of children in their school district between the ages of six and twenty years that intend to attend a public school, and the wages per month for which a teacher can be obtained; and after a school has been opened and maintained they shall, at the end of each school term report to the governor in writing the length of the term, the wages paid the teacher, the total number of pupils in attendance, and the daily average of such attendance at such term. The governor shall assign and set apart to each school district established and organized under the provisions of this section a sum, not less than three hundred dollars nor more than one thousand dollars, in proportion to the number of pupils in the district, for the construction and equipment of a schoolhouse, which sum shall be paid by the Secretary of the Treasury to the treasurer of the school district upon the order and voucher of the governor out of that portion of the said Alaska fund set apart for the establishment and maintenance of public schools. The residue of said portion of said fund, or so much thereof as may be necessary, shall by the governor be apportioned among the several school districts established under the provisions of this section in amounts sufficient for each district to pay the wages of a teacher, together with the expense of fuel and light, for five months' school in each year. And the amounts so apportioned to each school district shall be paid to the treasurer of the district by the Secretary of the Treasury upon the order and voucher of the governor out of the said portion of said fund.

SEC. 6. That the clerks of school districts in the incorporated towns shall, at the end of each school term, report to the governor in writing the length of the term, the wages paid the teacher, the number of pupils in attendance, and the average daily attendance during the term.

SEC. 7. That the schools specified and provided for in this Act shall be devoted to the education of white children and children of mixed blood who lead a civilized life. The education of the Eskimos and Indians in the District of Alaska shall remain under the direction and control of the Secretary of the Interior, and schools for and among the Eskimos and Indians of Alaska shall be provided for by an annual appropriation, and the Eskimo and Indian children of Alaska shall have the same right to be admitted to any Indian boarding school as the Indian children in the States or Territories of the United States.

SEC. 8. That commissioners appointed by the judges of the district court in the District of Alaska, pursuant to existing laws, shall, as ex officio probate judges and in the exercise of their probate jurisdiction, have the power, and it shall be their duty, in their respective districts, to commit, by warrant under their hands and seals, all persons adjudged insane in their districts to the asylum or sanitarium provided for the care and keeping of the insane in their District of Alaska. No person shall be adjudged insane or committed as such, except upon and pursuant

to the following proceedings, to wit: Whenever complaint in writing is made by an adult person to a commissioner that there is an insane person at large in the commissioner's district, the commissioner shall at once cause such insane person to be taken into custody and to be brought before him, and he shall then immediately summon and impanel a jury of six male adults, residents of the district, to inquire, try, and determine whether the person so complained of is really insane. The members of said jury shall, before entering upon the discharge of their duty, each take an oath to diligently inquire, justly try, and a true verdict render, touching the mental condition of the person charged with being insane. Before entering upon such trial the commissioner shall appoint some suitable person to appear for and represent in the proceeding the person complained of as insane, and in case there is a physician or surgeon in the vicinity who can be procured, the commissioner shall cause such surgeon or physician to examine the person alleged to be insane, and after such examination to testify under oath before the jury in respect to the mental condition of said person. The commissioner shall preside at said hearing and trial. All witnesses that may be offered shall be heard and shall be permitted to testify under oath in said matter, and after having heard all the evidence the said jury shall retire to agree upon a verdict, and if the jury unanimously, by their verdict in writing, find that the said person so charged with being insane as aforesaid is really and truly insane and that he ought to be committed to the asylum or sanitarium aforesaid, and the commissioner approved such finding, he shall enter a judgment adjudging the said person to be insane and adjudging that he be at once conveyed to and thereafter properly and safely kept in the said asylum or sanitarium until duly discharged therefrom by law. The commissioner shall thereupon, under his hand and seal, issue his warrant, with a copy of said judgment attached, for the commitment of said insane person to the asylum or sanitarium aforesaid, which warrant shall be delivered to the marshal of the division in which said proceedings are had, and shall direct said marshal to safely keep and deliver said insane person to said asylum or sanitarium, and the said marshal, for the service of process in connection with and the guarding and transportation of the insane, shall be compensated from the same source and in the same manner as in the case of prisoners convicted of crime. The commissioner, the jurymen, and the witnesses in said proceeding shall be entitled to the same compensation and mileage as in civil actions. And all the compensation, mileage, fees, and all other expenses and outlays incident to said proceedings shall be audited and allowed by the district judge of the division in which said proceedings are pending and had, and when so audited and allowed shall be paid by the clerk of the court in such division as the incidental expenses of the court are by him paid and from the same fund.

SEC. 9. That all Acts and parts of Acts inconsistent with this Act are, to the extent of such inconsistency, hereby repealed.

Approved, January 27, 1905.

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March 3, 1905. An Act making appropriations to supply deficiencies in the appropriations for the fiscal year ending June 30, 1095, and for prior years, and for other purposes. (33 Stats. at Large, 1225).

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Engineer Department.

Survey of wagon road from Valdez to Fort Egbert, Alaska: For a survey and estimate of cost of a wagon road from Valdez to Fort Egbert, on the Yukon River, to be made under the direction of the Secretary of War, five thousand seven hundred dollars and sixty three cents. (\$5,700.63).

Survey of military trail between Yukon River and Coldfoot, Alaska: For surveying and locating a military trail under the direction of the Secretary of War, by the shortest and most practicable route, between the Yukon River and Coldfoot, on the Koyukuk River, to be immediately available one thousand four hundred and thirty one dollars and fifteen cents. (\$1,431.15).

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May 14, 1906. Amendment to Act approved January 27, 1905.  
(34 Stats., 192).

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Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That section one of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January twenty-seventh, nineteen hundred and five, be, and the same is hereby, amended so as to read as follows:

SEC. 1. That all moneys derived from and collected for liquor licenses, occupation or trade licenses outside of the incorporated towns in the District of Alaska shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the 'Alaska fund' and to be wholly devoted to the purposes hereinafter stated in the District of Alaska. One-fourth of said fund, or so much thereof as may be necessary, shall be devoted to the establishment and maintenance of public schools in said district; five per centum of said fund shall be devoted to the care and maintenance of insane persons in said district, or so much of said five per centum as may be needed; and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said district; AND PROVIDED FURTHER, That the clerk of the court of each judicial division of said district is authorized, and he is hereby directed, whenever considered necessary, to call upon the United States marshal of said judicial division to aid in the collection of said license moneys by designating regular or special deputies of his office to act as temporary license inspectors, and it shall be the duty of said United States marshal to render such aid; and the said regular or

special deputies, while actually engaged in the performance of this duty, shall receive the same fees and allowances and be paid in the same manner as when performing their regular duties.

SEC. 2. That section two of said Act be, and the same is hereby, amended so as to read as follows:

Sec. 2. That there shall be a board of road commissioners in said district, to be composed of an engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the Army stationed in said district and to be designated by the Secretary of War. The said engineer officer shall, during the term of his said detail and appointment, abide in said district. The said board shall have the power, and it shall be their duty, 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 of said district to any town, mining or other industrial camp or settlement, or between any such town, camps, or settlements therein, if in their judgment such roads or trails are needed and will be of permanent value for the development of the district; but no such road or trail shall be constructed to any town, camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. The said board shall prepare maps, plans, and specifications of every road or trail they may locate and lay out, and whenever more than twenty thousand dollars, in the aggregate, shall have to be expended upon the actual construction of any road or section of road designed to be permanent, contract for the work shall be let by them to the lowest responsible bidder, upon sealed bids, after due notice, under rules and regulations to be prescribed by the Secretary of War. The board may reject any bid if they deem the same unreasonably high or if they find that there is a combination among bidders. In case no responsible and reasonable bid can be secured, then the work may be carried on with material and men procured and hired by the board. The engineer officer of the board shall in all cases supervise the work of construction and see that the same is properly performed. As soon as any road or trail laid out by the board has been constructed and completed they shall examine the same and make a full and detailed report of the work done on the same to the Secretary of War, and in such report they shall state whether the road or trail has been completed conformably to the maps, plans, and specifications of the same. It shall be the duty of said board, as far as practicable, to keep in proper repair all roads and trails constructed under their supervision, and the same rules as to the manner in which the work of repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expenses of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of

the Treasury, through the authorized disbursing officer of the board designated by the Secretary of War, out of the road and trail portion of said 'Alaska fund' upon vouchers approved and certified by said board. The Secretary of the Treasury, shall, at the end of each month, send by mail to each of the members of said board a statement of the amount available of said 'Alaska fund' for the construction and repair of roads and trails, and no greater liability for construction or repair shall at any time be incurred by said board than the money available therefore at the time in said fund. The members of the board shall, in addition to their salaries, be reimbursed in the sums actually paid or incurred by them in traveling expenses in the performance of their duties, and shall be entitled to receive their actual expenses of living while serving as members of said board within the limits of the district and not stationed at a military post.

Approved May 14, 1906.

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June 12, 1906. An Act making appropriation for the support of the Army for the fiscal year ending June 30, 1907. (34 Stats. at Large, 254).

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For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, one hundred and fifty thousand dollars. (\$150,000.00).

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June 20, 1906. (34 Stats., p. 316).

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Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That the sum of \$35,000 be, and the same is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for a reconnaissance and preliminary survey of a land route from the navigable waters of the Tanana River, at or near Fairbanks, to the vicinity of Council City, in the Seward Peninsula, Alaska, for a mail and pack trail along such route, such sum to be immediately available, and to be expended under the direction of the Secretary of War; report of said survey and reconnaissance to be made to Congress at the earliest practicable day.

Approved June 20, 1906.

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March 2, 1907. (34 Stats. at Large, 1178).

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For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, two hundred and fifty thousand dollars. (\$250,000.00).

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May 11, 1908. (11 Stats., 142).

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For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, two hundred and fifty thousand dollars (\$250,000.00) to remain available until the close of fiscal year 1910.

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February 6, 1909. Amendment to Act creating Road Commission). (35 Stats. at Large, 601).

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So much of the Act approved January 27, 1905, entitled "An Act to provide for the construction and maintenance of roads, establishment and maintenance of schools, and care and support of insane persons in the District of Alaska, and for other purposes," as provides that five per centum of the license moneys collected outside of incorporated towns in the District of Alaska shall be devoted to the care and maintenance of such insane persons is hereby repealed, and such five per centum, or so much thereof as may be necessary, shall hereafter be applied to and used for the establishment and maintenance of public schools in said district, under the supervision of the governor.

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March 3, 1909. (12 Stats., 148).

For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the

direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, three hundred and fifty thousand dollars (\$350,000.00) to remain available until the close of fiscal year 1911.

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 March 23, 1910. (13 Stats., 302).

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For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, one hundred thousand dollars (\$100,000.00), to remain available until the close of fiscal year ending June thirtieth, nineteen hundred and twelve.

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 March 3, 1911. (36 Stats., 1052).

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Same wording as act of June 12, 1906 (34 Stats., 254) except beginning with amount appropriated.

. . . one hundred and fifty thousand dollars (\$150,000.00) to remain available until the close of the fiscal year ending June thirtieth, nineteen hundred and thirteen (1913); Provided, That hereafter the Secretary of War may, in his discretion, assign suitable retired officers of the Army to active duty as members of the Board of Road Commissioners for Alaska, and in the case of any officer so assigned the provisions of so much of the Act of Congress approved April twenty-third, nineteen hundred and four, entitled "An Act making appropriations for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and five, and for other purposes" as relates to the assignment of retired officers to active duty shall apply.

The above extended to Alaska an act of April 23, 1904 (33 Stats., 264) which provided that "The Secretary of War may assign retired officers of the Army, with their consent, to active duty . . . and such officers while so assigned, shall receive the full pay and allowances of their respective grades.

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War Department Act approved August 24, 1912.

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Construction and maintenance of military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January twenty-seventh, nineteen hundred and five, as amended by the Act approved May fourteenth, nineteen hundred and six, and to be expended conformably to the provisions of said Act as amended, one hundred and twenty-five thousand dollars (\$125,000.00).

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War Department Act approved March 2, 1913.

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Construction and maintenance of military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails in the Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January twenty-seventh, nineteen hundred and five, as amended by the Act approved May fourteenth, nineteen hundred and six, and to be expended conformably to the provisions of said Act as amended \$155,000; Provided, That not to exceed \$55,000 of this amount may be used by the Board of Road Commissioners for Alaska for the protection of the Signal Corps Building and terminal grounds of the Alaska Military Cable and Telegraph System.

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March 3, 1913 (37 Stats., 728). An Act to provide assistance to persons in Alaska who are indigent and incapacitated through nonage, old age, sickness, or accident, and for other purposes.

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Be it enacted by the Senate and House or Representatives of the United States of America in Congress assembled. That section one of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January twenty-seventh, nineteen hundred and five, as amended by an Act approved May fourteenth, nineteen hundred and six, and as further amended by an Act approved February sixth, nineteen hundred and nine, be, and the same is hereby, amended as to read as follows:



SEC. 1. That all moneys derived from and collected for liquor licenses, occupation or trade licenses, outside of the incorporated towns in the Territory of Alaska, shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska fund" and to be wholly devoted to the purposes hereinafter stated in the Territory of Alaska. Twenty-five per centum of said fund, or so much thereof as may be necessary, shall be devoted to the establishment and maintenance of public schools in said Territory; ten per centum of said fund shall be, and is hereby, appropriated and authorized to be expended for the relief of persons in Alaska who are indigent and incapacitated through nonage, old age, sickness, or accident, and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said Territory; Provided, That the clerk of the court of each judicial division of said Territory is authorized, and he is hereby directed, whenever considered necessary, to call upon the United States marshal of said judicial division to aid in the collection of said license moneys by designating regular or special deputies of his office to act as temporary license inspectors, and it shall be the duty of said United States marshal to render such aid; and the said regular or special deputies while actually engaged in the performance of this duty shall receive the same fees and allowances and be paid in the same manner as when performing their regular duties.

That at the end of each fiscal quarter the Secretary of the Treasury of the United States shall divide the amount of said ten per centum of said fund so received during the quarter just ended into four equal parts, and transmit to each of the four United States district judges in Alaska one of said equal amounts.

That each of said judges is hereby authorized to expend so much of the money received by him under this Act as may, in his discretion, be required for the relief of those persons in his division who are incapacitated through nonage, old age, sickness, or accident, and who are indigent and unable to assist and protect themselves; Provided, That each judge shall quarterly submit to the Secretary of the Treasury an itemized statement, with proper vouchers of all expenditures made by him under this Act, and he shall at the time transmit a copy of said statement to the governor of the Territory; Provided further, That any unexpended balance remaining in the hands of any judge at the end of any quarter shall be returned to the Secretary of the Treasury of the United States, and by him deposited in the said 'Alaska fund' and the said sum shall be subsequently devoted first, to meeting any actual requirements for the care and relief of such persons as are provided for in this Act in any other division in said Territory wherein the amount allotted for that purpose has proved insufficient; and,

second, if there shall be any remainder thereof, said remainder shall be devoted to the construction and maintenance of wagon roads, bridges and trails in said Territory.

Approved March 3, 1913.

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April 27, 1914. (36 Stats., 366). An Act making appropriations for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and fifteen.

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Construction, repair, and maintenance of military and post roads, bridges and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$125,000; Provided, That the accounting officers of the Treasury are authorized and directed to allow and credit in the accounts of First Lieutenant Robert L. Weeks, United States Army, the sum of \$1,340, disallowed against him on the books of the Treasury in accordance with a ruling of the Comptroller of the Treasury, dated March fourteenth, nineteen hundred and thirteen; and that hereafter any officer of the Army and member of said Board of Road Commissioners who is living with his family while serving as a member of said board within the limits of the Territory of Alaska, and not stationed at a military post, shall be entitled to receive a per diem commutation fixed by the board in lieu of "actual living expenses" as now provided by law; and this provision shall embrace the time during which any member of said board shall have failed in the post to receive any allowance for expense of living by reason of the decision of the Comptroller of the Treasury above referred to, to the effect that said allowance could not be made to an officer living with his family.

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W.D. Act approved March 4, 1915.

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Construction, repair, and maintenance, military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$165,000.

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W.D. Act approved March 29, 1916.

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Construction, repair, and maintenance, military and post roads, bridges, and trails, Alaska: Construction, repair and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$500,000.

W.D. Act approved May 12, 1917.

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For the construction, repair, and maintenance, military and post roads, bridges, and trails, Alaska: Construction, repair and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$500,000, to remain available until June thirtieth, nineteen hundred and nineteen (1919).

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Retired Officers on Active Duty. (40 Stats., 231).

\* \* \* \* \*

That when Retired Officers of the Army, any portion of whose active service was in the Corps of Engineers, are called back into active service they shall be eligible to fill any position required by law to be filled by an officer of the Corps of Engineers.

Approved June 15, 1917.  
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APPENDIX C

MEMBERS OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA

MARCH 1905 TO JANUARY 1918

Richardson, Wilds Preston, Major and eventually Brigadier General,  
president of the board, March 1905 to December 29, 1917.

Engineer Officers

Pillsbury, George B., Captain, May 15, 1905 to 1908.

Pope, F. A., Captain, 1908 to 1911.

Egerton, Glen E., Captain, January 1911 to September 11, 1915.

Mehaffey, Joseph C., Major, July 1, 1917 to October 3, 1917.

Waugh, William H., Captain, October 4, 1917 to December 30, 1917.

Secretary and Disbursing Officers

Orchard, Samuel C., Lieutenant, March 1905 to 1911.

Weeks, Robert L., Lieutenant, 1911 to August 26, 1913.

Kunzig, L. A., Lieutenant, August 26, 1913 to December 31, 1915.

Davison, Peter W., Major, January 1916.

Davison, Peter W., Lieutenant Colonel, July 1, 1917 to August 31, 1917.

Mehaffey, Joseph C., Major, September 1, 1917 to October 17, 1917.

Zug, John, Captain, October 18, 1917 to January 18, 1918.

Pursuant to Contract RSA254534  
University of Alaska  
Arctic Environmental Information and Data Center  
Anchorage, Alaska

The Board of Road Commissioners for Alaska

1918 to 1924

by  
Claus-M. Naske

for  
Alaska Department of Transportation and Public Facilities

October 1981

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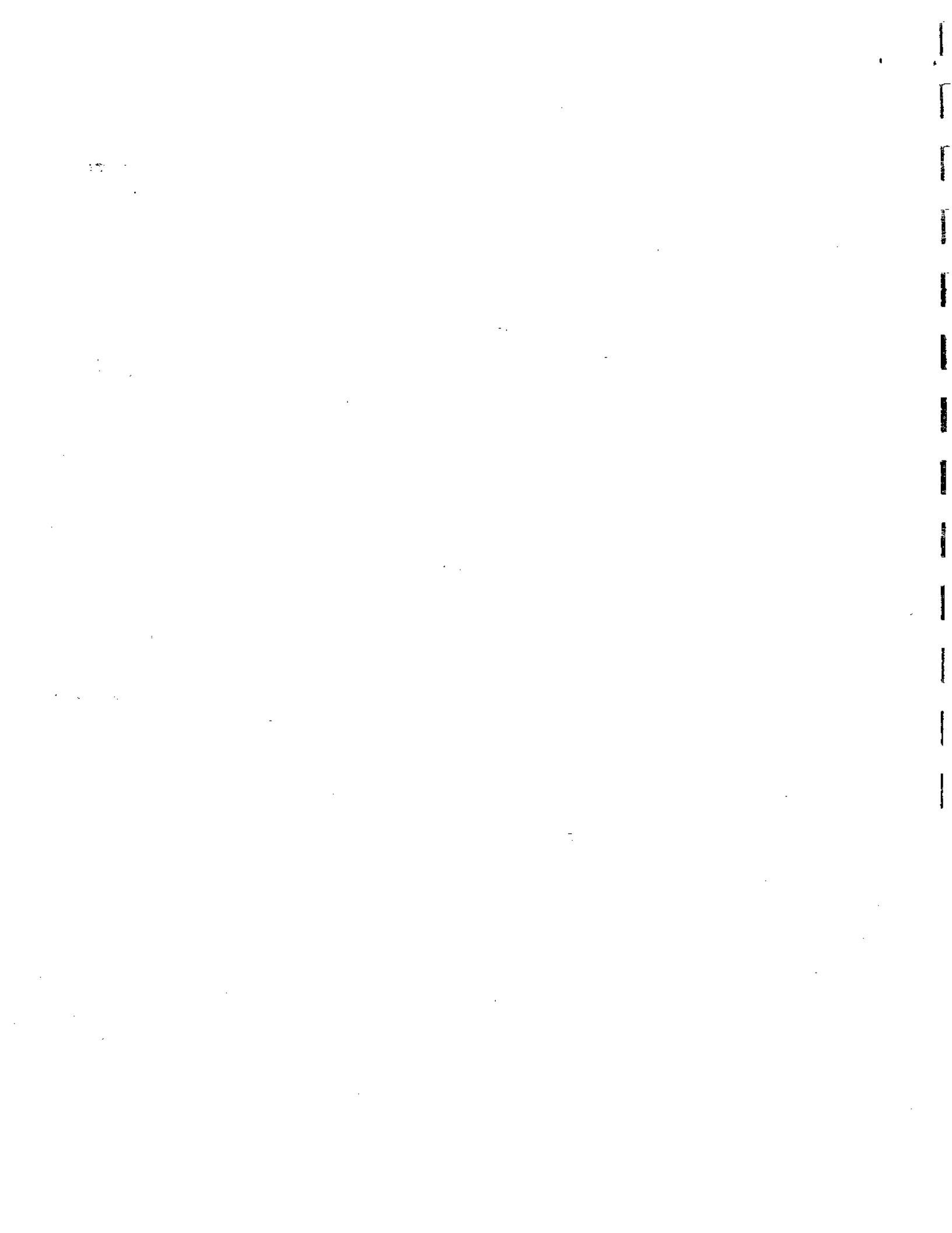
### The Board of Road Commissioners for Alaska

#### References

- Appendix A      Reconnaissance Survey by Unnamed Official --  
Fort Gibbon to Kotzebue.
- Appendix B      Reconnaissance Report of Fred Price (1921)  
Eagle, Fortymile, and Other Trails.
- Appendix C      Laws Relating to the Construction of Roads in  
Alaska.
- Appendix D      1924 Organization of the Alaska Road  
Commission.
- Appendix E      Officers of the Board of Road Commissioners  
for Alaska, 1918 to 1924.

## PREFACE

This narrative history of the Board of Road Commissioners for Alaska (or the Alaska Road Commission) is a continuation of the narrative submitted in December, 1981. The narrative's first segment comprised the pioneer period, 1905 to December, 1917. This narrative continues from 1918 through 1924.





The first man to travel the entire route of the Valdez to Prudhoe Bay corridor in a continuous journey may have been Harold Eide, a young, tough Norwegian who was given a map of a supposed gold strike by a friend of his in California. From an article he wrote in later years, we know a great deal about his trek. The year was 1917, and most of the more productive placer mining areas in Alaska had been worked out. 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."<sup>1</sup>

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 arduous 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 guessed 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 no 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 merrymakers. 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 be-whiskered, 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 Liven-

good 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, the 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 out-croppings. 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 redish 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 servicable.

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.

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 at any time of the year. 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 1925 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.

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 Board 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 been detailed in the first section of this history -- 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.

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.

A history of Alaska's roads 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.<sup>2</sup>

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 transform their heroic pioneering work to a derisible level of attainment. Actually, the writers were paying lip service to the stern limits of their duties to provide military routes. By law, if not in



practice, private travel was not their concern. Thus their reports cautiously denied any responsibility for the new social phenomenon: "The use of automobiles has not been encouraged by the Board, but the number of such vehicles in Alaska is growing rapidly from year to year."<sup>3</sup> 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 that "the value of quick transportation is recognized."<sup>4</sup> 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."<sup>5</sup>

By 1918 the Valdez-Fairbanks Road and the Willow Creek-Chitina branch were regularly used by automobile stages 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.<sup>6</sup>

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."<sup>7</sup> Of course, much of the wagon road mileage had not been surfaced, but approximately 300 miles had at least been surfaced with gravel.

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. The railroad would

eventually carry passengers and freight over a route roughly paralleling a good proportion of the Valdez-Fairbanks Road. 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."<sup>8</sup> 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.

Brighter prospects of the 1918 Annual 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, heavy<sup>9</sup>

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."<sup>10</sup> 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.<sup>11</sup> 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, some 40 Natives were employed on the Valdez-Fairbanks Road alone, and the practice of hiring continued over the entire history of the Board of Road Commissioners. 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.

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.

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.<sup>12</sup>

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 on 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.<sup>13</sup>

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."<sup>14</sup> 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.<sup>15</sup>

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.<sup>16</sup>

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 the end 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."<sup>17</sup> 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."<sup>18</sup>

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.

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.

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 the area's remoteness still caused a mini-stampede of 200 men in 1906. Some placer gold was produced, but a rosy, long range future was predicted for quartz mining. Quartz mining, 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 was 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.<sup>19</sup>

Sporadic attempts over the next 20 years to get the huge mill to the mines were failures. 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 savings 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."<sup>20</sup> 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."<sup>21</sup>

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."<sup>22</sup>

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."<sup>23</sup> 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.

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, one between Tonsina and Sourdough, 70 miles, and the other between Fairbanks and Sulchaket, 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.<sup>24</sup>

The Board of Road Commissioners bought equipment as it could in subsequent years, and enjoyed a windfall in surplus army



The Board of Road Commissioners 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.

Nature set certain obstacles to effective road maintenance. For all its scenic attraction then and now, the first 18 miles of the Richardson Road out of Valdez consumed a large chunk of the Board's budget year after year, and even in 1981 it still is 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 is graphic on the summer 1919 flooding of what had always been the most expensive road in Alaska to maintain.

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 bowlders (sic), 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 Lisicum 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.<sup>25</sup>

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; and 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 impassible.

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 to 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 the most important project of this program aims at its relief.
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	Remarks
			Miles	
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 to the 40-mile mining district fr 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 connects two old projects connecting Rampart on the Yukon with Hot Springs on the Tanana.

G. Gulkana, Copper River 40  
Chistochena

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 comprehends 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.<sup>26</sup>

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."<sup>27</sup>

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 for 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.<sup>28</sup> Joslin reported on the self-serving nature of some of Leach's statements, and the absurdity of giving 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.<sup>29</sup>

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 undesigned 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.<sup>30</sup>

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.<sup>31</sup> But Colonel James G. Steese, the new president of the Board, replied cautiously to the petitioners:

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 automotible road from Chatanika to Miller House) as rapidly as we should like to do so.<sup>32</sup>

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.

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  
17 horse-drawn road graders  
3 air compressors  
1 Bucyrus drag line  
2 hoisting engines  
4 pile drivers  
40 double-ender sleds  
3 jack hammers  
6 radio outfits  
8 trailers  
8 road rollers  
2 power saws  
2 car tractors  
20 Holt tractors  
3 Titan tractors  
1 Yukon tractor  
70 wagons  
5 winches  
28 Dodge trucks  
10 Ford trucks

- 6 GMC trucks
- 1 Gersix truck
- 4 Mack trucks
- 4 Pakcard trucks
- 2 Pierce Arrow trucks
- 2 White trucks
- 2 stone crushers
- 7 transits
- 3 levels
- 1 pile driver steam boiler
- 1 power driven pump
- 82 slip scrapers
- 10 wheel scrapers<sup>34</sup>

By 1923 the Commission 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 \$955,000 requested; for 1922 only \$465,000 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.<sup>35</sup>

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.<sup>36</sup> 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 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.<sup>39</sup> 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.<sup>38</sup>

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:

The practical result of the foregoing orders has 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 where the approval of Washington is required, such approval has usually been obtained by a single telegram covering the various angles or the views of the bureaus concerned.

The following are the 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, visced, and then passed up to the various departments and bureaus under whose direction the particular work has been handled.<sup>39</sup>

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.<sup>40</sup>

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 re-construction 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.<sup>41</sup>

The Board once again operated on its own, and the financial summary of June 30, 1923, gives 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	<u>618,869.62</u>	\$7,028,293.66	
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>7,427,392.13</u>
Total for new work	4,277,696.99		
Total for maintenance	<u>3,149,695.14</u>		
Total expended		7,427,392.13	
Balance available		<u>669,118.41</u>	
Grand total to be accounted for			<u>8,096,510.54</u>



Appropriations to June 30, 1923:					
Construction and maintenance of military post roads, bridges and trails, Alaska Wagon roads, bridges and trails					4,945,000.00
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					
				399,078.02	
Total					<u>8,096,510.54</u>
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>34,265.91</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:

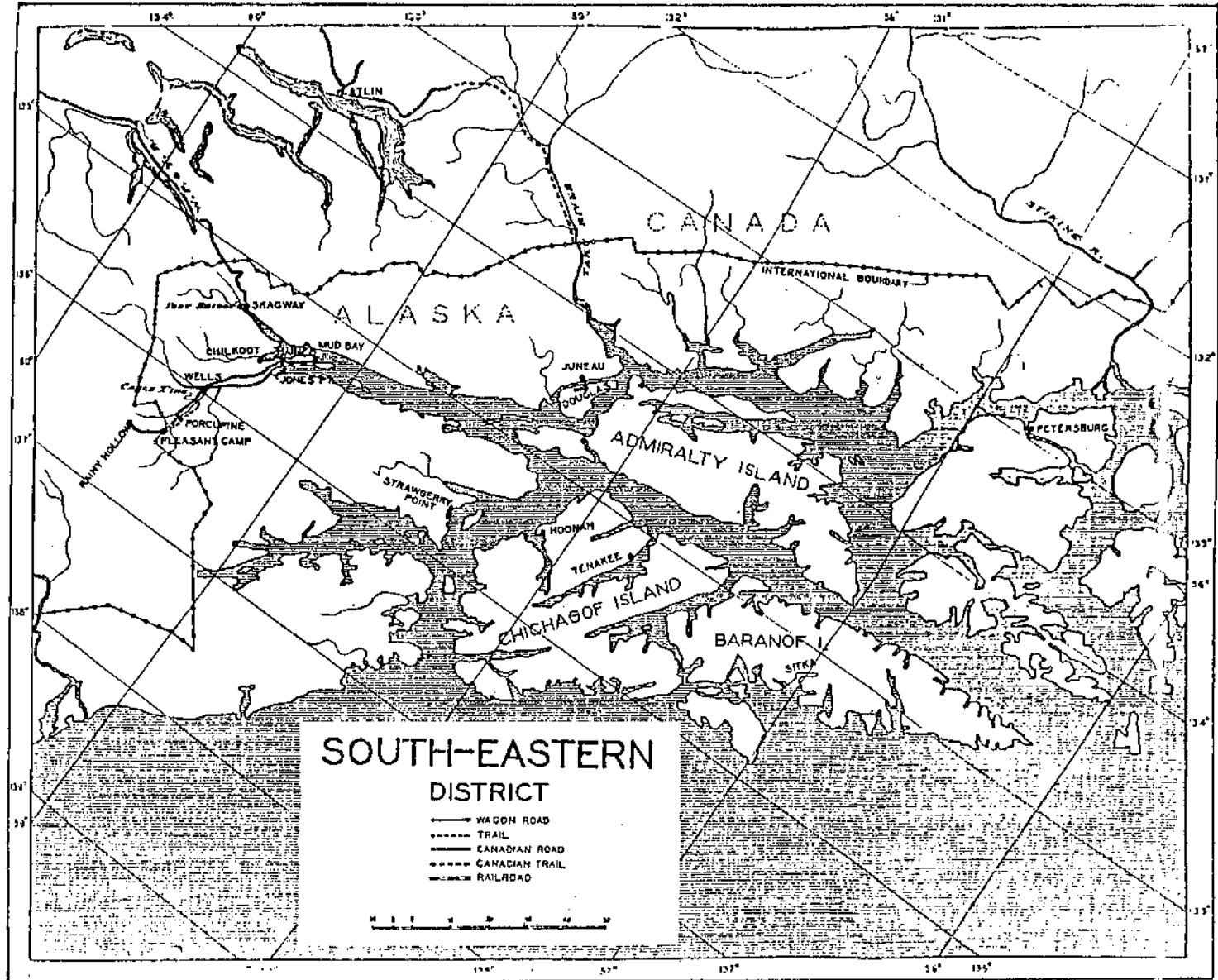
Act of legislature approved Apr. 21, 1919 -		
Public roads, bridges, trails, and ferries -		
Fiscal year 1920.....	\$115,517.94	
1921.....	<u>85,746.61</u>	\$201,264.55
Approved May 7, 1921, roads, etc. -		
Fiscal year 1921.....	28,000.00	
1922.....	43,237.28	
1923 (includes \$20.45 refund).....	<u>88,533.33</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>	20,000.00
Total territory.....		396,035.16

2. by others:

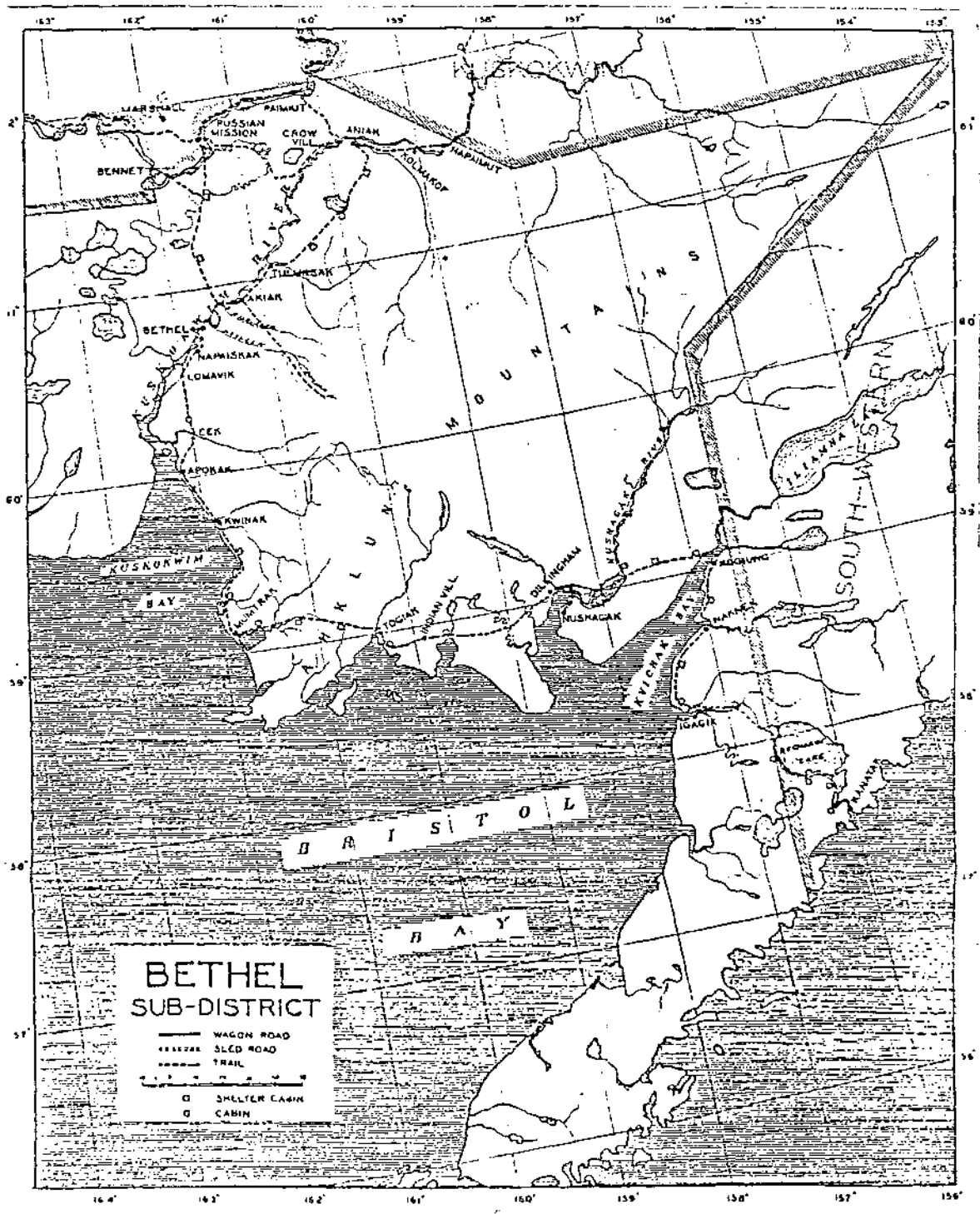
Fiscal year 1922 -		
City of Valdez.....	220.02	
City of Wrangell.....	500.00	
City of Sitka.....	500.00	
Alpine Club of Skagway.....	<u>463.75</u>	1,683.77
Fiscal year 1923:		
City of Valdez.....	601.83	
City of Juneau.....	<u>777.71</u>	1,379.54
Grand total, contributed funds.....		399,098.47 <sup>42</sup>

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,

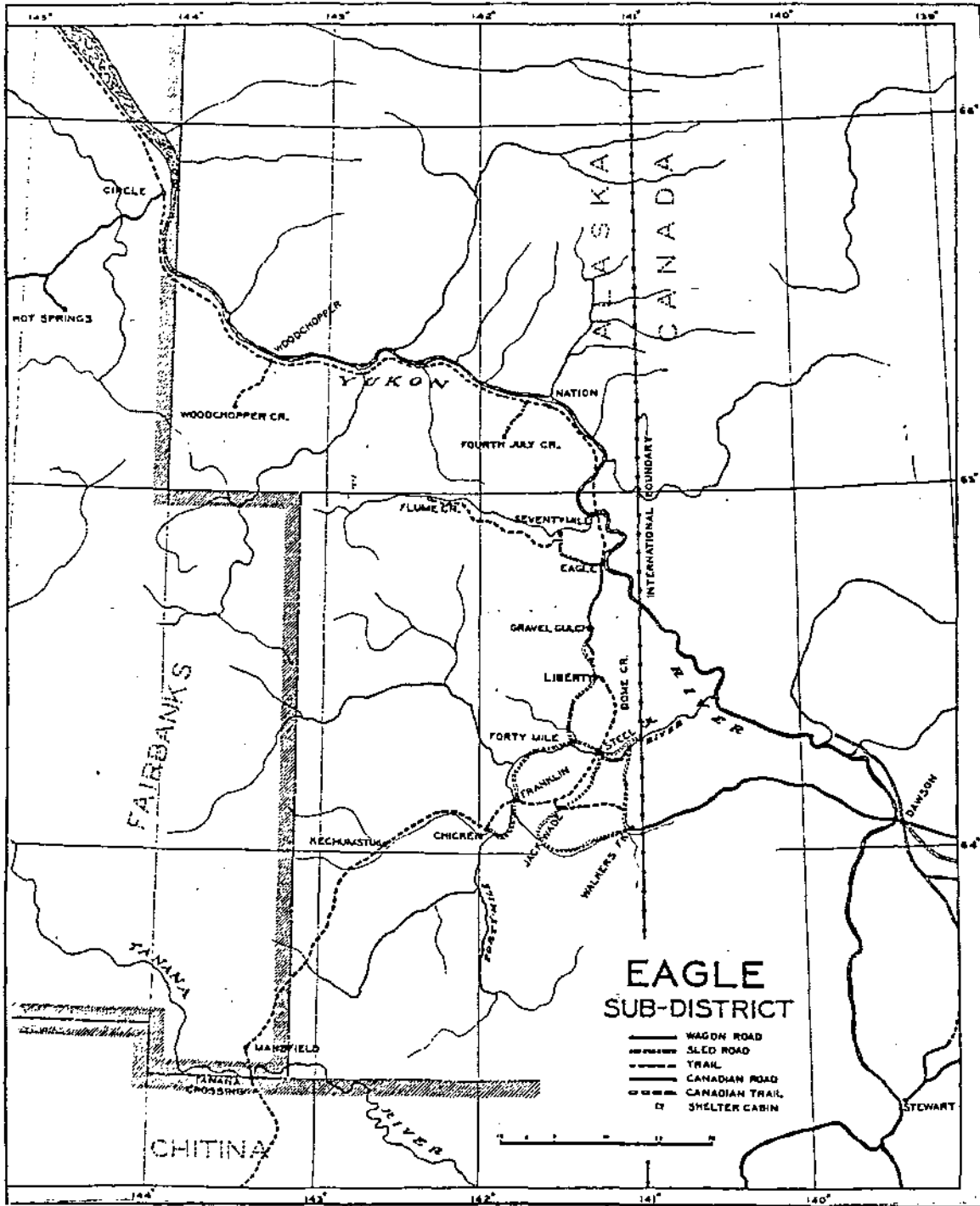
although smaller-scale sectional components of the overall map were published in the 1921 annual report and in other annual reports of the 1920's. For ready reference the maps are included here.<sup>43</sup>



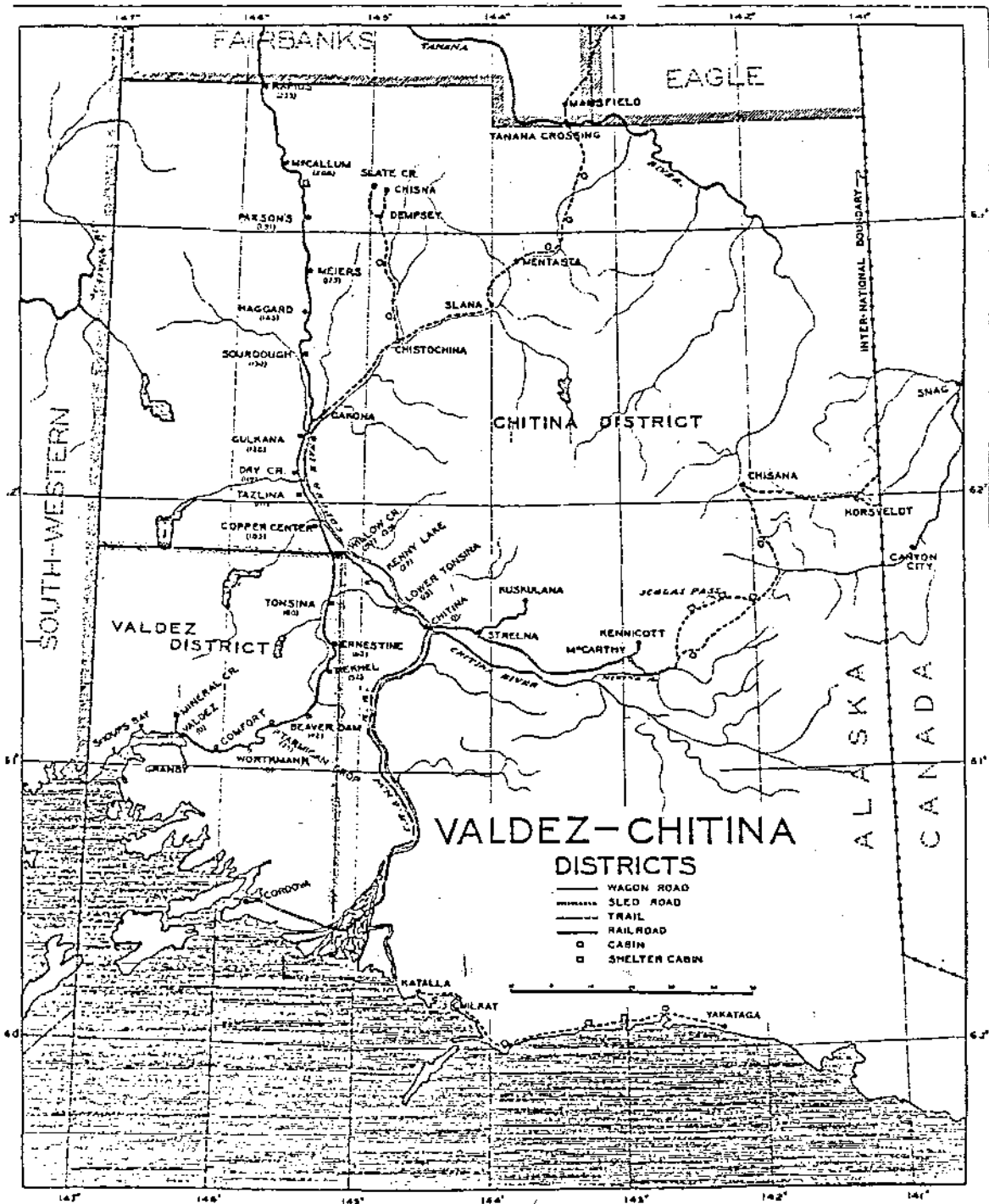
Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.



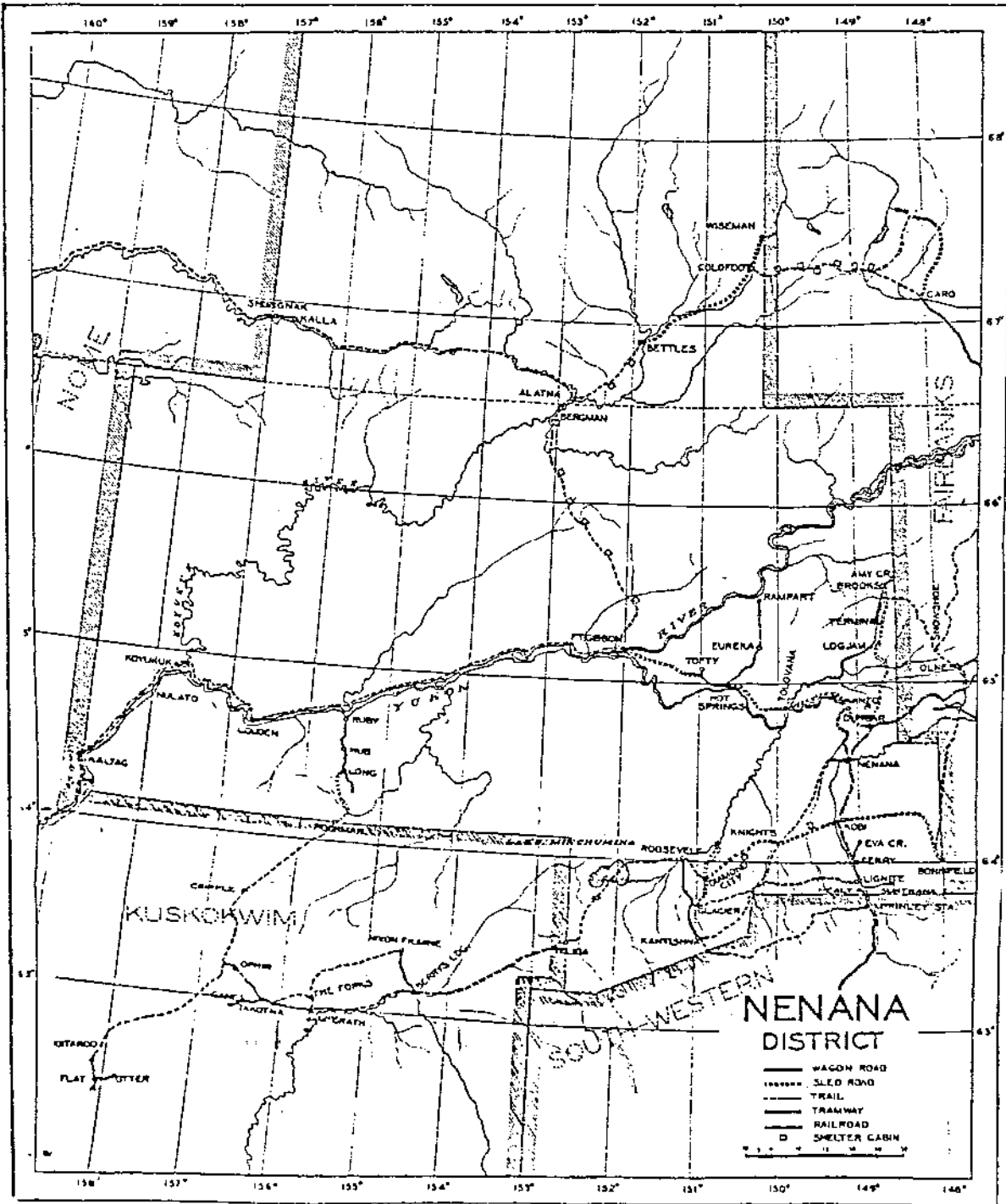
Reproduced from the 1923 Alaska Road Commission Annual Report.



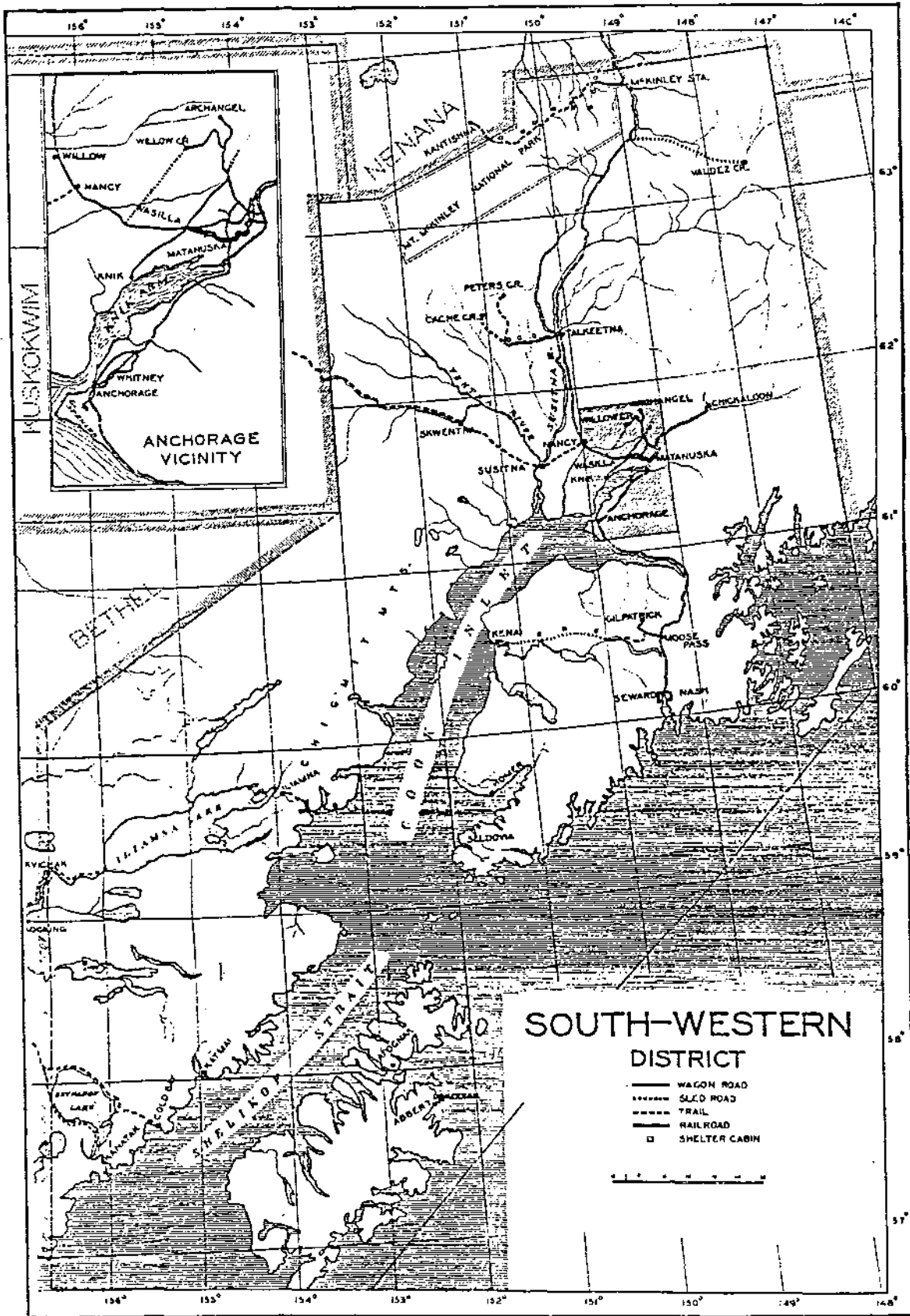
Reproduced from the 1923 Alaska Road Commission Annual Report.



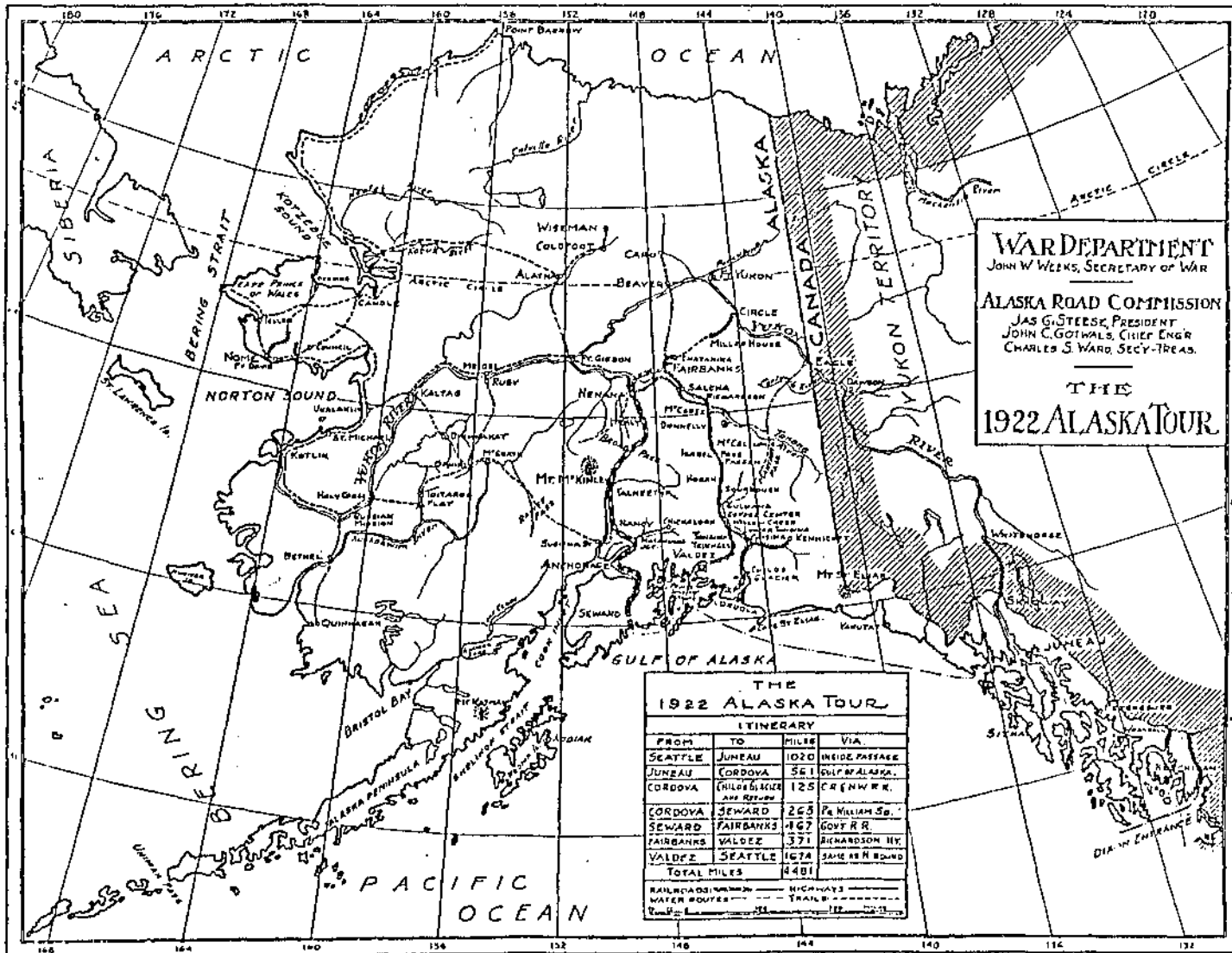




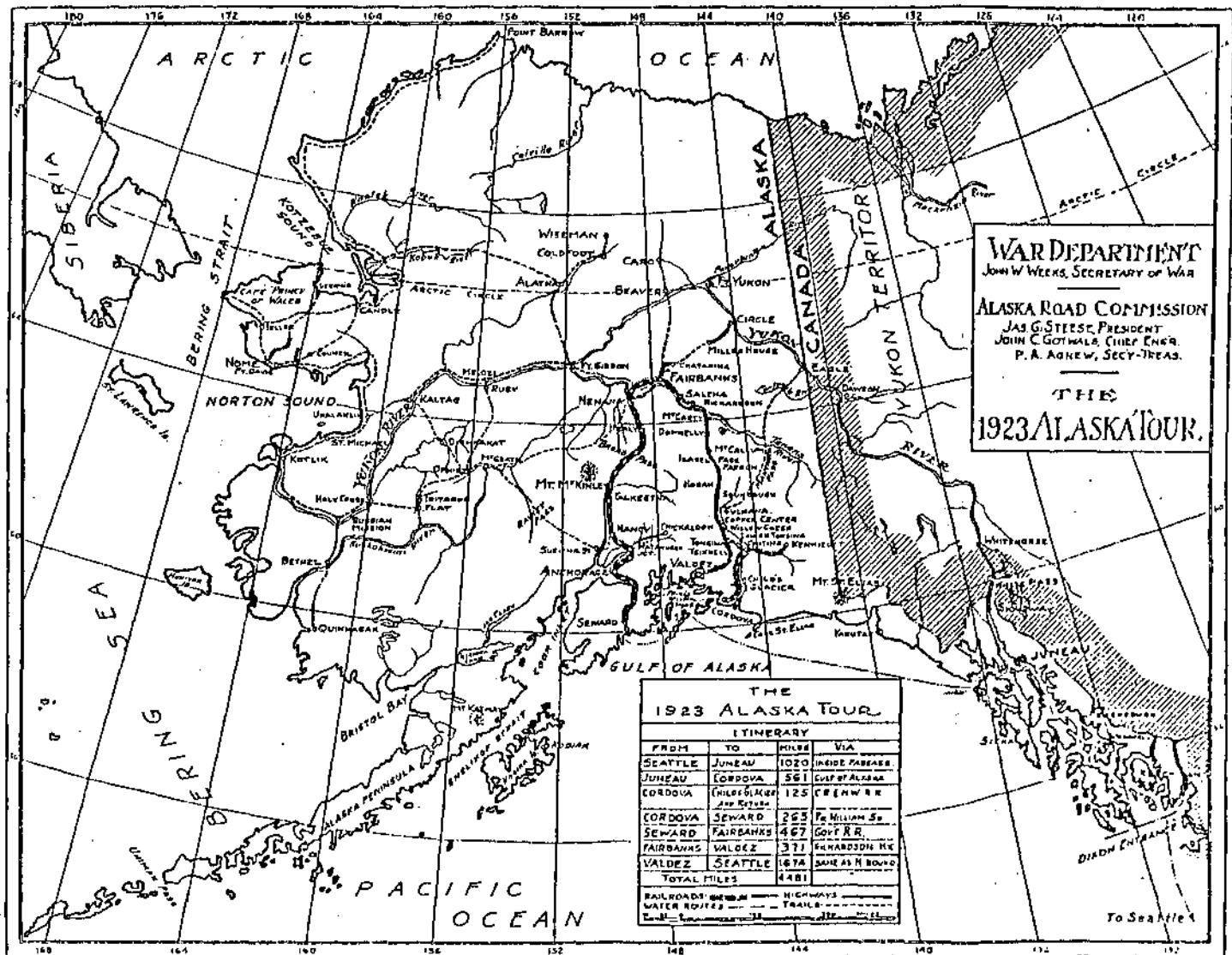
Reproduced from the 1923 Alaska Road Commission Annual Report.



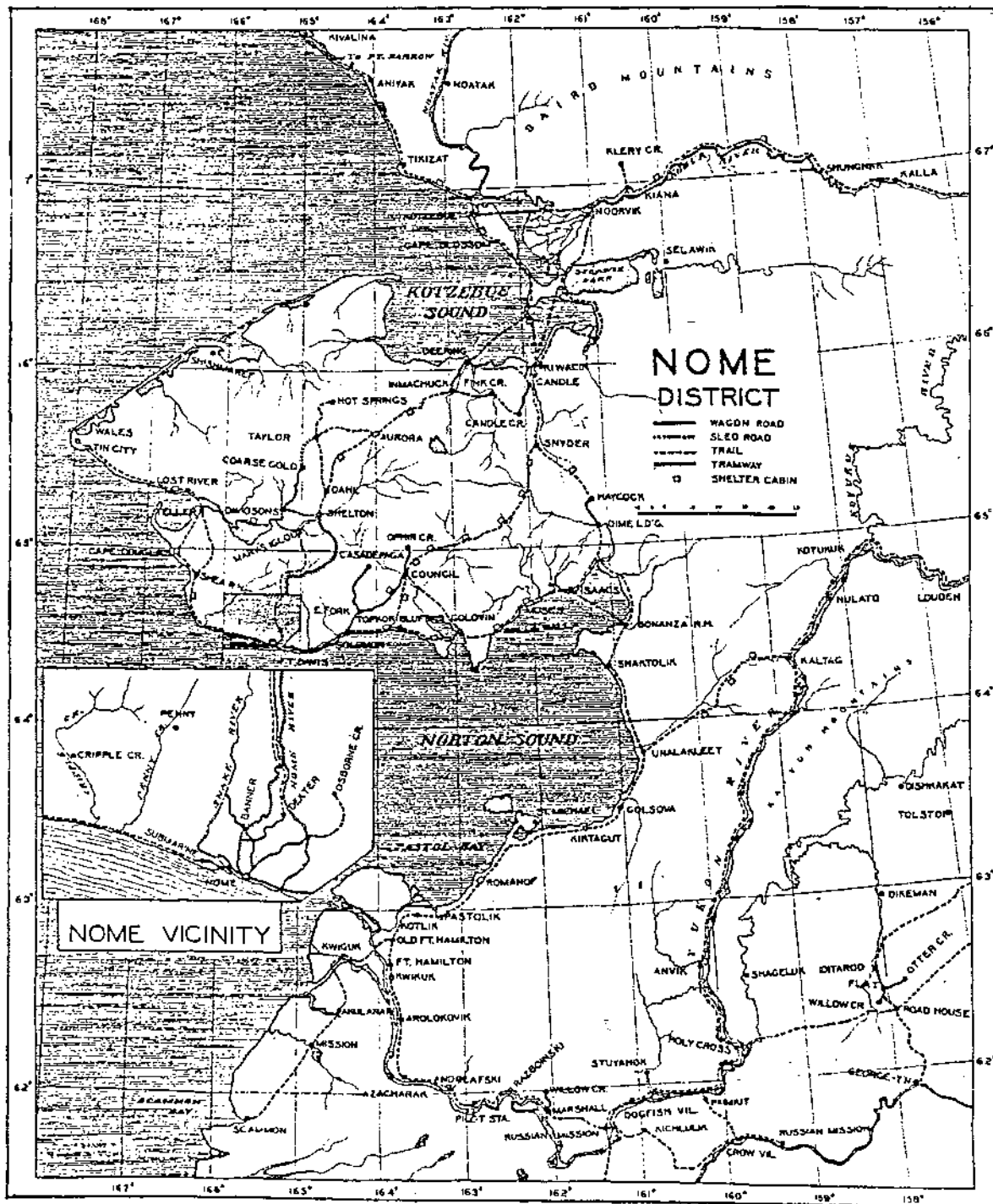
Reproduced from the 1923 Alaska Road Commission Annual Report.



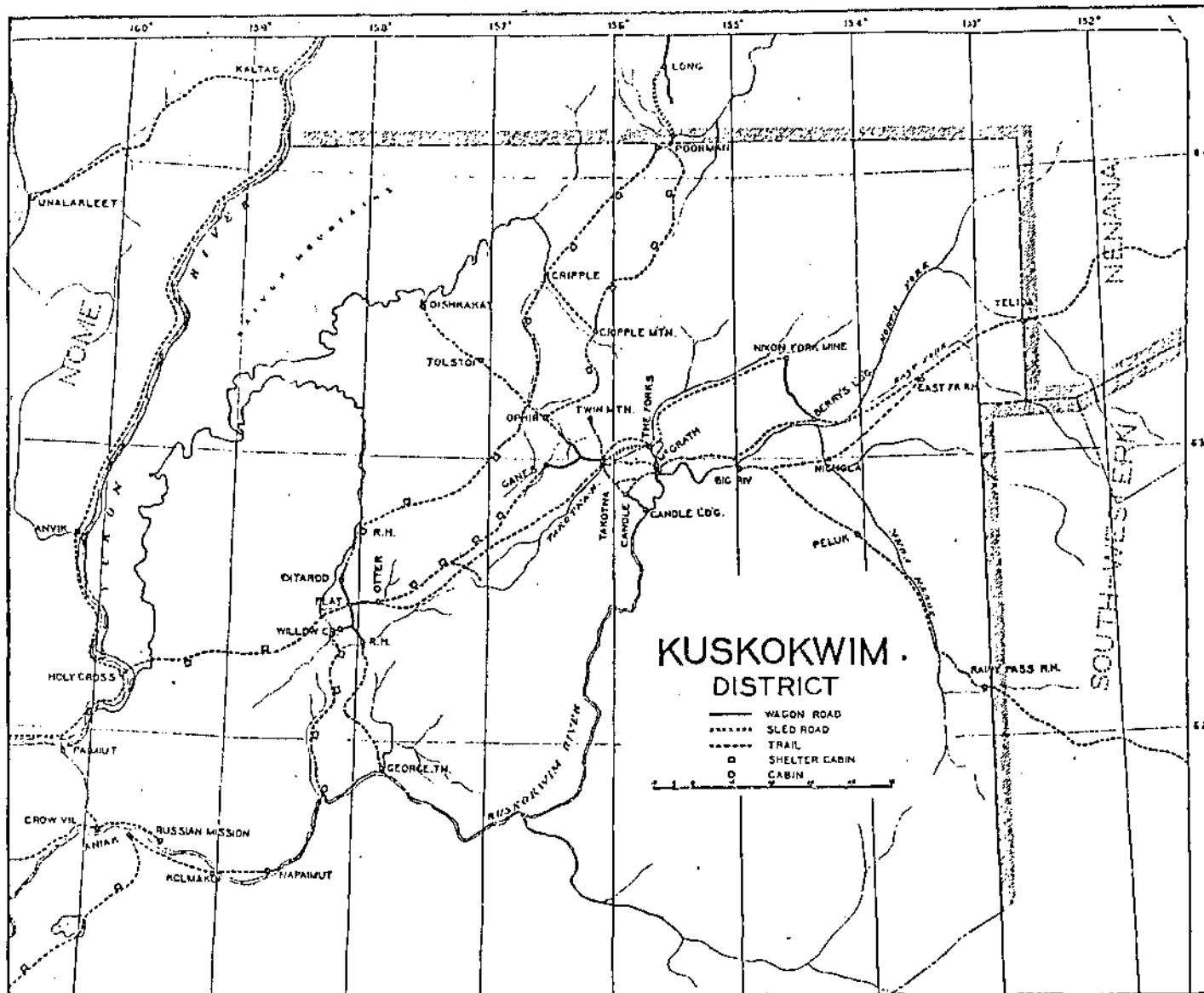
Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.



Reproduced from the 1923 Alaska Road Commission Annual Report.



This narrative could include numerous examples of Alaskan ire at the Board of Road Commissioners, 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 does seem important to show further that its staff investigated conditions on the trails and roads. Further documentation has the additional value here of giving something of the real flavor of the work. There is no more effective way to show how the necessary work was accomplished fifty years ago than by including the full report of a Russian River-Kenai Reconnaissance submitted in March, 1923:

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 eight 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 quiet thick and some places heavy timber is to be encountered. Estimate the cost cutting this section of seven and one half miles trail \$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, therefor assuring early and late travel with safety each year.

The Bureau of Public Roads have made a survey for a wagon road from Mile 8-1/2 on the Moose Pass wagon road to the lower end of Kenai Lake, however there has been nothing further done to relieve conditions this section of the trail, had the money which was expended for making the wagon road survey been expended on the winter sled road this section the situation would have been much relieved, also the wagon road survey could have been made later, during the summer months the Kenai Lake affords excellent water transportation to and from the lower end of the lake to the railroad and connects at Mile 23. Therefore the sled trail is much more in need than the wagon road at present.

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 a 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 three 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 three seventy foot pony Howe Trusses constructed of native timber also one hun-

dred 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 where ever 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 where 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. Then after arriving at the north end of the lake in the low pass where the mail carrier has a shelter tent erected, and makes this his headquarters for one of the daily runs on his trip each way.

Estimated cost of repairs and reconstruction this trail section from the landing on lower Kenai Lake to the shelter tent in the low 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 widening the trail \$1,200.00. Estimated grading hillside for sled road at for sled road at \$500.00 per miles 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 sec-

tion 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 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 out croppings solid rock of which is mostly composed of slate. Estimate the cost constructing 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 many be 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. Therefor 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. Once 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 coast wise winter travel also give excess 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 vi-

cinity, 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.

Moose Pass-Kenai Winter Trail.

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 "	Cuting Sled Trail	60.00	4,200.00
6 Bridges	Small Log	50.00	300.00
3 Cabins	New Shelter	250.00	<u>750.00</u>
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 at 10.00 per day	150.00
Provisions and supplies	16.85
Dog Fish, 60 pounds @ .20	12.00
One pair snow shoes	<u>11.55</u>
Total Expense	\$190.40

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.

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.<sup>45</sup>

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.<sup>46</sup> 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.

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."<sup>47</sup>

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.

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.<sup>48</sup>

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

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 magni-



tude 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."<sup>49</sup>

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."<sup>50</sup> 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.<sup>51</sup>

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."<sup>52</sup>

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."<sup>53</sup>

Carrying the road north from Fairbanks to the Yukon had not been easy because of the high maintenance demands for the Richardson Road, 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 mile 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.

Like the Board of Road Commissioner, 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."<sup>54</sup> 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."<sup>55</sup>

The governors always praised the work of the Board of Road Commissioners and emphasized the difficult terrain of Alaska.

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.<sup>56</sup>

After the intensive work done on the Richardson Road 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 Road 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  
817 motor vehicles  
30 wagons  
24 double bobsleds  
26 pack horses  
384-1/2 tons of freight<sup>54</sup>

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.

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.<sup>58</sup>

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. Belatedly, 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. 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. Hereafter cited as Annual Report of the Alaska Road Commission and year.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid., p. 1989.
9. Ibid., p. 3842.
10. Ibid.
11. Ibid.
12. Statement of Chas. R. Harris, Record Group 30, Records of the Bureau of Public Roads, 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: MacMillian 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.
26. Annual Report of the Alaska Road Commission, Fiscal year 1920, pp. 61-65.
27. F. M. Leach to Governor Thomas Riggs, June 12, 1919, R. G. 30, F.R.C., Seattle, Washington.

28. Governor Thomas 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.
29. John H. Joslin to Captain John Zug, January 30, 1920, R. G. 30, F.R.C., Seattle, Washington.
30. Petition to Alaska Road Commission from Circle, undated, probably February, 1922, R. G. 30, F.R.C., Seattle, Washington.
31. Hawley W. Sterling to the Board, April 14, 1922, R. G. 30, F.R.C., Seattle, Washington.
32. James G. Steese to Circle residents, May 12, 1922, R. G. 30, F.R.C., Seattle, Washington
33. Annual Report of the Alaska Road Commission, Fiscal Year 1922, pp. 2237-38.
34. Ibid., Part II, pp. 6-7.
35. Annual Report of the Alaska Road Commission, Fiscal Year 1923, p. 2087.
36. 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.
37. See first section of this narrative (1980), pp. 47-48 for an explanation of funding.
38. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2100-2101.

39. Ibid.
40. 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.
41. Ibid., pp. 156-159.
42. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2102-2104.
43. Annual Report of the Alaska Road Commission, Fiscal Year 1925, and other reports of the 1920s.
44. Walter W. Lukens to Engineer Officer of the Board, March 9, 1923, R. G. 30, F.R.C., Seattle, Washington.
45. Annual Report of the Alaska Road Commission, Fiscal Year 1925, pp. 2070-2071.
46. Ibid., p. 2071.
47. Annual Report of the Alaska Road Commission, Fiscal Year 1924, p. iii.
48. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2070.
49. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 10.
50. Ibid.
51. Annual Report of the Alaska Road Commission, Fiscal Year 1926, p. 1956; Session Laws of Alaska, 1925.



52. A. W. Greeley, Handbook of Alaska (New York: Charles Scribner's Sons, 1925), p. 41.
53. Ibid., p. 42.
54. 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.
55. Annual Report of the Governor of Alaska, 1919, p. 47.
56. Ibid.
57. Annual Report of the Governor of Alaska, 1924, p. 18.
58. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2069; Annual Report of the Alaska Road Commission, Fiscal Year 1926, p. 1954.
59. Valdez Trail Collection, University of Alaska Archives, Fairbanks, Alaska.
60. R. G. 30, F.R.C., Seattle, Washington.
61. Ibid.
62. Annual Report of the Alaska Road Commission, Fiscal Year 1924.
63. Annual Report of the Alaska Road Commission, Fiscal Years 1918-1924.

## APPENDIX A

### RECONNAISSANCE SURVEY - FORT GIBBON (TANANA) TO KOYUKUK AND KOBUK RIVERS TO KOTZEBUE

The purpose of this survey report in the winter of 1923-24 was to obtain information on the route for possible improvements of the trail and erection of shelter cabins. It was an old established trail, and of great use in access to the upper Koyukuk and Kotzebue area on the coast.

The trail extended north to Allakaket, Bettles, Coldfoot, and Wiseman, a distance of 180 miles. From Allakaket it branched off westward to Kotzebue, via the Alatna and Kobuk Rivers to Shungnak, Kiana, and Kotzebue, 280 miles.

The snowfall in the vicinity of Alatna was very light at the time of arrival at that place. The Christmas holidays brought the natives to the Mission of St. John in the Wilderness at Allakaket on the Koyukuk, near the mouth of the Alatna River. This gave me an opportunity to select a suitable guide from among the Kobuk natives. After having all the arrangements made for the trip, taking ten days supplies and dog food, I proceeded with Napoleon, the Kobuk guide, January 7th along the Alatna River, taking advantage of the portages, to Blackjack, a Kobuk village, where we stayed at Chief Nullyook's place for the night. From Blackjack the river was used, making short cuts across the portages of the many bends in the river. A 7 x 7 tent was used for camping out as there are no cabins along this route of travel. We had already resorted to the use of snow shoes to break trail for the dog team, the snow being heavier towards the Endicott Range. A blizzard from the northeast compelled us to seek shelter in a spruce grove, where we pitched camp for the night. It snowed during the night and the wind was getting stronger. Nothing was visible for more than a half a mile, but having

worked out a compass course, Napoleon and I started to break trail and mark the same to the Hogatza, locally called the Hog River. For the next two days we were breaking trail and found faint traces of old blazes but the snow had driven so hard that the bark of the trees was covered with snow. The line of blazed trees corresponded to the compass course and the same was followed for three hours, returning to camp at dusk. Only two days dog food was on hand and our own food supply was getting low; I decided to return to Marsan to replenish our supplies. On the return trip we met a Fur Warden from Nome with three dog teams and two natives as guides and trail breakers. Later in the day we met a Kobuk trapper and we camped at his tent for the night. Leaving the tent next morning, we traveled the Alatna River. The cold was severe, the nostrils and mouths of the dogs were getting iced. We made Pooto Hope's cabin, stopped for the day (63 degrees below zero). The next day we returned to Marsan and after replenishing our supplies, engaged Nictune, a native, to return with us to haul dog food. Leaving Marsan on the 28th of January, the Kobuk was reached on February 1st, made camp about two miles above Reed River (temperature 52 degrees below zero). Next day passed Reed River and Beaver Creek, at the mouth of Reed River overflow was concealed beneath the snow, got feet wet and sled runners iced. The faces of the dogs and the front of our parkas were frozen so made camp at 3 P.M. During the night Napoleon and Nictune had to make a fire in order to keep warm (69 degrees below zero). In the course of next morning's travel, both natives had their cheeks and chins frost bitten. We pulled in at a white trapper's cabin, below Selby Creek, where we had lunch. Here we learned that distemper was raging among the dogs along the Kobuk River and that many had died of the disease. Stayed over night at Pah River, where three Kobuk igloos are located. Proceeded next morning on Kobuk River, arriving at Shungnak on February 4th at 5 P.M. We put up at the store which has a sawmill and mining enterprise also. The eight days following, the weather remained 51 to 70 degrees below zero. During this time made a trip to the native village 7-1/2 miles below

Shungnak, where the Bureau of Education maintains a school, presided over by two teachers who also look after the reindeer herds in behalf of the Government. Owing to the epidemic of distemper amongst the dogs, the scarcity of dog food and the extreme cold, I decided not to go on to Kotzebue and went to Noorvik, where I wired Fairbanks to that effect. Left Marsan February 28th over the winter trail for Nolan and arrived at Henshaw Cabin at 5 P.M. The trail was drifted in many places. Proceeded next day to Chinoko Cabin. At this place I met two Koyukuk natives who were hauling dog food for the Geological Survey. Next day I arrived at Bettles and had a meeting with the miners and residents and talked over trail matters. Proceeded on to Coldfoot and 2-1/2 miles below Coldfoot, where Porcupine Creek flows into the Koyukuk -- a heavy overflow, 18 inches deep, was encountered. Cutting a way around, I arrived at Coldfoot at 1:30 P.M. Had lunch with Mianano, a Japanese, then proceeded to Wiseman and on to Nolan, it being the center of mining activities in the district, 6 miles from Wiseman. A meeting was held there and also at Wiseman to talk over trail and road matters. There seems to be more prospecting and development on the Upper Koyukuk than there has been for some time past. On Nolan Creek, 16 men in 3 outfits, were taking out winter dumps from shafts, others were working on benches. There was considerable working ground, but the water for sluicing was and had been a drawback. Two men were sinking a shaft on Slate Creek, 2 men and 1 woman on Emma Creek, 2 men on 12 Mile Creek, 5 men and 1 woman on Porcupine Creek, 5 men on Tramway Bar, 2 men on California Creek, 1 on Bettles River, 10 on Hammond Creek and 1 on Union Gulch. Four men were mining on Wild and 3 on John River.

The question of transportation and cost of supplies was foremost. Freight from Nenana to Bettles was \$90.00 per ton by boat, owned by the operating stores who handled mostly their own goods.

Leaving Wiseman on March 10th, I arrived at Nenana on March 26th, having covered 1,350 miles, of which 700 miles were traveled on snowshoes.

The money spent in former years for the improvement of trails, roads and shelter cabins north of the Yukon has been, in many cases, misapplied or wasted, either by having incompetent persons directing the work or others who directed the work for selfish purposes.<sup>59</sup>

APPENDIX B

To the Board  
of  
ALASKA ROAD COMMISSION  
Juneau, Alaska.

Gentlemen:

I herewith submit to your honorable body a report of the work accomplished by me upon the Eagle, Forty-mile, Seventy-mile, and Fourth of July trails, also a reconnaissance for O'Brien and Polly creeks, as a possible route for a main trunk road to Chicken. There is also included a report in detail of the activity in the districts as requested by your Major Gotwals.

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 year's 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 \$500.00 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 the Forty-mile 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 owing 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 them out. 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 Arkansaw 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 feet board 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 in replacing 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

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Present summer rates.	*	Winter rates	*	These rates are
	*		*	freighter's estimat
	*		*	with a trunk road
	*		*	to Chicken
	*		*	
	*		*	
From Eagle to	*		*	
Gravel Gulch	20¢	per lb.* 10¢	per lb.* 10¢	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 Steel Cr. 40-mile		* 15	* 3 Hydraulic * 12 Rocking	* \$5,000.00 * \$4 to \$6 * per day
Up 40-mile from Steel Creek		* 4	* 2 winter drift * 2 Rocking	* No data * " "
Franklin Creek		* 5	* Open Cut	* \$4,340.00
South Fork of 40-mile		* 1	* Winter Drifting	* \$400.00
Myer's Fork		* 2	* Open Cut	* \$2,100.00

Stonehouse Creek	*	2	* " "	*	\$1,800.00
Chicken Creek	*	7	* " "	*	\$2,625.00
Lost Chicken	*	2	* " "	*	None
Ingle Creek	*	3	* " "	*	\$1,200.00
Littlevig Creek	*	3	* Winter Drifting	*	\$2,300.00
Mosquito Fork	*	3	* Scraper Plant	*	\$18,000.00
Napoleon Creek	*	2	* Open Cut	*	None
Montana Creek	*	1	* " "	*	\$700.00
Walkers Fork	*	5	* Scraper Plant	*	\$8,000.00
Davis Creek	*	2	* Open Cut	*	\$1,400.00
Wood Creek	*	1	* " "	*	\$375.00
Squaw Creek	*	3	* Scraper Plant	*	No data
Canyon Creek	*	3	* Open Cut & * Winter drift.	*	\$3,100.00
Wade Creek	*	16	* 1 Hydraulic * 15 Open Cut & * drifting	*	\$11,300.00

Creeks 70 Mile	* Number * of Men	* * Class of Mining	* Estiamted * 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, \$3.00 pans being common.

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 judgment, 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 - Fortymile and the surrounding districts have a bright future.<sup>60</sup>

Fred Prin (Signature)

Foreman, A. R. C.

APPENDIX C

LAWS RELATING TO THE CONSTRUCTION OF  
ROADS IN ALASKA

W. D. Act approved July 9, 1918. (40 Stat. 843).

\* \* \* \* \*

CONSTRUCTION, REPAIR AND MAINTENANCE, MILITARY AND POST  
ROADS, BRIDGES AND TRAILS, ALASKA: For the construction, repair  
and maintenance of military and post roads, bridges, and trails,  
Territory of Alaska \$100,000 Provided That hereafter, so long as  
the construction and maintenance of "Military and Post" Roads in  
Alaska, and of other roads, bridges, and trails, in that Terri-  
tory shall remain under the direction of the Secretary of War, he  
be authorized to submit such estimates for the consideration of  
Congress as are in his judgment necessary for a proper prosecu-  
tion of the work.

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W.D. Act approved July 11, 1919 (41 Stat. 124)

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CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS,  
BRIDGES, AND TRAILS, ALASKA: For the construction, repair, and  
maintenance of military and post roads, bridges, and trails,  
Territory of Alaska, to be immediately available, \$100,000.

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W.D. Act approved June 5, 1920 (41 Stat. 970)

Same wording as act of July 11, 1919 except amount appro-  
priated, \$350,000.00.

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W.D. Act approved June 30, 1921 (42 Stat. Page 90).

\* \* \* \* \*

CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, to be immediately available \$425,000.00; PROVIDED, That the Secretary of War is hereby authorized, to receive from the Territory of Alaska, or other source, such funds as may be contributed by them to be expended in connection with funds appropriated by the United States for any authorized work of construction, repair, and maintenance of roads, bridges, ferries, trails, and related works in the Territory of Alaska, and to cause such funds to be deposited to the credit of the Treasurer of the United States, and to expend the same in accordance with the purpose for which they were contributed:

PROVIDED FURTHER, That not to exceed \$10,000 of the foregoing amount shall be expended, for a preliminary investigation and report on the feasibility, desirability, and cost of the best and most practicable connection between the Nome-Shelton system of communications and the coal deposits of the Kugruk River, Chicago Creek, and the Keewalik mining district, whether by wagon road, sled road, tramway, trail or other means.

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April 6, 1922 (42 State. 491)

RESOLVED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED, That the Secretary of War is authorized to direct the Board of Road Commissioners for Alaska to incur obligations prior to July 1, 1922, for the construction and maintenance of roads, bridges, and trails in Alaska of not to exceed 50 per centum of the appropriation for this purpose for the fiscal year ending June 30,



1922, payment of these obligations to be made from the appropriation for the fiscal year ending June 30, 1923.

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June 30, 1922 (42 Stat. 759)

CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA: For the construction, repair, maintenance of military and post roads, tramways, ferries, bridges, and trails, Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in section 2 of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, as amended by the Act approved May 14, 1906, to be expended conformably to the provisions of said Act as amended to be immediately available: PROVIDED, That if an appropriation for this purpose for the fiscal year ending June 30, 1924 shall not have been made prior to March 1, 1923, the Secretary of War may authorize the Board of Road Commissioners to incur obligations for this purpose of not to exceed 75 per centum of the appropriation for this purpose for the fiscal year ending June 30, 1923, payment of these obligations to be made from the appropriation for the fiscal year ending June 30, 1924, \$465,000.

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March 2, 1923 (42 Stat. 1420)

CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA: for the construction, repair, and maintenance of roads, tramways, ferries, bridges, and trails, Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in Section 2 of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the

care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, as amended by the Act approved May 14, 1906, and to be expended conformably to the provisions of said Act as amended, to be immediately available: PROVIDED, That if an appropriation for this purpose for the fiscal year ending June 30, 1925 shall not have been made prior to March 1, 1924, the Secretary of War may authorize the Board of Road Commissioners to incur obligations for this purpose of not to exceed 75 per centum of the appropriations for this purpose for the fiscal year ending June 30, 1924, payment of these obligations to be made from the appropriation for the fiscal year ending June 30, 1925, \$650,000.

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W.D. Act approved June 7, 1924.

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CONSTRUCTION AND MAINTENANCE OF ROADS, BRIDGES, AND TRAILS, ALASKA: For the construction, repair, and maintenance of roads, tramways, ferries, bridges, and trails, Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in section 2 of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, as amended by the Act approved May 14, 1906, and to be expended conformably to the provisions of said Act as amended, \$725,000 to be immediately available.

Note: Supplemental appropriation of \$55,000 on account of Increase of Compensation in the Field Service contained in the Act of December 6, 1924.

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W. D. Act approved February 12, 1925

\* \* \* \* \*

Same wording as act of June 7, 1924 up to amount appropriated, \$900,000, to be immediately available. Hereafter when an appropriation for this purpose for any fiscal year shall not have been made prior to the 1st day of March preceding the beginning of such fiscal year, the Secretary of War may authorize the Board of Road Commissioners to incur obligations for this purpose of not to exceed 75 per centum of the appropriation for this purpose for the fiscal year then current, payment of these obligations to be made from the appropriation for the new fiscal year when it becomes available.

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W. D. Act approved April 15, 1926

\* \* \* \* \*

Wording same as act of June 7, 1924 up to amount appropriated, \$900,000, to be immediately available, and to include \$1,000 compensation to the President of the Board of Road Commissioners for Alaska, in addition to his regular pay and allowances.

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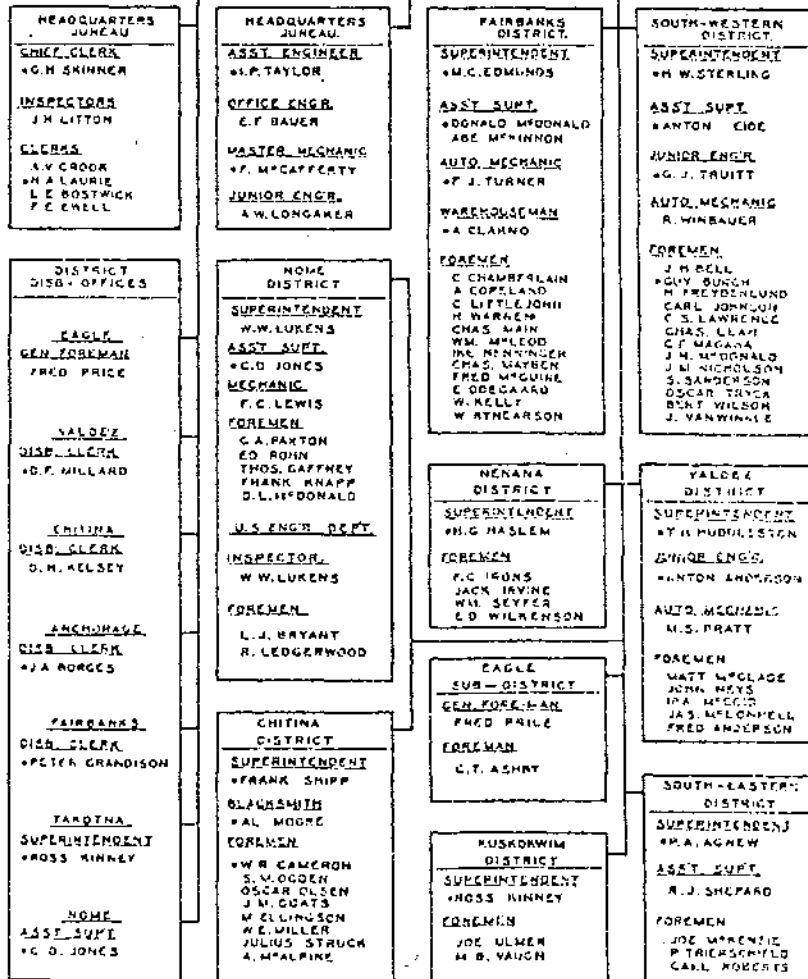
# ORGANIZATION CHART

ALASKA ROAD COMMISSION AND U.S. ENGINEER DEPARTMENT  
WORKING SEASON, 1924.

**JAS. G. STEESE**  
PRESIDENT OF THE BOARD  
AND  
DISTRICT ENGINEER USED

**P. A. AGNEW**  
SECRETARY  
AND  
DISBURSING OFFICER

**L. E. OLIVER**  
ENGINEER OFFICER



\* - ENTIRE YEAR, OTHERS PART TIME ONLY.

Members of the Board of Road Commissioners  
for Alaska, 1918 to 1925

Presidents

Major William H. Waugh, December 30, 1917 to April 14, 1920  
Lieutenant Colonel John C. Gotwals, April 15, 1920 to  
July 6, 1920  
Major, later Colonel, James G. Steese, July 7, 1920 to date

Presidents and Engineer Officers

Major William H. Waugh, December 30, 1917 to April 14, 1920  
Colonel James G. Steese, March 27, 1924 to August 4, 1924

Engineer Officers

Major William H. Waugh, April 15, 1920 to July 6, 1920  
Lieutenant Colonel John C. Gotwals, July 6, 1920 to March 26,  
1924  
Major Lunsford E. Oliver, August 5, 1924 to date

Assistant Engineers

Captain John Zug, December 30, 1917 to April 14, 1920

Secretary and Disbursing Officers

Captain John Zug, October 18, 1917 to January 18, 1918  
1st Lieutenant Sidney L. Carter, January 19, 1918 to June 30,  
1921  
Captain C.S. Ward, July 1, 1921 to May 2, 1922  
Captain Aubrey H. Bond, May 3, 1922 to November 25, 1922  
1st Lieutenant Pierre A. Agnew, March 1, 1923 to January 31,  
1925

Special Disbursing Agent

Colonel James G. Steese, September 23, 1922 to February 28,  
1923

Military Assistants

Captain C.W. Ward, May 3, 1922 to November 14, 1922  
1st Lieutenant Pierre A. Agnew, December 18, 1922 to  
February 28, 1923  
Lieutenant Colonel John C. Gotwals, March 27, 1924 to  
April 26, 1924  
Major Lunsford E. Oliver, May 2, 1924 to August 4, 1924  
Second Lieutenant Harry E. Fisher, October 2, 1924 to  
January 31, 1925

