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disturbance effects. Construction would probably cause greater displacement than operation; less disturbance from occasional passing trains would allow a return of bears to previous habitat areas. Long-term black bear habitat enhancement could occur from the project where ecotones of cleared right of way and adjacent forest communities are created. Little likelihood exists of black bears being hit by passing trains.

Furbearers

The following furbearers are known to occur within the project corridor area: wolf, wolverine, muskrat, marmot, mink, lynx, beaver, marten, coyote, weasels, red fox, land otter, red squirrel, flying squirrel and arctic ground squirrel. In general, river and stream bottoms provide most furbearer habitat. Corridor locations with significant furbearer populations include Fort Wainwright Military Reservation lands south of the Tanana River, the Salcha River, Shaw Creek Flats, the Goodpaster River, an area immediately north and east of Delta Junction, the lowlands north and east of Tetlin Lake and the Ladue River.

Railroad project impact upon furbearers is difficult to assess. Stream crossings could encroach on furbearer habitat (i.e., streamside vegetation). Most areas of significant furbearer populations (described above) would be avoided by a Tanana River Valley alignment. Habitat along the Delta River between Big Delta and Delta Junction would be affected with an alignment placed immediately adjacent to the Delta River. In the Ladue River Valley, an alignment could not avoid furbearer habitat and a reduction of furbearer numbers would result.

Small Game and Non-Game

Small game species found in the Tanana-Ladue River valleys include porcupine, snowshoe hare, ruffed grouse, spruce grouse, rock ptarmigan, willow ptarmigan and sharp-tailed grouse. Numerous non-game species such as passerine birds are also present. Both small game and non-game species are widely distributed. Small game populations in the corridor, as throughout the State, are characteristically cyclic, fluctuating in response to weather, food, predation and diseases.

Some habitat for small game and non-game species would be lost with a railroad alignment, probably resulting in an insignificant population reduction. Abundance and large reproductive potential of small game and non-game species would preclude any serious long-term impacts. More significantly however, ecotones created by the project would enhance most small game and non-game habitats.

Waterfowl

Numerous waterfowl species utilize corridor locations for breeding, nesting and rearing or as feeding and resting sites during migration. Significant waterfowl habitats within the corridor include wetland areas immediately west of Delta Junction, wetlands adjacent to Billy Creek and Mansfield Creek, the Lake Mansfield -Fish Lake-Wolf Lake area, and extensive wetland areas east of Tetlin Lake. During corridor seasonal use, May through June nesting and June and July rearing are probably the most critical or sensitive waterfowl times.

A railroad alignment would ideally avoid river, lake and wetland areas, typical waterfowl habitat, where existing foundation conditions usually present severe engineering and economic constraints. Significant waterfowl impacts are therefore not anticipated. Where the alignment traverses near small isolated waterfowl habitats (e.g., forest ponds, small creeks), project construction activity could result in some disturbance to nesting.

Raptors

At least nine species of raptors (birds of prey) utilize locations within the Tanana and Ladue River valleys during the breeding, nesting and rearing seasons. Raptors having been identified in the corridor area include peregrines, bald and golden eagles, goshawks, sharp shinned hawks, Harlans hawks, redtailed hawks, osprey and great horned owls. Numerous recently used nesting sites within the Tanana valley have been located through raptor survey work done for the proposed Northwest gas pipeline project. Although known nest locations, both historical and active, have been reviewed for this study, those nest locations and immediate habitat areas will not be disclosed for protection of the raptor species. Additionally, both the American Peregrine Falcon determined to be an "endangered species" (i.e., in danger of extinction throughout all or a significant portion of its range), and the bald eagle are protected by Federal policy and legislation (e.g., Endangered Species Act, Bald Eagle Protection Act).

The project would result in both adverse and beneficial impact to raptors. Construction, railroad maintenance and road haul operations are human "disturbance" activities incompatible with raptor nesting. Disturbances near nesting sites during critical stages of the nesting season (i.e., egg laying, incubation, and early brooding stages) could result in reproductive failure. Although avoidance of raptor nest sites, particularly peregrine and bald eagle nest sites, has been prioritized, several recently active raptor nests are less than one mile

away from the proposed alignment. They include one peregrine, one bald eagle, one osprey, two great horned owl, and three goshawk nests. Near both the peregrine and bald eagle nest sites, the alignment is restricted to its proposed location by constraints of topography, foundation suitability, and hydrological hazards. Other alignment possibilities are not practical. As adverse impact mitigation, construction activities generating high noise levels (e.g., material source mining, rock crushing, construction camps, etc.) within 1-2 miles of these or other raptor nesting sites could be prohibited from April 15 to August 31 (the nesting season). No practical mitigation is known, however, to preclude disturbance to the above eight raptor nest sites by railroad maintenance or operation. Beneficial project impact would occur from a (general) raptor "feeding habitat" enhancement. Raptors generally hunt in open areas. The cleared railroad right of way through forested areas would provide improved small game and non-game habitat, typical prey species for most raptors.

Anadromous Fish

Three species of salmon spawn in the Tanana River, its tributaries and adjacent clear water sloughs. Chum or dog salmon are predominate in number. Chum spawning occurs in several sloughs along the Tanana between Fairbanks and Big Delta; the mouth of the Delta River provides habitat for the largest fall chum spawning in Alaska. Chum spawning also occurs in the Salcha River; in Clear, Shaw and Clearwater Creeks, in the Tanana at the confluence with the Johnson River, and to a minor extent in the Upper Tanana. Spawning times are roughly from mid-September through October. The eggs, and later sac fry, remain in streambed gravels throughout the winter.

Coho or silver salmon utilize sloughs of the Tanana River near Harding Lake, Clear, Shaw and Clearwater Creeks for spawning. Coho spawning is from approximately mid-September through November.

Chinook or king salmon spawn from mid-July to mid-August in the Salcha and Goodpaster Rivers. Both Coho and Chinook eggs and sac fry also remain in streambed gravels over winter.

Resident Fish

Resident fish species, including grayling, whitefish, northern pike, and burbot occur in clearwater sloughs and streams in numerous corridor locations. Most overwintering is in the Tanana River. Grayling, in particular, then migrate back into tributary streams, spawning from late April through late May.

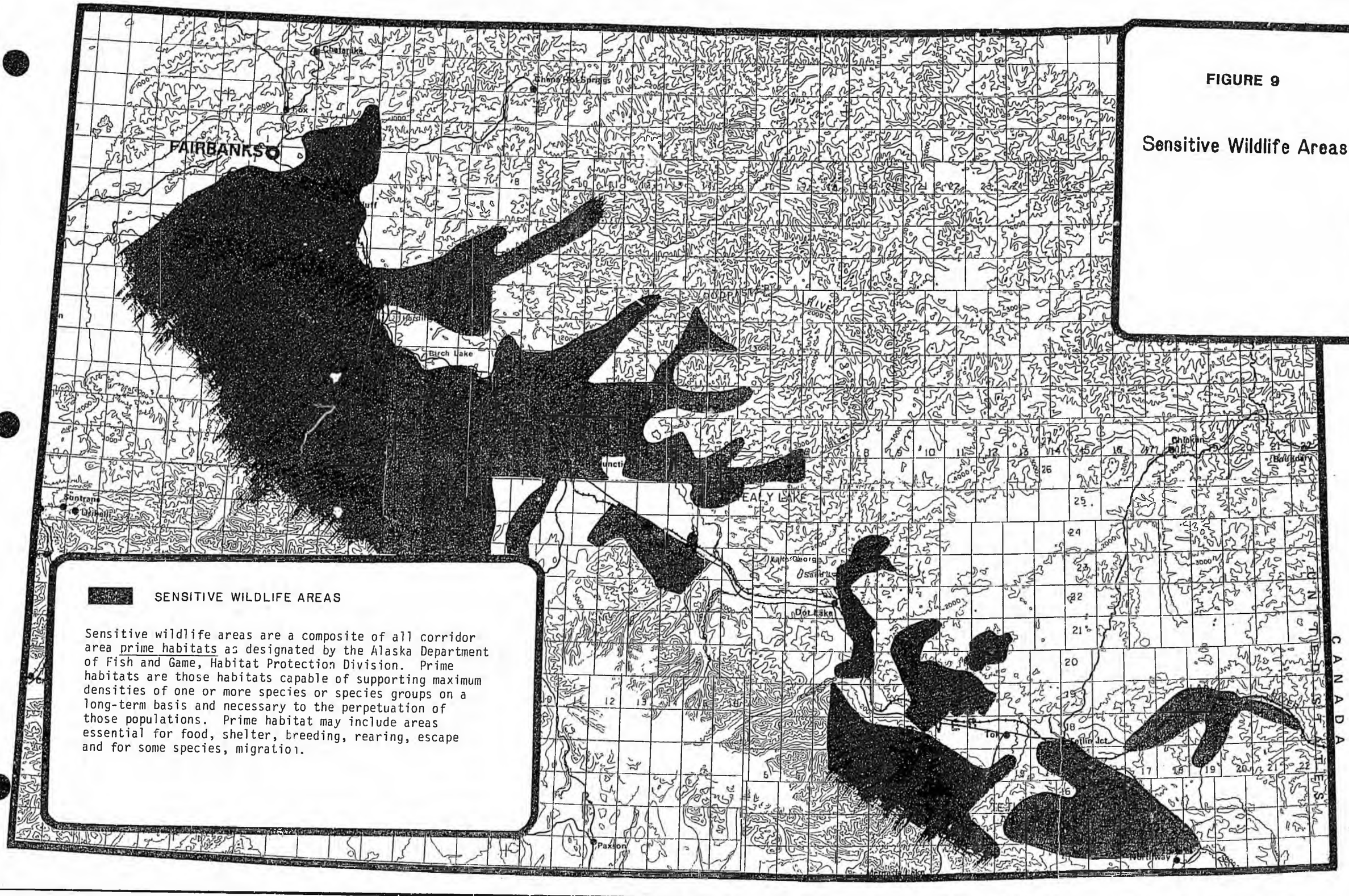

FIGURE 9

Sensitive Wildlife Areas

▨ SENSITIVE WILDLIFE AREAS

Sensitive wildlife areas are a composite of all corridor area prime habitats as designated by the Alaska Department of Fish and Game, Habitat Protection Division. Prime habitats are those habitats capable of supporting maximum densities of one or more species or species groups on a long-term basis and necessary to the perpetuation of those populations. Prime habitat may include areas essential for food, shelter, breeding, rearing, escape and for some species, migration.

A Tanana and Ladue valley railroad alignment would require numerous drainage crossings. Bridges and culverts would be utilized at crossings and no man-made barriers, stopping fish migration, would be necessary. No loss of the identified spawning beds from in-stream project construction activity would be required, although bridge construction and culvert placements could result in siltation, impacting any immediately downstream habitats.

Habitat Categories

The general areas of wildlife population concentrations for individual species detailed above have been classified by the Alaska Department of Fish and Game into habitat categories. Categories of prime habitat and important habitat have been designated. Prime habitat is defined as those habitats capable of supporting maximum densities of one or more species or species groups on a long-term basis and necessary to the perpetuation of those populations. Prime habitat may include areas essential for food, shelter, breeding, rearing, escape and for some species, migration. Important habitat is capable of supporting medium or high densities of one or more species or species groups for short or long periods and may include areas important (though not essential) for food, shelter, breeding, rearing and for some species, migration. Figure 9, "Sensitive Wildlife Areas," represents a composite of all corridor area prime habitats (except raptor habitats), as designated by the Alaska Department of Fish and Game, Habitat Protection Division. Raptor habitats, each containing nest sites, are not included due to the confidentiality of this information.

SUBSISTENCE

Both local residents and sportsmen from outside the corridor participate in hunting, fishing and trapping activities within the project corridor. Subsistence use is concentrated along routes of access including major waterways, trails and roads and within game concentration areas.

The proposed railroad project is expected to have an impact on corridor subsistence activity; the degree of impact is not known. Little or no affect upon fishing would result. Trapping, primarily occurring along waterways, would be impacted in proportion to the extent of furbearer habitat lost to a railroad alignment. After initial construction, a railroad facility would not accommodate road access (adjacent to the tracks) into previously inaccessible subsistence trapping and hunting areas. Off-road access already exists. With the possible exception of the Ladue River valley, little of the corridor is isolated from routine

off-road vehicle use during hunting and trapping seasons. However, a railroad facility would probably encourage additional off-road use on and immediately adjacent to the railroad alignment. While pre-railroad subsistence patterns could be adversely affected, additional subsistence activity would likely result from the project.

Project induced land development, especially additional mining and agriculture, is also possible although it cannot be quantified. Transportation links between development property and a railroad facility could result in secondary impacts of a potentially significant nature to corridor subsistence.

COASTAL ZONE

The project corridor is not located within the area covered by the Alaska Coastal Zone Management Program.

WATER QUALITY

The project corridor contains numerous tributaries to and a major portion of the Tanana River, and the much smaller Ladue River drainage. Two different types of stream systems are present: glacially impacted streams, carrying heavy sediment loads during summer months, and clearwater streams, originating in the lower foothill regions. All stream flows are typically low during fall and winter months, but show significant flow increases during breakup, glacial melt and peak summer rainfall periods. Extensive wetland areas are also present in the corridor, including Shaw Creek Flats, the Tetlin Lake area and sloughs along the Tanana River.

Most surface water in the Tanana basin is of acceptable chemical water quality and meets Federal and State standards. The dissolved-solids concentration is generally less than 200 ppm; the principal constituents are calcium, magnesium and bicarbonate (USGS, Report HA-319, 1970).

Project activities would result in water quality impacts. Impacts that could be anticipated are both physical and chemical and include:

-erosion and sedimentation resulting from disturbance of streambanks and stream channels by bridge construction activity and in-stream gravel material removal

-potential spills of fuel or oil resulting from in-stream construction equipment operation

-potential spillage (long-term) of materials being transported over the completed railroad

Mitigation for the above water quality impacts would include:

-minimization of stream crossings and crossing placements at the least dynamic stream locations

-expedient recontouring of disturbed streambanks and revegetation or other protective measures to prevent soil erosion into adjacent waters

-contract provisions limiting in-stream construction equipment operation and placing constraints on the timing of in-stream activity to avoid fish spawning or migration impact

-cleanup of spilled materials that would, if not removed, impact water quality

The project is not anticipated to contaminate any principal or sole-source aquifers.

Compliance with water quality standards of the State of Alaska would be necessary and can be accomplished. The acquisition of required permits from the Alaska Departments of Environmental Conservation, Fish and Game, the U.S. Army Corps of Engineers and the U.S. Coast Guard would also be necessary. Gravel material removal from rivers, streams or floodplains involves Title 16 permits from Fish and Game. Activities resulting in discharge of dredged or fill material into waters involves Section 404 and 401 permits from the Corps and Environmental Conservation respectively. Bridge construction would necessitate Section 9 permits from the U.S. Coast Guard. Figure 10 identifies several corridor rivers and streams that would be crossed by a railroad alignment and would require bridge construction.

WETLANDS AND FLOODPLAINS

The term wetlands may refer to a wide range of aquatic habitats including swamps, marshes, bogs, sloughs, wet meadows, shallow lakes, ponds, streambanks, etc. Wetlands provide vegetative material that is the base for many aquatic and terrestrial food chains. Wetlands may also provide breeding, rearing and feeding habitats for species of waterfowl, furbearers and moose. Wetlands reduce the severity of flooding and control erosion; wetlands may recharge groundwater. Numerous recreational opportunities are provided by wetland habitat (e.g., hunting, fishing).

Much of the Tanana and Ladue River valleys contain wetlands. Extensive wetland areas occur in Shaw Creek Flats, the Tetlin Lake area and sloughs along the Tanana River. A railroad alignment would ideally avoid most wetland areas where existing foundation conditions usually present severe engineering and economic constraints (e.g., large amounts of fill material would be required to construct a railroad embankment through wetland areas). However, avoidance is not possible or practical in all cases. Figure 10 identifies numerous corridor rivers and streams that would be crossed by a railroad alignment. Although each location would involve a bridge crossing, the respective riparian or streambank wetlands would still be impacted. Other railroad alignment possibilities would also necessitate crossing most of the same drainages and would consequently impact a comparatively equal amount of wetland acreage. Alignment impact to wetlands would also occur at locations where smaller drainages are crossed, utilizing culverts to maintain the drainage patterns, and where areas of permanently or periodically saturated soils (e.g., wet meadows) are traversed. Appendix G further identifies wetland areas that would be impacted by the proposed alignment. In general, these wetland areas are primarily important as wildlife habitat. None of the areas are known to be unique in relation to total corridor wetland resources. The project would include all praticable measures to minimize harm to wetlands. Examples of such measures include erosion control and maintenance of existing drainage patterns.

Known or inferred river flooding may occur along several rivers of the corridor (Figure 7). Crossing of river floodplains would necessitate construction of bridges capable of withstanding floodstage discharges and elevation of tracks or roadbed where facility overtopping would otherwise be anticipated to occur. This would minimize floodplain risks associated with the project, including the potential for property loss, hazard to life, or interruption of railroad facility use. The project would impact natural and beneficial floodplain values, primarily wildlife habitat values. In comparison though with the total floodplain areas of the Tanana River and its tributaries, significant adverse project impacts on floodplain values are not expected to result. Except for construction of industrial tracks (at presently unidentified locations), the railroad alignment should not induce, directly or indirectly, development in the base floodplain. As with impacted wetland acreages, floodplain involvement offers no practicable alternatives to the project proposal. Other alignment alternatives would result in additional economic or wetland and floodplain impacts.

AIR QUALITY

Little site-specific air quality data has been recorded for the project corridor. Air quality is very good and the project corridor falls within those areas of the State in attainment with national ambient air quality standards mandated by the Clean Air Act Amendments of 1977.[4]

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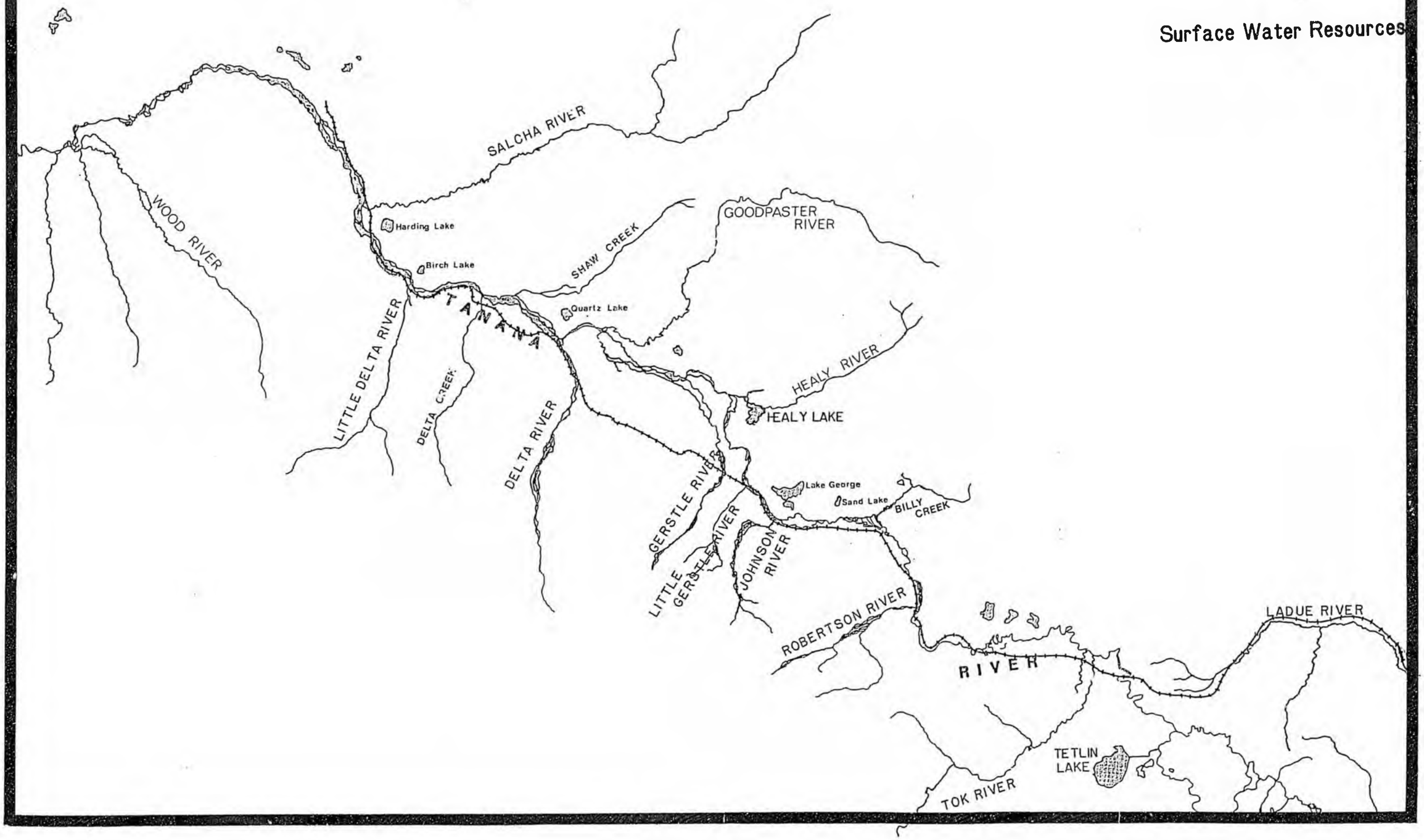
[4] At the present time, non-attainment areas include Anchorage, Fairbanks and North Pole.

FIGURE 10

Surface Water Resources



Additionally, the project corridor is within those areas designated as Class II by State air quality classification. State designated Class II standards are more stringent than the national standards. Class II designation allows for regional growth to affect air quality up to approximately one fourth of the national air quality standards.

Project impacts on air quality would include emissions from construction equipment operation, a temporary impact, and railroad locomotive emissions, a permanent impact of the facility. Diesel locomotive emissions contain several pollutants including particulate matter, sulfur dioxide, carbon monoxide, hydrocarbons, nitrogen dioxide, aldehydes, and organic acids. Emission concentrations are variable depending on, among other factors, locomotive use patterns (i.e., railyard switching or road-haul service) and engine configurations. However, an average of emissions produced per locomotive would be comparable to the emissions produced by two heavy-duty, diesel powered trucks or buses. The project should not cause or contribute to air pollutant concentrations which exceed any standards.

NOISE

The effects of noise on human health can be both physiological and psychological, though primarily psychological. Physiologically, excessive noise is capable of producing hearing loss. Pyschological effects may include interference with speech communications, sleep disturbance, annoyance, etc.

Sound levels are measured in decibels, a numerical expression of the relative loudness. Below are some examples of typical decibel readings of common sounds.

40	Quiet Room
50	Quiet Street
60	Normal Conversation
90	Shouted Conversation
107	Loud Power Mower
120	Thunderclap
150	Jet Take-Off

Studies have determined that 67 dBA (decibels, A-weighted sound level) is an average amount of sound received over one hour that begins to

interfere with normal conversation, producing psychological impact.[5]

The Code of Federal Regulations, Title 40, Part 201 specifies Federal noise emission standards that apply to all locomotives and rail cars. Table 2 is a synopsis of total sound levels permitted. Assuming all railroad equipment utilized upon project completion would meet the Federal noise emission standards, a zone of worst case noise impact can be calculated relative to the 67 dBA interference level. Table 3 represents the impact zone.

A large portion of the corridor is undeveloped or relatively uninhabitated. No significant human impact from railroad construction or operation noise would result in these locations. Developed areas that would receive noise impact include the communities of Salcha, Delta Junction and Dot Lake. The degree of impact would be dependent upon the decibel noise levels generated, the duration of the noise and the sensitivity of the noise receptors. The zones of impact identified in Table 3 pertain to a worst case scenario for railroad operation, that is, the interference limits resulting from maximum allowable noise emission levels. More recently manufactured railroad equipment produces less noise emissions, therefore, noise impacts of the railroad could likely be substantially less. Also the 67 dBA disturbance level is related to an hour of noise emission. Moving trains produce a transient noise impact lasting only a minute or two per train. Receptors within the impact zone include residences, a school and a church at Salcha; residences, churches, a school, motels, public meeting rooms, and a library at Delta Junction and a school, church, motel and public meeting room at Dot Lake. A few other isolated residences would also be within the impact zone. Construction mitigation could include scheduling noise generating activities to occur during less noise critical times of day near residential receptors or other noise sensitive areas. Noise mitigation for railroad operation might require noise barriers and/or acoustical construction within existing impacted buildings.

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[5] National Cooperative Highway Research Program Report 117

The human ear is more sensitive to sound energy at high frequencies than at low frequencies. Also, the ear's sensitivity to sounds of different frequencies changes with the level of the sound. The A-weighted sound level (dBA) is the actual measured sound level weighted to match the sensitivities of the human ear.

TABLE 2
FEDERAL NOISE EMISSION STANDARDS FOR RAILROADS

Total sound levels may not exceed the following decibels* (A-weighted sound level)

Equipment & Conditions	Manufactured Before 12-31-79	Manufactured After 12-31-79	At Speeds Up To 45 MPH	At Speeds Greater Than 45 MPH
Locomotives moving at any time or under any condition of grade, load, acceleration or deceleration	96 dBA	90 dBA		
Locomotives at idle throttle setting	73 dBA	70 dBA		
Rail cars in motion			88 dBA	93 dBA

*measured with fast meter response at a point 100 feet from the geometric center of the locomotive along a line perpendicular to the centerline of the track.

TABLE 3
RAILROAD NOISE IMPACT ZONE
(Worst Case)

Equipment & Conditions	Theoretical dBA's Generated*	Distance from Track Centerline to Outside Edge of Noise Impact Zone (67 dBA point)
Idling locomotive	70 dBA	160 ft.
	73 dBA	250 ft.
Rail cars in motion	88 dBA	2500 ft.
	93 dBA	5400 ft.
Moving locomotive	90 dBA	3400 ft.
	96 dBA	8500 ft.

*at a point 100 ft. from the track centerline

ARCHAEOLOGIC, HISTORIC AND CULTURAL RESOURCES

Numerous known archaeologic and historic sites are present within the corridor area. The Alaska Heritage Resource Survey identifies approximately 66 sites within eight miles of the proposed alignment. Only one site, Rika's Landing (a Richardson Highway roadhouse), is on the National Register of Historic Places. Several other sites are potentially eligible for the National Register.

No cultural resource field survey for the railroad project has yet been conducted. Previous archaeological investigations for other projects or purposes have occurred in or near the corridor. They include the following: a survey in 1944 along the Alaska Highway between Fairbanks and Whitehorse by Frederick Johnson, a 1976 survey by the Alaska Division of Parks along the Alaska Highway between Delta Junction and Tok, a survey of Fort Wainwright lands by E.J. Dixon, and a survey conducted for the proposed Northwest Gas Pipeline project by Anne Shinkwin and Jean Aigner. Since there is a potential for project impact to undiscovered sites, the State Historic Preservation Office has recommended a preconstruction cultural resource survey. Detailed survey work would be done along the proposed railroad alignment and at each material source site, construction camp site and at other facility locations (i.e., industrial track sites, yards) to be identified during the project design phase.

While all impacts to archaeological sites from a railroad alignment cannot be accurately quantified prior to cultural resource field survey work, the nature of potential impacts can be discussed. Impacts could be both direct and indirect. The obliteration or alteration of sites by alignment placement could occur. Sites outside of the project right of way could receive indirect impact, the greater accessibility to previously remote locations making these sites subject to disturbance by souvenir hunters.

Of the known corridor archaeologic and historic sites, three sites lie within an area of potential impact by the project. In each case, the impact would be indirect. The sites consist of a winter cemetery and two prehistoric archaeologic sites. None are presently on the National Register of Historic Places. Further field investigation may be necessary to develop the adequate documentation required for determinations of National Register eligibility and of the possible extent of indirect project impact. This would occur prior to construction activity.

Should previously undiscovered cultural resources be found in any project affected area during construction, project work would cease until contact with the State Historic Preservation Office. Appropriate mitigation would then be pursued.

4(F) - PROTECTED PROPERTIES

In accordance with Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act, a project alignment cannot impact significant publicly owned parks, recreation areas, wildlife and waterfowl refuges or historic sites on or eligible for inclusion on the National Register of Historic Places unless a determination is made that (1) there is no feasible and prudent alternative to use of above properties, and (2) the project includes all possible planning to minimize harm to those properties.

State park units within the corridor (Figure 12) include the following:

Salcha River State Recreation Site	61.41 acres
Harding Lake State Recreation Area	168.96 acres
Quartz Lake State Recreation Site	600.00 acres
Rika's Landing State Historic Site	10.26 acres
Clearwater State Recreation Site	26.52 acres
Moon Lake State Recreation Site	22.25 acres
Tok River State Recreation Site	3.83 acres

The proposed railroad alignment is considerably removed from six of the State park units (from approximately one mile up to seven miles). The seventh unit, Moon Lake State Recreation Site, would be directly impacted by the project. Moon Lake is a rest and overnight stop for Alaska Highway travelers as well as a recreation site for local residents. The 22 acre wayside contains 15 campsites, a swim beach, and a boat launching area. The park borders Moon Lake, a naturally blocked slough of the Tanana River. The proposed railroad alignment, north of the Alaska Highway at the Moon Lake location, traverses between the Tanana River and the highway and avoids less acceptable grades on the south side of the highway. There is no feasible and prudent alternative to the above alignment. It would traverse through the wayside requiring a physical occupation of park acreage. The right of way needed for the project would not preclude use of the beach and lake, but would impact the value and utility of the overall park unit.

No components of the National Wild and Scenic Rivers System are located within the project corridor. A Federal withdrawal, PLO 3943, has reserved lands within one-half mile of Clear Creek for protection of public recreation values. The proposed railroad alignment passes south of the withdrawal. No other significant recreation areas exist within the corridor.

Two wildlife refuges occur within the corridor. One is a State refuge, the Delta Junction Bison Range, located southeast of Delta Junction and south of the Alaska Highway. It provides fall and winter habitat for a herd of approximately 375 bison. The second refuge is the 700,000 acre Tetlin National Wildlife Refuge. It is located south of the Alaska Highway between Midway Lake and the Canadian border. Tetline Refuge provides habitat primarily for waterfowl, other migratory birds, large mammals and furbearers. The Tanana Valley corridor in the vicinity of the Delta Junction Bison Range offers feasible railroad alignment alternatives to use of refuge land. The Alaska Department of Fish and Game has recommended that an alignment parallel the northern border of the Bison Range. Thus, the railroad embankment, combined with adjacent snow fencing, could produce a barrier to inhibit bison from leaving the refuge and crossing over into agricultural lands to the northeast. An alignment utilizing the Ladue River Valley would preclude any potential impacts to the Tetlin National Wildlife Refuge.

Corridor archaeologic and historic sites within an area of potential impact by the project include three sites: a winter cemetery and two archaeologic sites. None of the three sites are presently on the National Register of Historic Places. Eligibility for the register is undetermined at this time; determinations would be necessary prior to any construction activity.

SCENIC RESOURCES/AESTHETICS

Regional land forms visually associated with a potential railroad alignment would include forested basins of the Tanana and Ladue River valleys, rivers within the basins, surrounding hills, ridges and distant mountains. A railroad alignment would traverse portions of both remote, undeveloped land and land in close proximity to communities and transportation and utility networks. The above close-up and distant viewscapes are not unique in Interior Alaska, nor would the visual quality over a 270 mile alignment distance change significantly.

Project changes in the natural landscape would primarily include vegetation removal within the project right of way and at material source sites, and the introduction of a railroad facility where none had previously existed. Due to the extensive forested environment present, a railroad facility would be largely concealed from ground views made beyond the right of way.

OUTDOOR RECREATION

The project corridor contains numerous recreational opportunities. Lakes and streams contain a variety of sport fish. Several wildlife species are hunted or trapped. For more information regarding the distribution and seasonal populations of fish, game and furbearer species, refer to the wildlife section. Water sports opportunities include powerboating, sailboating on larger lakes and floatboating. Winter sports consist of snowmobiling, dog mushing and cross country skiing. Picnicking, camping, photography, hiking, prospecting, berry picking, firewood gathering and sight seeing are other recreation activities possible in the corridor. The above activities are most prevalent where access is readily available, such as along the Alaska Highway and secondary roads and along the major rivers. Remote locations in the corridor show less evidence of use.

A railroad is not expected to present a barrier to or preclude any existing recreation activities. A railroad alignment would create a measure of accessibility and thereby introduce another area of linear recreational use. While no roads would be maintained along a railroad alignment after initial construction, the cleared alignment would provide a route more attractive to snowmobile, ATV and foot travel than the surrounding terrain. Consequently, environmental degradation could result from ATV impacts upon fragile soils.

LAND USE

Land classification within the corridor is State, either patented, tentatively approved, or pending; Federal, under Bureau of Land Management, U.S. Fish and Wildlife Service or military jurisdiction; Alaska native regional and village selected or Indian reservation; and private (see Figure 11).

The State of Alaska has selected the majority of corridor lands. Large blocks of State land occur around the Delta Junction area, in the Alaska Range immediately south of the Alaska Highway and in the Fortymile country extending southward and including the Ladue River valley.

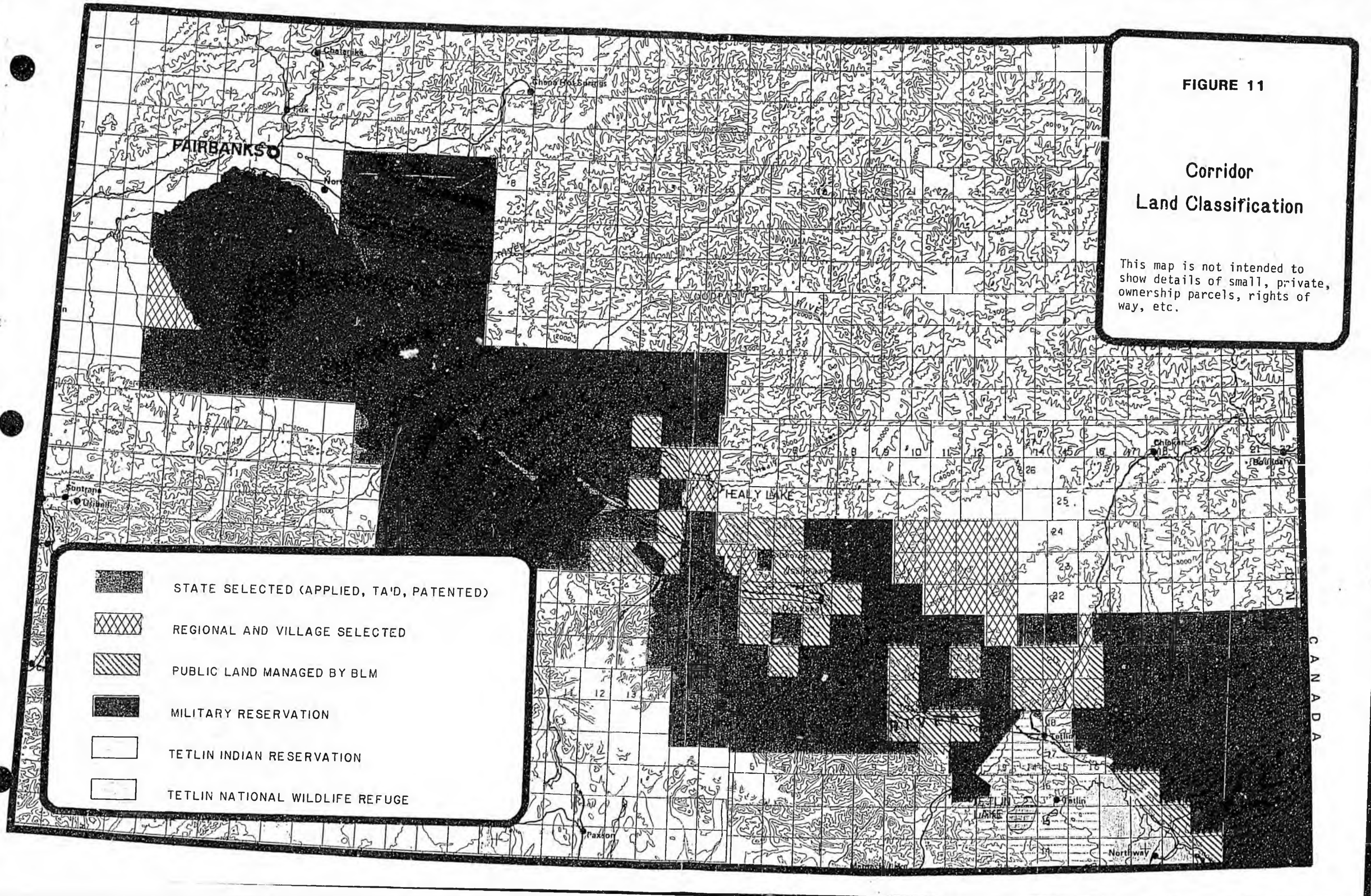
Federal lands include the Fort Wainwright Military Reservation, Eielson Air Force Base, Fort Greely, isolated parcels of BLM administered lands scattered throughout the corridor, and the Tetlin National Wildlife Refuge managed by the U.S. Fish and Wildlife Service.

Regional and village native selections include areas around Healy Lake, Lake George, Dot Lake and Tanacross. The Tetlin Indian Reservation occupies an extensive area surrounding Tetlin Lake.

FIGURE 11

Corridor Land Classification

This map is not intended to show details of small, private, ownership parcels, rights of way, etc.



Private ownership parcels occur primarily in communities and at sporadic locations along the Alaska Highway.

TABLE 4

CORRIDOR COMMUNITIES

COMMUNITY	1980 CENSUS
North Pole	724
Moose Creek	510
Eielson AFB	5232
Salcha	319
Harding Lake	38
Big Delta	285
Delta Junction	945
Fort Greely	1635
Dot Lake	67
Tanacross	117
Tok	589
Tetlin	107

Current corridor development ranges from areas of intensive development to remote undeveloped portions. Table 4 lists corridor communities and 1980 population figures. All of the communities except the remote native village of Tetlin are located adjacent to the State highway system. In addition to residential and transportation land use

activity, the communities of North Pole, Moose Creek, Big Delta, Delta Junction, and Tok also contain commercial and public services land use. Fort Wainwright, Eielson AFB, and Fort Greely are predominantly used for military manuevers and military equipment testing. Communication and utility land uses in the corridor include the U.S. Coast Guard LORAN station east of Tok, a network of microwave stations, TV and radio receiving and repeater sites, the Alyeska Pipeline, and several power and telephone systems. Recreation land use includes State Park units and numerous undifferentiated corridor locations where diverse and multi-season recreation activities occur. Natural resource development includes agriculture, mining and forestry. Agricultural activity occurs east and southeast of Fairbanks and east of Delta Junction. Both mining and timber harvesting areas are distributed throughout the corridor (Figure 12).

Future development trends within the corridor are dependent to a great extent on governmental land use policy. Some corridor communities are in the process of preparing local land use plans for land surrounding their community. The State of Alaska, Department of Natural Resources, has existing management goals and objectives for management of State lands. Several State land disposals are proposed within the corridor. These include small scale agriculture (10-80 acres), subdivision, and remote parcels. The proposed disposals are in various stages of development approval, on-site feasibility, and subdivision layout. A Tanana Basin Area Plan is presently being prepared by the Department of Natural Resources for land use policies and decisions in the basin. A portion of the project corridor also falls within the Bureau of Land Management's FortyMile Planning Unit, with Federal land use goals and objectives. The U.S. Fish and Wildlife Service is working on a plan for the Tetlin National Wildlife Refuge addressing public use, habitat and wildlife management, and transportation corridors in the refuge. A private development proposal in the corridor, contingent on adequate financing is the natural gas pipeline. The pipeline would transport natural gas from the North Slope to the lower 48 states along a route following the Alaska Highway from Fairbanks to the south.

Project inconsistencies with or adverse effects on existing and planned land uses are minimal. Some State land disposal areas, primarily agricultural, would be bisected by the railroad alignment. Physical separation from and loss of equipment access to agricultural fields would be a potential impact. Suitable track crossing sites could be provided to help mitigate this impact. The presence of a railroad in or near subdivision or remote disposals would not necessarily produce a significant negative impact, although occasional passing trains would intermittently affect the serene environment of those areas. Again track crossing sites in appropriate locations would be necessary for continued road access. Proposed land disposals could also be replatted to accommodate the railroad alignment.

FIGURE 12

Existing and Proposed
Corridor
Land Use Activities

FARMING AREA
(general area where several farms are located)
PROPOSED STATE FOREST RESOURCE MANAGEMENT AREA

MINING AREA

STATE PARK

COMMUNICATION SITE

RECENT TIMBER HARVESTING AREA
(commercial, house logs, fuelwood)
RECENT AND CURRENTLY PROPOSED STATE LAND DISPOSALS
(remote, subdivision, agriculture)
TRANS-ALASKA PIPELINE

PROPOSED NATURAL GAS PIPELINE

FAIRBANKS
Aurora Lodge
Quartz Lake
Big Delta
Delta Junction
HEALY LAKE
Tanacross
Tetlin Jct.
Tetlin
TETLIN LAKE
Northway
Paxson
DELTA RIVER
CANADA

Future land use benefits would result from the project. Benefits relate to the provision of access to resource development areas, to corridor communities with consumer and industrial product needs, and to military installations. Railroad access would connect these locations to markets, suppliers, labor, etc. and increase the land available for development.

SOCIOECONOMIC

No benefit/cost analysis has been done for the project. However, certain general assumptions may be made. Project socioeconomic impacts would be both beneficial and adverse. Beneficial impacts would occur as a result of construction employment. Several hundred persons could be employed during construction activities. Communities near the project would benefit from construction wages spent there. Likewise, an economic benefit to local shippers with siding access would result from the rate competition a rail facility would effect with nonrail carriers. As a regional benefit, general economic growth could result from railroad generated resource development. On the other hand, adverse project impacts would occur. A significant amount of State monies would be expended to construct the railroad extension. During construction, limited highway traffic disruption would occur where the railroad alignment crosses or closely parallels public roads. Also, local community services could be burdened by the influx of project construction workers.

ENERGY

Both energy costs and benefits would result from a railroad extension; neither are quantifiable. Project construction activities would involve the energy commitment of fuel for equipment operation. After facility construction, railroad operation and maintenance would necessitate a continual energy commitment. Since a train is more energy efficient in moving freight than either plane or truck, an energy savings would result in the transport of products that would otherwise be made by the latter two methods. Additionally, an energy savings in highway maintenance might be possible, as the project relieves truck freighting pressure on the Alaska Highway.

CONSTRUCTION IMPACTS/PERMITS

Railroad construction involves several types of activities including the following: foundation investigation, alignment surveying, mobilization of construction equipment, clearing of timber, cut and fill earthwork, bridge construction, base preparation, placement of ties and rails,

and clean up. Although most activities are generally of a progressive nature, combinations of the identified activities could be ongoing at any one time in different locations. Many of the construction activities are also seasonal in nature. Examples of potential construction impacts and possible mitigation activities include the following:

Erosion and Sedimentation

Construction activities would be performed so as to cause the least disturbance to surface areas, vegetation and water bodies.

All disturbed surface areas would be left in a stabilized condition, with revegetation or other means of stabilization accomplished as soon as possible.

Where soil material is expected to be suspended in water, settling basins would be constructed to intercept silt before it reaches streams, lakes or wetlands.

Timber Removal

Trees cut in connection with right of way clearing operations could be made available, when practical, for commercial or private firewood utilization.

Wildlife Disturbance

Construction activities would be restricted in specific locations during key periods of biological activity such as breeding, nesting, rearing or spawning.

In-stream activities would be avoided or minimized near fish spawning beds, rearing and overwintering areas.

Activities causing a blockage to fish passage would be prohibited.

Cultural Resource Discoveries

Should previously unknown cultural resources be found in any project affected area during construction, project work would cease until contact with the State Historic Preservation Office and the Federal landowner where applicable.

Safety and Inconvenience

At locations where a railroad alignment must cross existing public

roads, adequate signing dur'ng and following construction work would be required for safety of the motoring public.

Construction at public road/railroad crossings could involve minor traffic delays, however, roads would remain open to traffic use.

Noise

Construction activity could be scheduled to occur during less (noise) critical times of day near residential receptors or other noise sensitive areas.

Air Quality

Open burning of cleared vegetation or other project generated wastes would be prohibited at locations where smoke or odor could have an adverse effect on nearby residences.

* * *

To facilitate the identified construction activities, significant amounts of construction materials, equipment and labor would be required. Construction materials, exclusive of embankment needs, would primarily come from outside the project corridor. Large quantities of gravel and rock would be required for the embankment for nearly 270 miles of railroad. Using the typical section indicated in Figure 3 approximately 67,000 cu.yds. of embankment material per mile over favorable foundation conditions can be estimated to be required. For localized unfavorable foundation conditions (e.g., floodplain, permafrost, etc.) greater quantities would be necessary. In addition, a continual supply of gravel and rock would be necessary for embankment maintenance. The Tanana Basin contains abundant alluvial gravels. However, project materials investigations to identify specific mining locations have not yet occurred. Although normal construction practices utilize material sources as close to the point of embankment construction as possible, importing gravel materials from longer distances over newly constructed portions of railroad alignment might also prove feasible and cost effective. Irrespective of material source locations, large surface disturbed areas would result from gravel mining for the project. With material source mining, additional environmental impacts (e.g., erosion, vegetation and habitat loss, noise, etc.) would follow.

To accommodate construction equipment and personnel, construction camps would also likely be required. Locations for construction camps have not been identified, nor the number of workers that the project would require. Camp location impacts would be reduced by selection of sites away from sensitive environmental areas.

During construction, all applicable standards, guidelines and permit requirements of the State of Alaska and of Federal agencies having jurisdiction would be adhered to. Examples of permits that could be required for a railroad project are shown in Table 5.

TABLE 5

PERMITS THAT COULD BE REQUIRED

PERMIT TITLE	AGENCY WITH JURISDICTION	AREA OF CONCERN
Section 401 Permit (Certificate of Reasonable Assurance)	Alaska Department of Environmental Conservation	Control discharge into navigable waters in order to protect the waters from being polluted
Air Quality Control Permit	Alaska Department of Environmental Conservation	Control air contaminant emissions to prevent, abate and control air pollution
Air Quality Permit to Open Burn	Alaska Department of Environmental Conservation	Prevent, abate and control air pollution
Anadromous Fish Protection Permit	Alaska Department of Fish and Game	Protect and preserve fish in waters that the Commissioner of Fish and Game designated as important to the spawning, rearing, or migration of anadromous fish
Section 404 Permit (Discharge of Dredged or Fill Material into U.S. Waters)	U.S. Corps of Engineers	Conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, navigation, recreation, water quality and, in general, the needs and welfare of the people
Permits for Bridges Over Navigable Waters	U.S. Coast Guard	Insure the navigability of waterways is not impaired and that all environmental impacts have been considered

COORDINATION AND COMMENTS

Early project coordination, prior to the initiation of an environmental study, included several Department contacts with agencies and community groups. Involved in those preliminary project "location" meetings were representatives of Eielson Air Force Base, Fort Wainwright, Fort Greely, the Alaska Railroad, Northwest Pipeline, the Alaska Department of Fish and Game, the Delta Junction City Council, the Delta Junction Planning Commission, and residents of Delta Junction and Tok. Alignment concerns were voiced and considered in the route location process.

On November 24, 1981 the Department held an interagency scoping meeting to determine the scope of the environmental study -- that is, what issues needed to be identified and addressed and to what degree. Below are listed the agencies and organizations invited to participate in the scoping process. Those agencies and organizations identified with an asterik were either represented at the scoping meeting and/or provided written project input. Six environmental study issues deemed most significant by concensus of the scoping meeting attendants were land use (existing and planned), natural resources use, wetlands, noise, floodplain management, and wildlife (including endangered species). Many other issues were also considered important.

Public Works Canada*

Canadian Transportation Administration*

Federal Railroad Administration

Alaska Railroad*

U.S. Department of the Interior

- Bureau of Land Management
- Bureau of Indian Affairs
- Fish and Wildlife Service*

Geological Survey

National Marine Fisheries Service*

U.S. Forest Service*

U.S. Environmental Protection Agency*

Federal Aviation Administration*

U.S. Army Corps of Engineers*

U.S. Coast Guard*

Fort Wainwright*

Eielson Air Force Base*

Fort Greely*

Alaska Office of the Governor

Alaska Office of History and Archeology*

Alaska Department of Natural Resources

Forest, Land and Water Management*

Geological and Geophysical Survey*

Parks*

Alaska Department of Fish and Game*

Alaska Department of Environmental Conservation*

Alaska Department of Commerce and Economic Development

Fairbanks North Star Borough*

City of Fairbanks

City of Delta Junction

Tok Chamber of Commerce

Fairbanks Chamber of Commerce

Tetlin Indian Corporation

Dot Lake Village Corporation*

Doyon Limited

Interior Village Association

Tanacross Village Corporation

Tanana Chiefs Conference*

Healy Lake Village Corporation

Northwest Alaska Pipeline Company*

Alyeska Pipeline Service Company*

Golden Valley Electric Association

Alascom

Sitka Telephone Company

Alaska Power and Telephone Company*

Glacier State Telephone Company*

National Audobon Society

Alaska Conservation Society

Sierra Club

Friends of the Earth

Fairbanks Environmental Center

Comments received regarding the project have specified various concerns; no comments have been unfavorable. Agency coordination will continue throughout project development. The public and special interest groups will also be invited to provide input. Permit acquisitions (e.g., Section 404, Anadromous Fish Protection, etc.), with corresponding stipulations, and the contract provisions, including pollution control requirements and funding, will mitigate to the greatest extent practical environmental impacts of the project. Re-evaluation of this document will also occur, as necessary, throughout project development.

APPENDIX A

Previous Railroad Extension Studies

Alaska - Canada Transcontinental Rail Connection to Contiguous United States, State of Alaska Department of Commerce and Economic Development, Division of Economic Enterprise. January 1977.

Alaska Railroad Extension Route Selection, Project X20089, State of Alaska Department of Transportation and Public Facilities. July 1979 and April 1982 update.

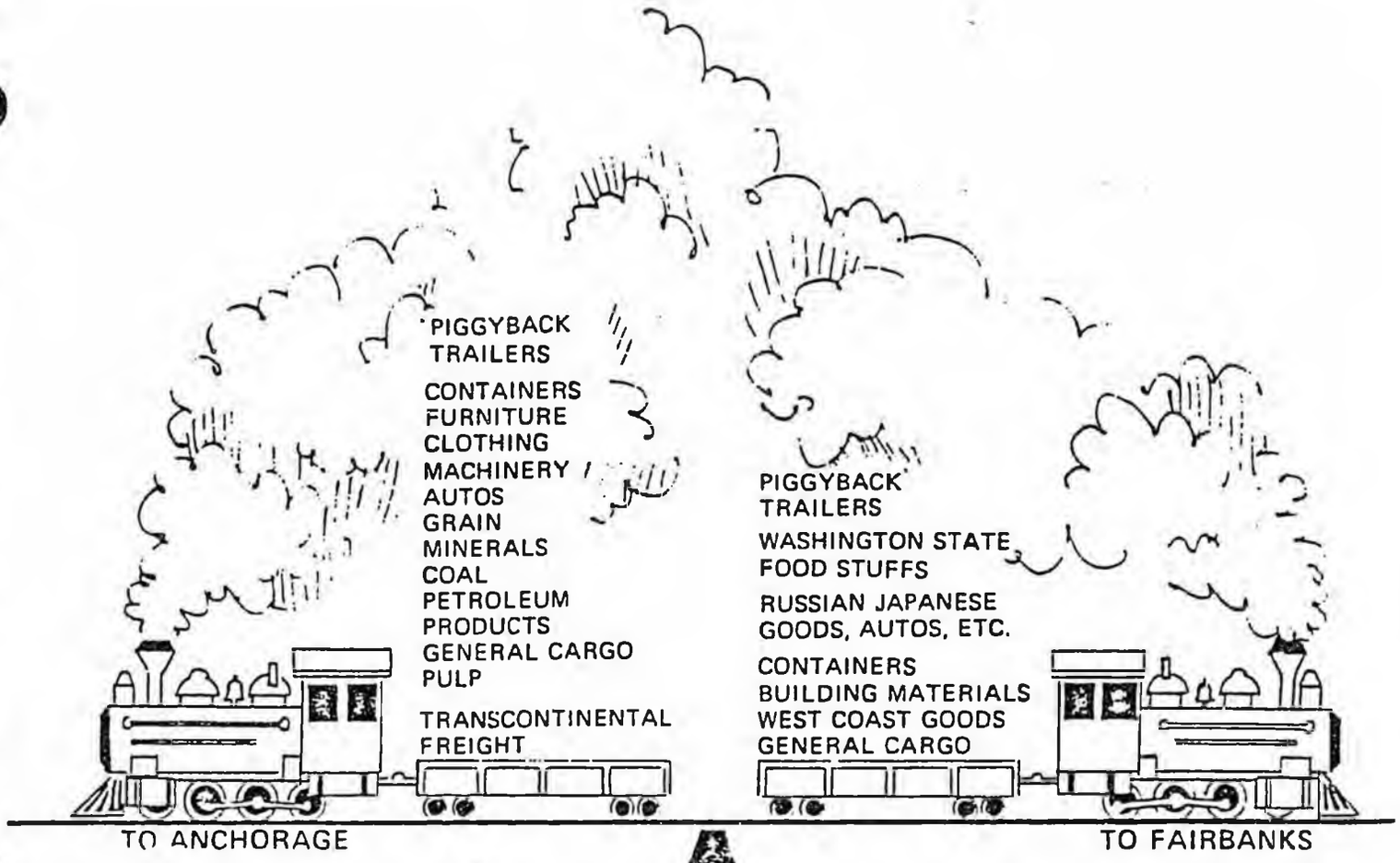
Feasibility Study, Proposed Extension of the Alaska Railroad from Eielson Air Force Base to the Canadian Border, Larry Orsini Associates, Inc. December 1980.

Interior Transportation Study, Project Identification and Evaluation, State of Alaska Department of Transportation and Public Facilities. 1983.

APPENDIX B

Possible Products Flow Along A Rail Connection

Illustrations from the report: Alaska-Canada Transcontinental Rail Connection to Contiguous United States, State of Alaska Department of Commerce and Economic Development, January 1977.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TRAILERS
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PRODUCTS
GENERAL CARGO
PULP
TRANSCONTINENTAL
FREIGHT
PIGGYBACK
TRAILERS
WASHINGTON STATE
FOOD STUFFS
RUSSIAN JAPANESE
GOODS, AUTOS, ETC.
CONTAINERS
BUILDING MATERIALS
WEST COAST GOODS
GENERAL CARGO
TO ANCHORAGE
TO FAIRBANKS


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CARMACKS
ROSS RIVER
ANCHORAGE
WHITEHORSE
WATSON LAKE
FORT NELSON
SKAGWAY
DEASE LAKE
JUNEAU
(UNDER
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SOME EXISTING RAILROAD ROUTES
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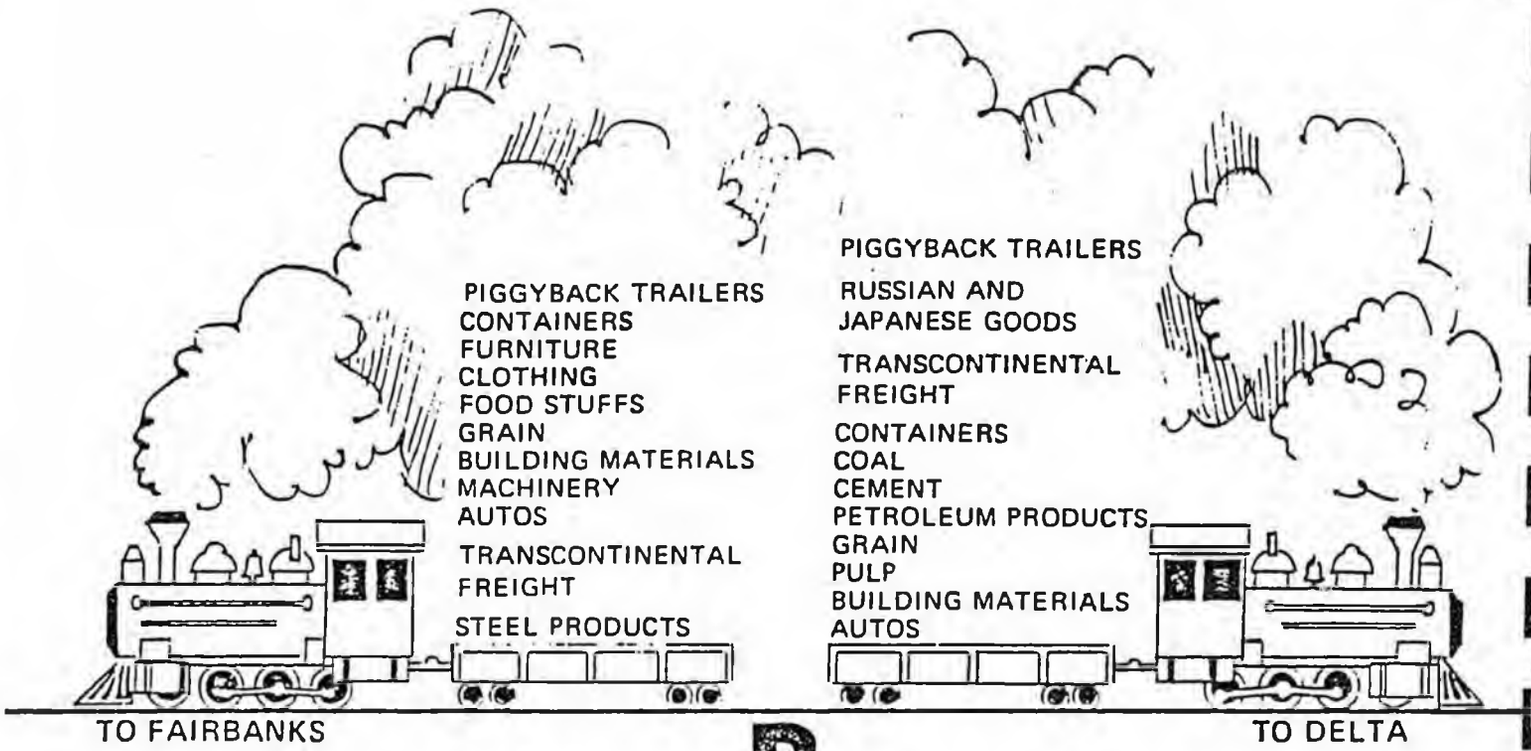
KAMLOOPS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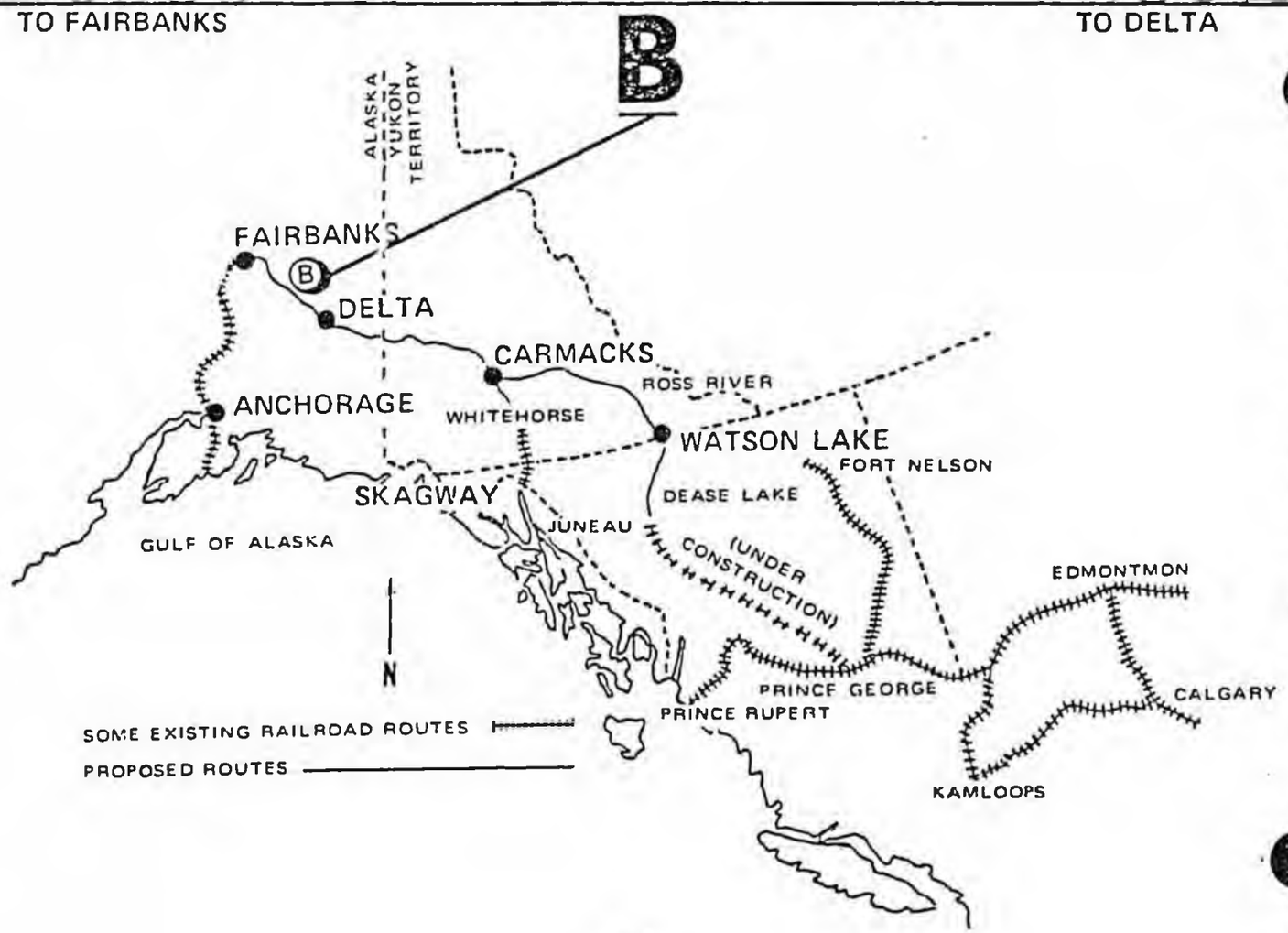
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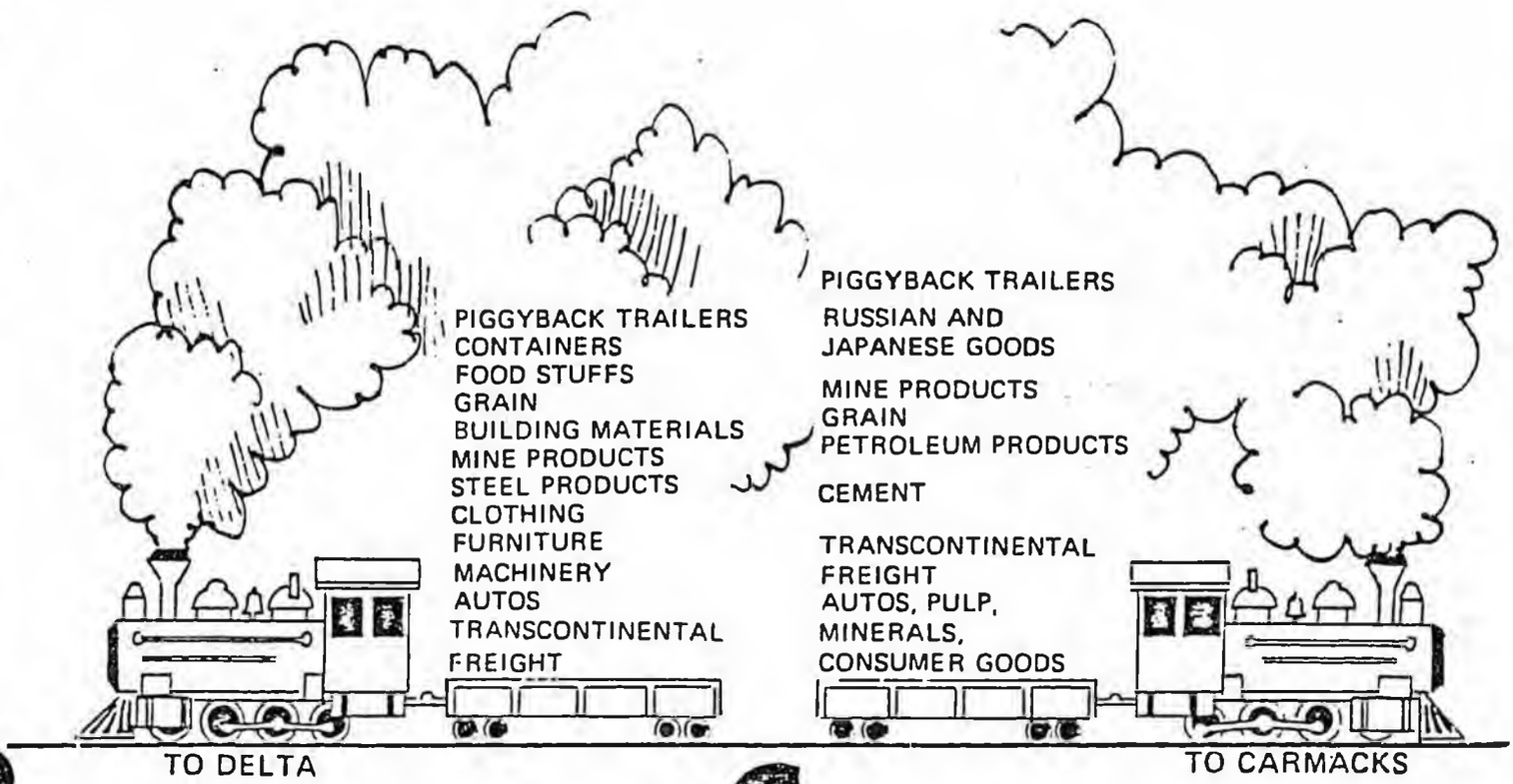
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JAPANESE GOODS
MINE PRODUCTS
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CEMENT
TRANSCONTINENTAL
FREIGHT
AUTOS, PULP,
MINERALS,
CONSUMER GOODS
TO CARMACKS


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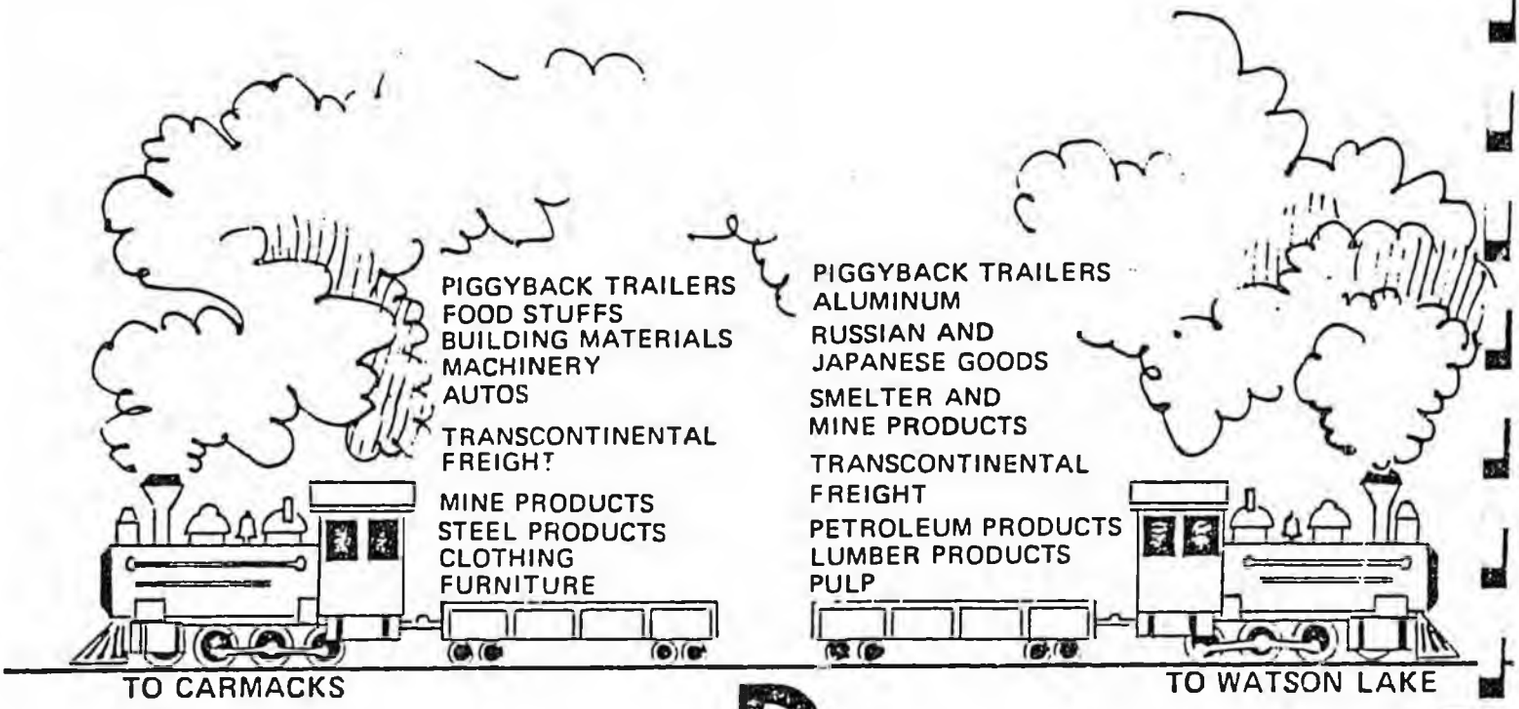
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FURNITURE
TO CARMACKS
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ALUMINUM
RUSSIAN AND JAPANESE GOODS
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PETROLEUM PRODUCTS
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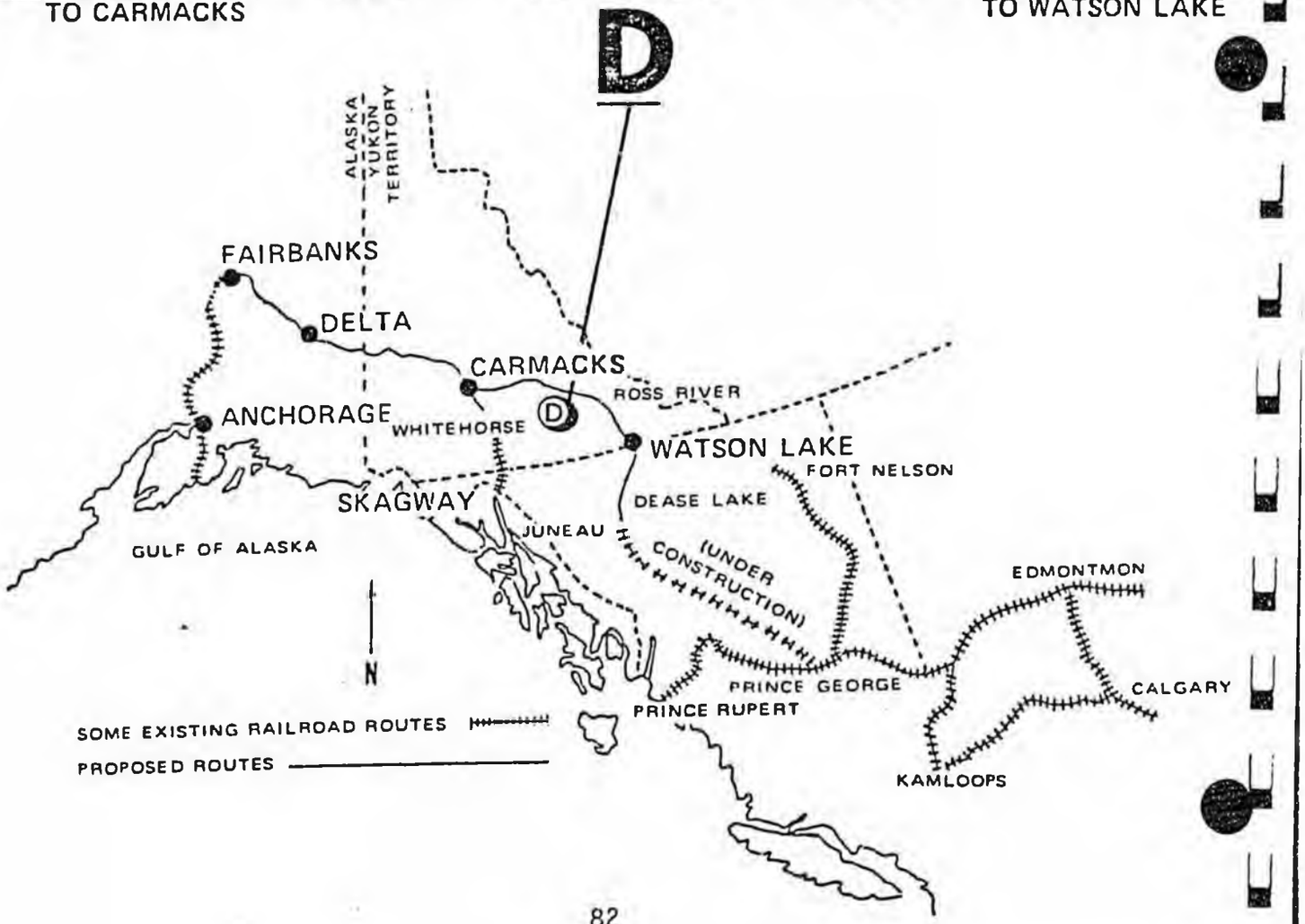
TO WATSON LAKE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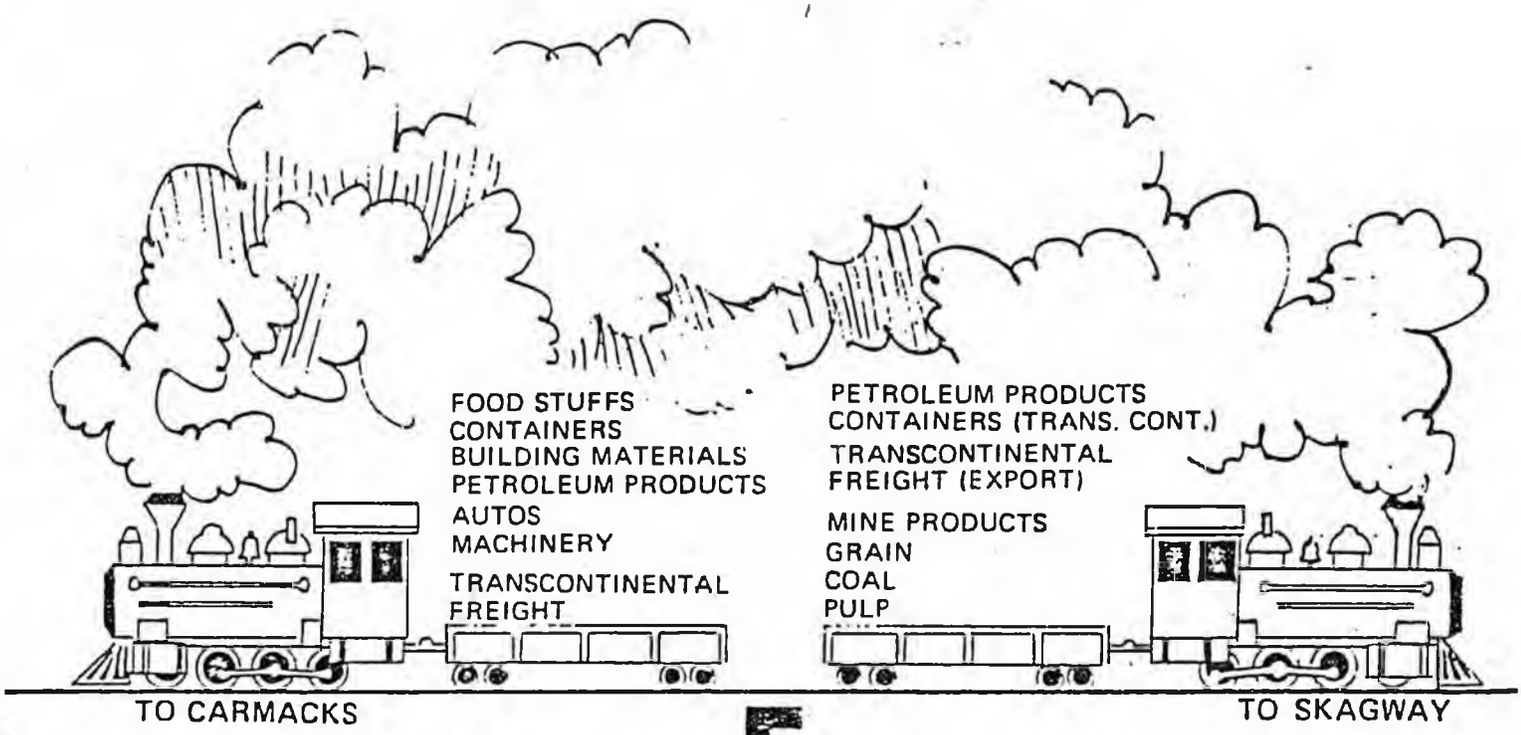
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TRANSCONTINENTAL
FREIGHT (EXPORT)
MINE PRODUCTS
GRAIN
COAL
PULP
TO CARMACKS
TO SKAGWAY


ALASKA
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EDMONTMON
PRINCE GEORGE
CALGARY
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SOME EXISTING RAILROAD ROUTES
PROPOSED ROUTES

APPENDIX C

Route Reconnaissance Work

Excerpted from the State of Alaska Department of Transportation and Public Facilities location study: Alaska Railroad Extension Route Selection, Project X20089, July 1979.

Previous developments, (highways, pipelines, communications systems, airports), have established a general transportation corridor from the present terminus of the Alaska Railroad at Eielson Air Force Base southeast to the Canadian border. This corridor can be described in broad terms as the valley of the Tanana River or in more narrow terms, as the route of the Richardson and Alaska Highways.

A study of topographic and land status maps of eastern Alaska readily shows that the terrain and the associated economic and environmental considerations effectively rule out any general corridor other than the Tanana River Valley. This route study was confined to the Tanana Valley except for the easternmost 50 miles which follow the Ladue River down to the Canadian border.

The Ladue border crossing was first proposed in 1942 when the U.S. Army Corps of Engineers surveyed a route for a rail connection to Alaska. Interest in that project faded after the end of World War II, but the route chosen at that time has been reaffirmed many times in subsequent years. The Ladue crossing directs the Yukon Territory segment of the railroad route into the broad valleys of the White, Yukon, Pelly and Liard rivers. The valleys provide a fairly direct route to Watson Lake, Y.T., through which the connecting link to the existing transcontinental rail system will pass.

It should also be pointed out that the Ladue River border crossing allows the easiest and most direct route to Whitehorse, Y.T., should Canada decide to run the rail connection through that city. This study considers only the Ladue River border crossing.

The first step in selecting a railroad route was to study topographic maps and to identify on these the route possibilities that appeared to merit further study by means of aerial photography.

From the map study, it was determined that the 108 mile section from Delta Junction to Tok was adequately covered by aerial photographs taken in September 1976 for the purpose of highway reconnaissance. Likewise, the 80 mile segment from Tok to the Canadian border via the Ladue River had previously been photographed in a 1973 rail study. This left only the 75 mile segment from Eielson to Delta Junction lacking in

reconnaissance photo coverage. Photographs of this area were scheduled for the fall of 1977.

Map study of the Eielson to Delta Junction area revealed several possible routes including an alignment along the north bank of the Tanana River and several alternatives south of the river. In September 1977, these routes were investigated by a fixed-wing overflight involving the Regional Geologist, Hydrologist and Reconnaissance Engineer. After this investigation, three routes were chosen as the most promising rail locations, one north of the Tanana River and two south of the river.

All three of these routes were subsequently photographed in color on October 1, 1977. All of the aerial photos mentioned above are at a scale of 1 inch = 1000 ft.

Through the winter of 1977-78, considerable time was spent studying the reconnaissance photographs in an effort to select a preliminary alignment. The preliminary route was then studied in detail and refined in 1978 and 1979. Photogrammetric mapping was chosen as the most effective means of selecting a precise route for the railroad. This method allowed a high degree of latitude in final route selection and was adaptable to the time and funding constraints which had been placed on the project. The mapping work was assigned to two consulting firms which were already under contract to provide mapping services to the State of Alaska. The Department also engaged consultants to do the control survey work necessary for accurate mapping.

In all cases, coordinate positions and azimuths were originated from existing Geodetic Survey, U.S. Geological Survey, U.S. Army Corps of Engineers, Bureau of Land Management and two stations estalished by the International Boundary Commission. The control traverses or nets were also closed with respect to other stations of the same origin or previously established monuments which had been derived from them. After running a field data traverse through the network from geodetic station to station, a compass adjustment was made to position all intermediate points. The thus derived positions of each new traverse or control station were anticipated to be within 1:30,000 accuracy relative to existing control. Actual field determinations have proven this to have been accomplished.

All vertical control was derived from existing U.S.C. & G.S. or U.S.G.S. Bench Marks. A more detailed discussion of the control survey is presented in a report prepared by the consultants upon completion of the survey work. That report also contains a listing of the positions of all control points.

As the Department received control data from the survey consultants, it was sent to the mapping consultants and the production of contour maps began by mid-summer 1978. This was accomplished at a scale of 1 inch = 100 ft. with a 2 inch contour interval. The band of mapping varied from 500 ft. to 800 ft. Over most of the length of the project a 500 ft. wide strip centered on the preliminary route was mapped. In some areas of rough terrain, a wider strip of mapping was requested to allow more flexibility in selecting a final railroad route.

As the mapping was received, the Department placed a railroad centerline on it. Occassionally, the line is tightly controlled by topography. This is most obvious when climbing from the Tanana River to the Ladue Summit. A 1% "Grade Contour" was laid out on the mapping by starting at the Ladue Summit and working down to the highway on the Tanana side. A railroad centerline was then drawn to get the best "fit" to this grade contour. The result is a railroad centerline with a sustained 1% grade and continuous curvature for a distance of about 10 miles.

As the alignment was placed on the mapping, the Regional Geologist and Hydrologist reviewed it and recommended needed changes. When the most desirable "fit" was achieved, the State Plane Coordinates of the tangent intersections were scaled off the contour maps and bearings and distances of the tangents were calculated, as well as all curve data. All of the alignment and coordinate data has been tabulated and is on file at the Interior Regional Office of the Department of Transportation and Public Facilities.

APPENDIX D

Agency, Organization and Individual Responses

Public Works Canada | Travaux publics Canada
Pacific Region | Région du Pacifique

TECHNICAL SERVICES
Chief, Technical Services
Environment
Materials
Contracts and Review
Consultant Coordinator

12 November 1981

Our File
3720-1

INTERIOR REGION
DIRECTOR D&C
D.O.T.P.F.
NOV 18 2 22 PM '81

Mr. Robert W. Ward
Commissioner
Department of Transportation
and Public Facilities
Pouch Z
JUNEAU, Alaska 99811

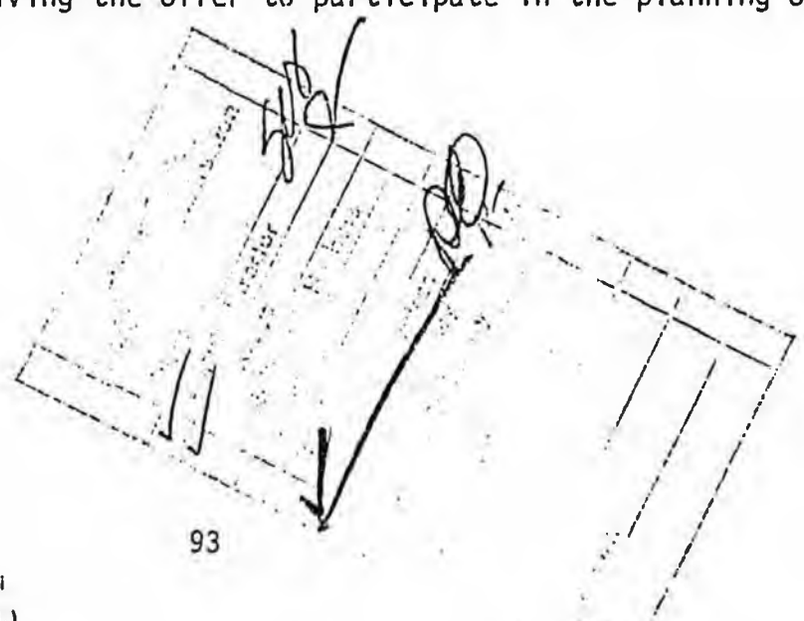
Dear Commissioner Ward:

Your letter of November 2, 1981, with attached report is acknowledged. I appreciate receiving the information and request that we remain on your coordination list. I had hoped that either John Hudson, our Senior Departmental Representative in Whitehorse, or myself could have attended the November 24, 1981 meeting in Fairbanks, but regrettably, both of us have previous commitments. I will try to have a representative at your next meeting.

Our responsibility in the Yukon is limited to the maintenance, design and construction of highways, buildings and marine installations. Our interest in your proposed Railroad Extension stems from the need for the various modes of transportation to complement one another. Within our federal family, responsibility for decisions concerning railroads rests with Transport Canada, and I have taken the liberty of forwarding your letter and report, and a November 4, 1981 letter from Stephen C. Sisk to Mr. A.D. McKenzie, Western Regional Co-ordinator, Canadian Transportation Administration, 2760 - 200 Granville Street, Vancouver V3L 1B3. Mr. McKenzie is interested in your plans and can provide information concerning the British Columbia Railway and the Whitepass & Yukon Route (rail).

I very much appreciate receiving the offer to participate in the planning of this project.

Yours truly,



J.W. Gayton
Regional Manager
Design and Construction

cc: S.C. Sisk,
A.D. McKenzie
J. Hudson

1166 Alberni Street
Vancouver, B.C.
V6E 3W5

1166, rue Alberni
Vancouver (C.-B.)
V6E 3W5

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 1668
Juneau, Alaska 99802

November 16, 1981

INTERIOR REGION
DIRECTOR D&C
D.O.T.P.F.
NOV 19 | 05 PM '81

Mr. Stephen Sisk
Design and Construction
Interior Region
Department of Transportation
and Public Facilities
600 University Avenue, Suite 8
Fairbanks, Alaska 99701-1074

Dear Mr. Sisk:

We have received Commissioner Robert W. Ward's, November 2, 1981, letter regarding the environmental study to be undertaken by the State Department of Transportation and Public Facilities in response to the charges contained in House Bill 47. Although, it is likely an extension of the Alaska Railroad to the Canadian border could impact some of the fishery resources under National Marine Fisheries Service (NMFS) purview, we cannot provide an in-depth project review or comments at this time. Further, we will not be attending the scoping meeting in November. Adherence to the Federal Railroad Administration environmental guidelines will help to reduce many of our potential concerns.

We appreciate the opportunity provided us to review and comment on project plans to date. Please keep this office of NMFS on your mailing list so that we may keep abreast of this project.

Sincerely,

Robert W. McVey
Director, Alaska Region

Interior Region
Design and Construction
Director
Deputy Director
Highways
Buildings & Harbors
Aviation
ROW
Central Services
Home Residency
Valdez Residency
Planning
M & O
Tinkler
Return

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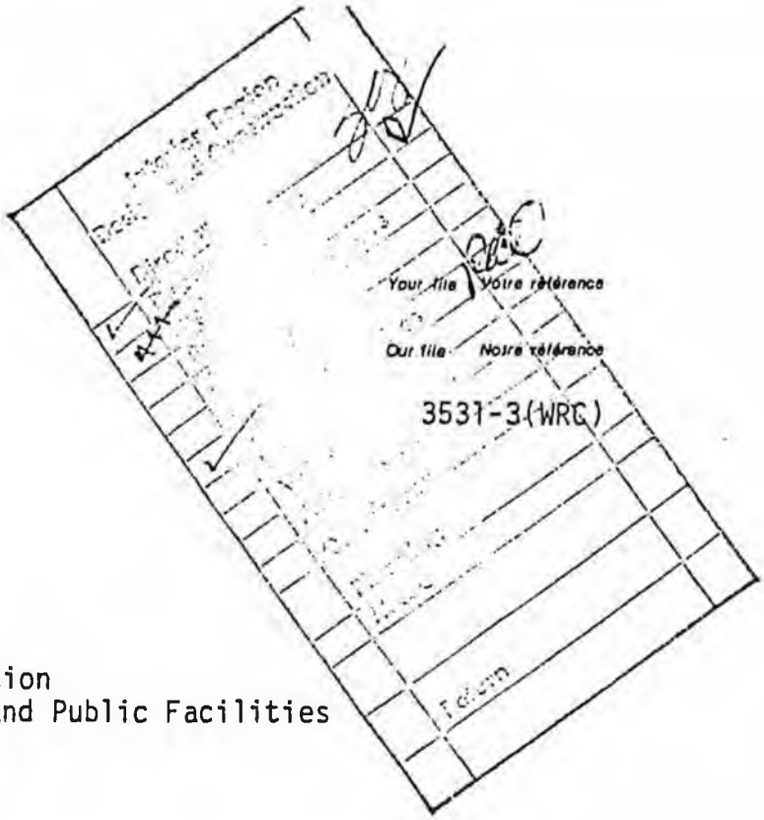
Transport Canada / Transports Canada

Surface / Surface



November 19, 1981

Mr. Stephen C. Sisk
Director, Design and Construction
Department of Transportation and Public Facilities
State of Alaska
2301 Peger Road
Fairbanks, Alaska
99701

Dear Mr. Sisk,

In view of the fact that railway matters fall within the purview of the Canadian Surface Transportation Administration of Transport Canada, the Regional Director-General of Public Works Canada has referred to me your letter of November 4 regarding a meeting to be held in Fairbanks on November 24 on the subject of a proposed railway extension from Fairbanks to the Yukon border.

We are always interested in hearing details of initiatives being taken in other jurisdictions, particularly with a view to assessing the implications in terms of Canadian policies and programs, but I feel I should tell you that at the present time there seems to be little prospect of Transport Canada becoming seriously involved in the question of establishing a rail link between Alaska and the lower forty-eight states. In the circumstances, it might therefore be inappropriate for us to seek representation at a meeting designed to address very specific issues.

I must hasten to add that this should not be seen as a reluctance to cooperate to the fullest extent with officials of the Government of Alaska and if, as part of your exercise, you require any information regarding those aspects of the Canadian surface transportation system which come under Federal jurisdiction, please let me know and I shall be pleased to assist in any way possible.

Nov 27 2 55 PM '81
INTERIOR REGION
DIRECTOR D&C
D.O.T.P.F.

Yours very truly

A.D. McKenzie
Western Coordinator.

TECHNICAL SERVICES
Chief, Technical Services
Environment
Materials
Contracts and Review
Consultant Coordination

L ARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

Address reply to:
COMMANDER dpl
Seventeenth Coast Guard District
P.O. Box 3—5000
Juneau, Alaska 99802

907-586-7355

16000
25 NOV 1981

Mr. Stephen Sisk, Director
Design and Construction, Interior Region
Dept. of Transportation and Public Facilities
State of Alaska
600 University Ave, Suite B
Fairbanks, Alaska 99701-1074

Nov 30 10 24 AM '81
INTERIOR REGION
DIRECTOR D&C
D.C.T.P.F.

Dear Mr. Sisk:

My office has reviewed the Alaska Railroad Extension Route Selection Project X20089 document dated July 1979 that was received with Commissioner Ward's letter dated 2 November 1981. Two major points that I feel you should consider in your next planning phase are as follows.

First, bridge permits will be required for the crossings of the Tanana River. These crossings include the one at mile 25 and the one just upstream from the Alaska Highway bridge at approximately mile 199.5.

Second, Section 4(f) of the Department of Transportation (DOT) Act provides for the protection of parks, recreation areas, wildlife and waterfowl refuges, and historic sites. The route's projected passage through or near the Moon Lake campground area may be in conflict with the provisions of this Act.

I appreciate the opportunity to review and comment on the proposed project.

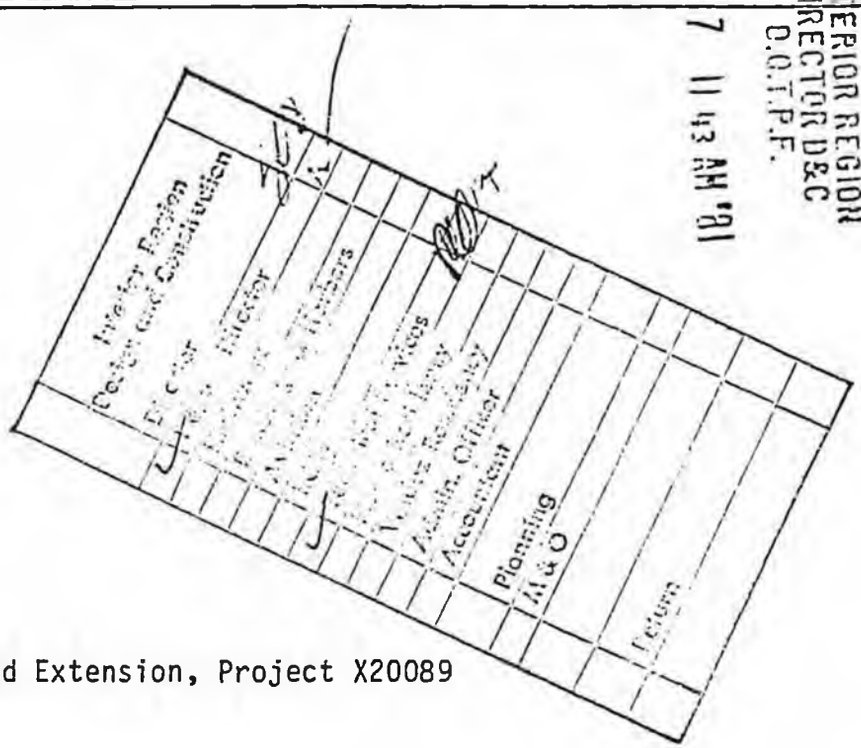
Sincerely,

H. E. Stanley

H. E. STANLEY
Captain, U. S. Coast Guard
District Planning Officer
Seventeenth Coast Guard District

fairbanks north star borough
p.o. box 1267 520 fifth ave. fairbanks, alaska 99707 907-452-4761

December 1, 1981



Stephen C. Sisk, Director
Design & Construction
Dept. of Transportation &
Public Facilities
2301 Peger Road
Fairbanks, AK 99701

Attention: Mike Tinker

Re: Alaska Railroad Extension, Project X20089

Dear Mr. Sisk:

Thank you for the opportunity to address plans to construct an extension of the Alaska Railroad from its present terminus to the Canadian border. We ask that you include a bypass of the Fairbanks urban area as part of the project.

Reasons for constructing a rail bypass of Fairbanks are numerous. The existing line into Garden Island creates a serious traffic hazard at road intersections: Sheep Creek Road, the old Nenana Highway, University Avenue, and the two crossings of Phillips Field Road, in particular. With the additional rail traffic, that hazard will increase.

A high quality rail line along the south side of Fairbanks would encourage industrial development in an area already designated for industrial use. We must encourage industrial growth on the outskirts of Fairbanks, where residential neighborhoods will not be disrupted.

With an increase in industrial activity, the need for importing and exporting toxic chemicals and toxic wastes will also increase. A bypass of the City of Fairbanks would reduce the number of people directly exposed to potential hazard, as well as reducing the likelihood of its occurrence.

Since the state is considering extending the Alaska Railroad to the Canadian border in anticipation of increasing freight traffic, it is imperative that a bypass of Fairbanks be constructed at the same time.

I will be available to discuss a rail bypass of the Fairbanks urban area at your convenience.

Sincerely,

Don Goggin
Planning Director

DCG:PT:mkr

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ALASKA OPERATIONS OFFICE
Room E535, Federal Building
701 C Street, Box 19
Anchorage, Alaska 99513
Phone (907) 271-5083

4 DEC 1981

Stephen C. Sisk, Director
Design and Construction
Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, Alaska 99701

Dear Mr. Sisk:

Thank you for your invitation to attend the interagency scoping meeting in connection with the study of environmental impacts associated with the proposed Alaska Railroad extension to the Canadian border. Due to the limited availability of travel funds, our office was unable to send a representative.

We will, however, be interested in maintaining as great a level of involvement in this process as our staff and funds allow, consistent with relevant Agency regulations. To this end, we are interested in reviewing the report prepared by your agency, pursuant to Alaska House Bill 47, delineating a utility corridor for the proposed extension. We would also appreciate the opportunity to review the results of the 24 November scoping meeting, and other meeting minutes and reports that will be produced during this study.

The Alaska Operations Office of EPA will review the products of this study effort, and any resulting project, mainly for consistency with our Section 404(b)(1) guidelines. These regulations require that practicable alternatives to the placement of dredged or fill material in waters of the United States be examined. Compliance with Council on Environmental Quality regulations will generally satisfy most, if not all, of the specific requirements. Bill Britt of my staff will be the Agency contact for Section 404 activities.

To insure that requirements of the National Environmental Policy Act are complied with, you may wish to provide the Environmental Evaluation Branch in our Seattle Regional Office with all appropriate review material. Correspondence to the Regional Office should be addressed to:

Ms Kathy Davidson M/S 443
Environmental Evaluation Branch
Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

For day to day involvement in the project please contact the Alaska Operations Office. If there is a question concerning the items discussed in this letter, please contact Bill Britt at 271-5083.

Sincerely yours,

W. James Sweeney, Director
Alaska Operations Office

cc: USFWS, Fairbanks
NMFS, Anchorage
ADFG, Fairbanks
ADEC, Fairbanks
CORPS (Regulatory Functions/Environmental Resources)
Kathy Davidson M/S 443

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS

JAY S. HAMMOND, GOVERNOR

619 WAREHOUSE DR., SUITE 210
ANCHORAGE, ALASKA 99501

PHONE: 274-4676

February 19, 1982

Re: 1120-10

Mike Tinker, Environmental Coordinator
DOT, Interior Region
2301 Peger Road
Fairbanks, Alaska 99701

SUBJECT: Proposed Alaska Railroad Extension

Dear Mr. Tinker:

We have reviewed the subject proposal and would like to offer the following comments:

STATE HISTORIC PRESERVATION OFFICER

Our review indicates that significant cultural resources may be impacted. Specifically AHRS sites XBD 027 and XBD 067 have been seen to be potentially eligible for the National Register of Historic Places. Also XBH-246 appears to be potentially eligible. This site will need further investigation to determine site boundaries and to gather sufficient archaeological material for a determination of cultural affinity. Furthermore, the corridor, as proposed goes through an area deemed to have a high probability for historic/ prehistoric site as noted by E.J. Dixon in the University of Alaska Museum report: Archaeological Survey and Inventory of Cultural Resources Fort Wainwright, Alaska. This area lies Southwest of Harding Lake where the corridor crosses the Tanana River and extends to the southernmost border of the Fort Wainwright Military Reservation. The corridor from this point east to Tetlin Junction may also be considered as archaeologically sensitive, based upon the known cultural resource sites from previous surveys along the Tanana River. That portion of the corridor that passes along the Ladue River may affect unknown cultural resources. The Ladue River has potential for having been a transportation corridor into the Yukon territory via the White and Stewart Rivers. Also, 1980 research along the gas pipeline west of this research area found sites in a topographically similar area (a minor river drainage with a broad, flat valley).

Therefore, per 36 CFR 800 and AS 41.35.070, a preconstruction cultural resource survey/site investigation is recommended. Should there be any questions concerning this review, please call Diana Rigg at this office.

Robert D. Shaw
State Historic Preservation Officer

STATE PARK PLANNING

Recreation opportunities which could be adversely effected is enhanced by the proposed railroad extension should be identified in the Tanana Basin planning project during the next year.

LAND & WATER CONSERVATION FUND GRANT PROGRAM

No Comment.

Sincerely,

for Chip Dennerlein
Director

CD:mlb

Tanana Chiefs Conference, Inc.

Doyon Building
201 First Avenue
Fairbanks, Alaska 99701
Phone (907) 452-8251

February 24, 1982

Mr. Mike Tinker
Environmental Coordinator
State of Alaska
Dept. of Transportation
2301 Peger Road
Fairbanks, AK 99701

RE: November 1981 Scoping results, Alaska Railroad Extension

Dear Mr. Tinker:

Frank Borecki of our Realty section passed along the above noted material for my review.

Our concern for the planning of this project goes beyond the identification of certain surface renewable resources, to the identification of user group patterns and user groups. We view that traditional uses of the lands in question could be significant and that this information must be developed and utilized in the planning of any surface transportation corridor and development.

I note some reference is made in your summary of the November meeting to existing land use, but this is not very clear as to the intended meaning.

Specifically, the use patterns of which we speak refer to such as traplines, trapping cabins and camps, fish camps, access and trails incidental to the activities suggested by the presence of these, berry picking areas, and areas of firewood and house log gathering to mention the more common types of use areas.

Not very much of this information has been carefully documented in the State. The Subsistence Divison of ADF & G has designed a research project to develop this type of traditional land use mapping in the Tanana Basin south of Fairbanks, but the work has not yet begun.

The DNR has also developed a Tanana Basin Land Use Atlas to be used for its Tanana Basin Area Plan. However, we find the Atlas to be incomplete and inadequate inasmuch as traditional land use and occupancy information is not documented on the atlas maps.

I see a reference in the scoping summary:

> The existence/location of mining claims in the Ladue River Valley needs to be investigated.

We wish to suggest that, in addition to developing that type of information for rail corridor planning to the Canadian Border, traditional land use and occupancy information should also be included.

We are told that, generally some Northway residents do use the Ladue River area for trapping; perhaps the area is important for other activities as well, on one here is certain.

I would appreciate being placed on any mailing lists which are used to update interest parties on this planning effort, and I would appreciate an opportunity to participate at future meetings which are called to address the study of the route.

Sincerely,

TANANA CHIEFS CONFERENCE, INC.

Jim Kowalsky
Director, Wildlife & Parks
Dept. of Community & Natural Resources

JK:ds

cc: Henry Springer

United States Department of the Interior
FISH AND WILDLIFE SERVICE
1011 E. TUDOR RD.
ANCHORAGE, ALASKA 99503
(907) 276-3800

REPLY REFER TO:
SE

RECEIVED
Interior Region
JUL 20 1982
Technical Services

Interior Region
Design and Construction

Director	
Deputy Director	
Highways	
Buildings & Harbors	
Aviation	
ROW	
Technical Services	
Home Residency	
... Residency	
... Officer	
...ntant	
...ing	
Return	

13 JUL 1982
HIGHWAY D&C
INTERIOR REGION
DOT&PF
22 JUL 1982

Mr. Stephen C. Sisk
Director, Design and Construction
Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, Alaska 99701

Dear Mr. Sisk:

This responds to your June 24, 1982 request for information on threatened or endangered species in the corridor of the proposed Alaska Railroad Extension - Project # R-51033. Based on the best information currently available to us, the American Peregrine Falcon (Falco peregrinus anatum) is the only listed or proposed threatened or endangered species present in the project area.

Peregrine Falcon

The widespread use of chlorinated hydrocarbon based pesticides was the principle factor in the severe decline of Peregrine Falcon populations in boreal forest and tundra regions of Alaska. On June 2, 1970, the American Peregrine Falcon was officially listed as an endangered species.

The Tanana River valley from Nenana to Tetlin was, historically, a major nesting area for Peregrine Falcons in Alaska. Peregrines are known to have nested at 18 locations along this reach of the river. The following table and the attached map identify 12 nesting locations that are within 3.25 miles of the proposed Alaska Railroad alignment.

INTERIOR REGION
DIRECTOR D&C
D.O.T.P.F.
JUL 21 2 57 PM '82

CENSORED

The U.S. Fish and Wildlife Service considers the location of Peregrine Falcon eyries to be sensitive information. The illegal taking of peregrines for falconry continues to pose a threat to this endangered species.

TECHNICAL SERVICES	
Chief, Technical Services	
Environment	
Materials	105
Contracts and Review	
Consultant Coordinator	
File	

CENSORED

The U.S. Fish and Wildlife Service considers the location of Peregrine Falcon eyries to be sensitive information. The illegal taking of peregrines for falconry continues to pose a threat to this endangered species.

Although many of the nest sites are currently inactive, the peregrine population along the Tanana River has risen from a nadir in 1974 when only one pair was present to 5 pairs in 1982. We are optimistic that many of the presently unoccupied sites will again be used by nesting peregrines as the population fully recovers. We, therefore, believe that all historical nest sites, whether presently active or not, are important for providing for the full recovery of the species.

The Bald eagle, though not considered threatened or endangered in Alaska, is a protected species pursuant to the Bald Eagle Protection Act of 1940, as amended. As many as 10 pairs of bald eagles nest within 3-4 miles of the Alaska Highway within the Tanana River floodplain (Bob Ritchie, ABR, Fairbanks, pers. comm.). More information about bald eagle nesting locations can be provided upon request.

Your letter clearly states that although the railroad extension is not a Federal project, the DOT intends to follow Federal Railroad Administration environmental guidelines. In this regard, we appreciate the opportunity to address endangered species concerns in the planning of this project and look forward to your continued cooperation. Skip Ambrose (452-6785) or Dennis Money (263-3435) are available to further consult with you regarding the Peregrine Falcon and this project. A copy of the Endangered Species Act of 1973, as amended, will be forwarded to you under separate cover.

Sincerely,

Assistant Regional Director

cc: Strobelle, USFWS, Fairbanks
Grundy, Alaska Dept. of Fish and Game, Fairbanks

APPENDIX E

List of Preparers

Coordination and Supervision
Mike Tinker, Regional Environmental Coordinator

Organization and Text
Randy Horner, Environmental Section

Graphics
Belinda Swift, Environmental Section

Typing
Deborah Jernigan, Environmental Section

Project Description Information
Danny Johnson, Reconnaissance Section

Geological Information
Hal Livingston, Regional Geologist

Land Ownership Information
Burle Beard, Right of Way Section

In addition to the above Department of Transportation and Public Facilities personnel, the following individuals were contacted for specific corridor or project-related information:

U.S. Soil Conservation Service
Jim Vancura

U.S. Fish and Wildlife Service
Skip Ambrose
Dennis Money

Alaska Railroad
Ted Trueblood
Francis Weeks
Mike Sudal

Alaska Department of Fish and Game
- Matt Robus
- Dave Kellyhouse
- Larry Jennings
- Dave Johnson
- Dick Peckham
- Pam Bruce
- Al Townsend
- Jack Dietricson

Alaska Department of Natural Resources
- Les Fortune
- Frances Van Ballenberghe
- Rob Walkinshaw
- Chris Glenn
- Diana Rigg

Alaska Department of Environmental Conservation
- Tom Moyer

APPENDIX F

Document Circulation List

Federal Railroad Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Alaska Railroad
P.O. Box 7-2111
Anchorage, Alaska 99510

Canadian Surface Transportation Administration
2760-200 Granville Street
Vancouver, B.C. V6C 1S4

U.S. Department of the Interior
Office of the Secretary
P.O. Box 120
Anchorage, Alaska 99501

Bureau of Land Management
Fairbanks District Office
P.O. Box 1150
Fairbanks, Alaska 99707

U.S. Department of the Interior
Fish and Wildlife Service
Northern Alaska Ecological Services
Room 110, Federal Building, Box 20
101 12th Avenue
Fairbanks, Alaska 99701

U.S. Department of the Interior
Fish and Wildlife Service
Western Alaska Ecological Services
733 W. Fourth Avenue, Suite 101
Anchorage, Alaska 99501

U.S. Fish and Wildlife Service
1011 East Tudor Road
Anchorage, Alaska 99503

U.S. Department of The Interior
Bureau of Indian Affairs
101 12th Avenue
Box 16
Fairbanks, Alaska 99701

National Marine Fisheries Service
Alaska Region
P.O. Box 1668
Juneau, Alaska 99802

U.S. Forest Service
Institute of Northern Forestry
University of Alaska Campus
Fairbanks, Alaska 99701

Environmental Evaluation Branch
Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

Alaska Operations Office
Environmental Protection Agency
701 C Street, Box 19
Anchorage, Alaska 99510

Federal Aviation Administration
5640 Airport Way
Fairbanks, Alaska 99701

U.S. Army Corps of Engineers
Alaska District
P.O. Box 7002
Anchorage, Alaska 99510

U.S. Customs Service
620 E. Tenth Avenue
Anchorage, Alaska 99501

Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99802

Post Commander
Fort Wainwright, Alaska 99707

Base Commander
Eielson A.F.B.
Eielson, Alaska 99702

Post Commander
Fort Greely, Alaska 98733

State of Alaska
Office of the Governor
675 Seventh Avenue, Station H
Fairbanks, Alaska 99701

Alaska Office of the Governor
Division of Policy Development
and Planning
Pouch AD
Juneau, Alaska 99811

Alaska Department of Commerce
and Economic Development
Division of Tourism
Pouch E
Juneau, Alaska 99811

Department of Environmental Conservation
Box 1601
Fairbanks, Alaska 99701

Habitat Division
Department of Fish and Game
1300 College Road
Fairbanks, Alaska 99701

Alaska Department of Natural Resources
Division of Parks
619 Warehouse Drive, Suite 210
Anchorage, Alaska 99501

Office of History and Archeology
State Historic Preservation Office
619 Warehouse Drive, Suite 210
Anchorage, Alaska 99501

Division of Geological and
Geophysical Survey
P.O. Box 90007
College, Alaska 99708

State of Alaska
Department of Natural Resources
Division of Land and Water Management
4420 Airport Road
Fairbanks, Alaska 99701

City of Fairbanks
410 Cushman Street
Fairbanks, Alaska 99701

Tok Chamber of Commerce
P.O. Box 389
Tok, Alaska 99780

Fairbanks North Star Borough
P.O. Box 1267
Fairbanks, Alaska 99707

City of Delta Junction
P.O. Box 229
Delta Junction, Alaska 99737

Fairbanks Chamber of Commerce
550 First Avenue
Fairbanks, Alaska 99701

Tanana Chiefs Conference, Inc.
320 Second Avenue
Fairbanks, Alaska 99701

Dot Lake Village Corporation
P.O. Box 441
Tok, Alaska 99780

Doyon Limited
201 First Avenue
Fairbanks, Alaska 99701

Tetlin Indian Corporation
Tetlin Village
Tetlin, Alaska 99779

Interior Village Association
127½ Minnie Street
Fairbanks, Alaska 99701

Tanacross Village Corporation
Tanacross, Alaska 99776

Healy Lake Village Corporation
Healy Lake, Alaska 99727

Alyeska Pipeline Service Company
Pouch 60290
Fairbanks, Alaska 99706

Northwest Alaskan Pipeline Company
1001 Noble Street
Fairbanks, Alaska 99701

Golden Valley Electric Association
P.O. Box 1249
Fairbanks, Alaska 99707

Alascom, Inc.
949 East 36th Avenue
Anchorage, Alaska 99502

Sitka Telephone Company
P.O. Box 257
Sitka, Alaska 99835

Glacier State Telephone Company
P.O. Box 55129
North Pole, Alaska 99705

Alaska Power and Telephone Company
Box 222
Port Townsend, Washington 98368

Interior Woodcutters Association
P.O. Box 73762
Fairbanks, Alaska 99707

Northern Environmental Center
218 Driveway Street
Fairbanks, Alaska 99701

APPENDIX G

Impacted Wetlands

Approximate Milepost	Wetland	Impact
4	Twenty-three Mile Slough	bridge crossing
8	Twenty-three Mile Slough	bridge crossing
11-14	Piledriver Slough (4)	bridge crossings
14-15	Unnamed drainages (2)	culvert crossings
18	Unnamed drainage	culvert crossing
19	Unnamed drainage	culvert crossing
20	Salcha River	bridge crossing
25	Tanana River	bridge crossing
25-28	Unnamed drainages (10)	culvert crossings
29-30	Unnamed drainages (4)	culvert crossings
31	Unnamed drainage	culvert crossing
35	Unnamed drainage	culvert crossing
38	Little Delta River	bridge crossing
39	Unnamed drainage	culvert crossing
44	Unnamed drainages (2)	culvert crossings
45-48	Unnamed drainages (6)	culvert crossings
50	Unnamed drainages (2)	culvert crossings
53	Delta Creek	bridge crossing
54	Unnamed drainage	culvert crossing
59	Clear Creek	bridge crossing
61	Clear Creek	bridge crossing
75	Delta River	bridge crossing
86	Unnamed drainage	culvert crossing
89	Unnamed drainages (2)	culvert crossings
90	Unnamed drainage	culvert crossing
91	Granite Creek	bridge crossing
92	Unnamed drainage	culvert crossing
93	Rhoads Creek	bridge crossing
97	Sawmill Creek	bridge crossing
109	Gerstle River	bridge crossing
111	Unnamed drainage	culvert crossing
113	Little Gerstle River	bridge crossing
114	Unnamed drainage	culvert crossing
121	Johnson River	bridge crossing
123	Dry Creek	bridge crossing
124	Unnamed drainage	culvert crossing
126	Sears Creek	bridge crossing
128	Unnamed drainages(2)	culvert crossings
129	Berry Creek	bridge crossing
132	Unnamed drainages (2)	culvert crossings
135	Unnamed drainage	culvert crossing
137	Unnamed drainage	culvert crossing
139	Unnamed drainages (2)	culvert crossings
141	Unnamed drainage	culvert crossing

Approximate Milepost	Wetland	Impact
142	Chief Creek	bridge crossing
144	Bear Creek	bridge crossing
155	Robertson River	bridge crossing
158	Unnamed drainages (2)	culvert crossings
159	Unnamed drainage	culvert crossing
160	Sheep Creek	bridge crossing
161	Unnamed drainage	culvert crossing
162	Cathedral Rapids Creek No. 3	bridge crossing
163	Cathedral Rapids Creek No. 2	bridge crossing
164	Cathedral Rapids Creek No. 1	bridge crossing
166	Unnamed drainage	culvert crossing
168	Unnamed drainages (2)	culvert crossings
170	Yerrick Creek	bridge crossing
171	Unnamed drainage	culvert crossing
192	Unnamed drainage	bridge crossing
194	Tok River	bridge crossing
198	Unnamed drainage	culvert crossing
200	Tanana River	bridge crossing
205	Unnamed drainage	culvert crossing
207	Unnamed drainage	culvert crossing
208	Unnamed drainage	culvert crossing
209	Unnamed drainage	culvert crossing
211	Unnamed drainages (2)	culvert crossings
213	Unnamed drainages (2)	culvert crossings
219	Ladue River	bridge crossing
220	Ladue River	bridge crossing
224	Ladue River	bridge crossing
225	Unnamed drainage	bridge crossing
230	Unnamed drainage	bridge crossing
233	Unnamed drainage	bridge crossing
234-235	Unnamed drainages (2)	bridge crossings
237	Unnamed drainage	culvert crossing
238	Unnamed drainages (2)	culvert crossings
241	Unnamed drainage	bridge crossing
243	Unnamed drainage	culvert crossing
245	Ladue River	bridge crossing
245	Unnamed drainage	culvert crossing
246	Ladue River	bridge crossing
247	Unnamed drainage	culvert crossing
248	Unnamed drainage	bridge crossing
249	Unnamed drainage	culvert crossing
250	Unnamed drainage	culvert crossing
251	Unnamed drainage	bridge crossing
253	Unnamed drainages (3)	culvert crossings

Approximate Milepost	Wetland	Impact
255	Chicken Creek	bridge crossing
256	Unnamed drainage	culvert crossing
257	Unnamed drainage	culvert crossing
258	Unnamed drainage	culvert crossing
259	Unnamed drainage	bridge crossing
260	Unnamed drainage	culvert crossing
261	Unnamed drainage	culvert crossing
262	Unnamed drainage	culvert crossing
263	Unnamed drainage	culvert crossing
265	Unnamed drainage	culvert crossing
267	Unnamed drainage	culvert crossing
268	Unnamed drainage	culvert crossing
269	Unnamed drainage	culvert crossing
270	Unnamed drainage	culvert crossing

It is probable that the project would also impact other presently unidentified wetland areas where saturated soil conditions exist despite the absence of visible flowing surface water.

MAR 5 RECD

KANTISHNA
HOLDINGS INC.

Rep Vic Khoring
State Capitol
Juneau, Alaska 99801-1182

Ref: Denali Park Rail Access

March 2, 2001

Dear Rep. Khoring:

Because you are the House Transportation Chair with a vital role in developing new transportation infrastructure in Alaska, the attached materials are submitted to you in furtherance of the development of a new northern railroad access into Denali National Park and Preserve.

After seeing the recent University Lands Bill proposed by the Governor, crafted by acting DNR Commissioner Pourchot and Chip Dennerlein of the NPCA and, the wasteful and delaying tactics of the Rex / South Intertie process, I don't see Commissioner Pourchot granting the lands in the 1998 AIDEA bill - CSHB 386 - (attached) to AIDEA for KHI to develop as a railroad right-of-way under any circumstances.

To avoid further delays and not have to fight the Commissioner for the next two years, we are asking Rep. James and Sen. Therriault to introduce appropriate legislation to resolve the rail corridor issue. Both are familiar with the Denali Railway System Project and can fill you in on their positions. I am also asking for your support.

After you have a chance to review the attached, please call or email me if you have any comments or questions.

Thank you for your time and good efforts on behalf of Alaska and for your support.

Best regards

Joseph N. Fields III, President
Kantishna Holdings, Inc.

KHI • P.O. Box 71047, Fairbanks, AK 99707 • Tel:907-451-7906 • Fax:907-451-6494 • Email: joseph.fields@acsalaska.net
"The Denali Railway System - Park Access for the 21st Century"

CONFIDENTIAL

COPY

Senator John Cowdery
Chair, Senate Transportation Committee
State Capital. Juneau, Alaska 99801-1182

KANTISHNA HOLDINGS INC.

February 28, 2001

Dear Senator Cowdery:

We have not met so allow me to introduce myself, my name is Joseph N. Fields III and I'm a 40 year resident of Fairbanks and President of Kantishna Holdings, Inc. (KHI), an Alaskan corporation.

KHI has proposed The Denali Railway System: A privately funded, Design / Build / Operate and Maintain Project creating a new northern railway access for Denali National Park and Preserve.

I read with interest Liz Ruskin's February 24th Anchorage Daily News article entitled: "Cowdery collects engineers' ideas." and I applaud your leadership and that of others in the Legislature in seeking a resolve to Alaska's deficiency in transportation infrastructure.

While the article focused on engineering vision and ideas, there are elements of transportation infrastructure development that do not fall to engineers, such as project capitalization, right-of-way acquisition and governmental relations. Of course, I'm referring to privately funded transportation infrastructure development and not to the process most frequently undertaken in Alaska, where State and Federal monies are expended implementing construction of transportation infrastructure.

Denali Reality:

First, it's a novel concept, a "Denali Aerial Coach" seen as "...basically an elevated railway from Healy to Kantishna"[1], but as the person with perhaps the most experience with railroad development in Denali, this idea is a non-starter from both financial and practical standpoints. The proposal envisions the use of public funds. There has never been federal or state funding in the amount of $450 million for transportation infrastructure in a single park. Further, passenger revenue dynamics for Denali Park simply will not amortize $450 million. Conversely, the rail element KHI's proposal, is approximately $135-150 million in private capital, less terminal facilities (which are revenue generators) and lease-purchase rolling stock. In total about $235-240 million private capital investment.

Second, the visual impact of an elevated train will garner the strongest of opposition - not that the opposition will support any development - but unlike standard railroads with a low profile, elevated trains become the dominant feature of the landscape which detracts from the visitor experience without bringing any real benefit other than higher engineering fees. Further, Elevated trains, like monorails are typically urban transportation features providing a second level of transportation in crowded environs. Usually, Elevated trains and monorails require a surface support road and, because they most resemble bridges require extraordinary fire and rescue equipment and facilities.

Wants:

Basically there are two actions required for KHI to start actual development a new year-round northern access railroad into Denali from Healy to Wonder Lake:

1. Creation of a corridor from the Alaska Railroad near Healy to the edge of the Park in the Stampede Townships; **2.** Creation of a corridor in the Park from the edge of the state land to a preferred terminus location in the vicinity of Wonder Lake.

Background Information and Solutions for 1 & 2 above:

- (1) This corridor should be complete now. The AIDEA re-authorization bill of two years ago (CSHB 386) reserved in law a corridor for KHI to select a railroad right-of-way from. However, the bill required the DNR Commissioner to implement the process for the granting of the corridor from DNR to AIDEA, Commissioner Shively said he could do it in a perfect world but this was not one. Later, sometime last summer, DNR Commissioner Pourchot, aided by Chip Dennerlein of the National Parks Conservation Association (NPCA), devised a plan to grant 90,000 acres in Stampede Townships west of Healy to the University of Alaska on the condition the UA sell the 90,000 acres to the National Park Service[2]. Commissioner Pourchot is a long time opponent of northern access into Denali as is the NPCA, who's Board of Trustee's Secretary is the owner of Camp Denali and in effect Mr. Dennerlein's employer. Commissioner Pourchot is not going to grant land to AIDEA for a railroad corridor while he and his environmental industry constituency are orchestrating such a major deal.

  - **Solution: The way to resolve the corridor issue on State lands is a bill or amendment to a bill that the Governor can not veto easily. A bill that would transfer a similar corridor, as the one established in the AIDEA bill and under the same provisions, to the Denali Borough for economic development purposes. Ironically, the Denali Borough was denied by DNR the selection of Stampede Township lands in its original allotment selection and those lands are among the best and most suited to economic development in the Borough. The Denali Borough is agreeable in principal to such legislation and would endorse it by resolution if one was introduced. A bill could be moved in this Legislative Session and would advance the time schedule of Denali access considerably.**

- (2) A State's legislature has only a limited influence on federal land issues, as we in Alaska know from experience. A "new northern railroad route to Wonder Lake" was the ultimate finding endorsed by National Park System Advisory Board (NPSAB) in the final version of 1994 Denali Task Force (DTF) Report as Amended. The Amendment was written by the NPSAB itself after the DTF failed to recommend improved access into Denali. (Note: Pat Pourchot and Chip Dennerlein were respectively, Vice-Chairman and Member of the DTF in 1994). Since 1994, the finding for a new north access has been ignored by the Park management. Sadly, the NPS planning process has been tragically subverted by the environmental industry under the last national administration and is likely unable to make a plan that creates new access. NPS planners routinely consider 8 to 20 years as a planning period for the Park. The South Side Denali Plan which has been opposed by the residents of the area, proposed to take 15 years to implement. There is no effort to meet the immediate growth in visitor volume. The Park management concept in play is to reduce park access. No privately funded project can survive a 20 year time line for development.

  - **There is a logical and legal way for a Railroad / Utility Corridor to be created in Denali. The Secretary of the Interior can create rights-of-way in Conservation Units (Parks) under the Secretary's Management Authority. KHI petitioned Secretary Babbitt to create such a corridor based on the DTF Report finding in 1994. Secretary Babbitt supported rail access into Denali[3], but ultimately he failed to act. KHI is now re-submitting it's petition to Interior Secretary Gale Norton in order to re-ignite the process. A Letter of Support from Senate and House Transportation Chairs calling for creation of a rail corridor in Deanli, as recommended by the 1994 Denali Task Force Report to Secretary Norton would have a very strong impact on the process. A list of endorsements for the Denali Railway System Project is attached for your information and consideration.**

Needs:
At this writing, you are visiting with Alaska's Rep. Don Young, now Chair of the House Transportation Committee. Rep. Young is familiar with the DRS Project and as Chairman, has the opportunity to help turn a plan into a reality.

First. for any access project to be undertaken in Denali, the Secretary ot the Interior needs to halt the planning processes now underway and take all the time necessary to get a full understanding of the needs of the Denali from a non-environmental industry standpoint. This is critical, the Denali "Backcountry Management Plan" now out for public review and comment sets forth further restrictive proposals to close down Denali to the visiting public. There is no element of the "Backcountry Management Plan" that deals with more access, only less access, in all transportation modes. The plan does not even account for the $1.5 million in TEA-21 EIS funds and the $330,000 in SB-3 available for the north access route.

Action:
As a starting point. I suggest the following: That you recommend to Rep. Young, that he, you and if at all possible, Secretary Norton and other as may be appropriate be the guests of KHI this coming summer on a fact finding tour of the Denali Park Road and north access route. As soon as the Park road is open and all schedules permit.

The idea would be to travel the Park road (one way to Kantishna with a helicopter flight out to Healy) accompanied by qualified transportation engineers to get a first hand knowledge of the road and its current state of deterioration and, the safety hazards (lack of compliance with federal and state regulations etc.) it presents to the visiting public. The flight out of Kantishna would be over the north access route a' l provide the knowledge base necessary to pursue appropriate action.

Background:
"The Denali Railway System" is not a new proposal. KHI first proposed the railroad nearly a decade ago and has been in development ever since. The route KHI proposes is on both state and federal land and was first seriously considered after the Parks Highway opened in 1972 and the volume of visitors to Denali mushroomed.

Today, between a half million and 600,000 visitors come into the area of the Park entrance area each year. Due to the restrictive nature of the single dirt road servicing the park and the multi-layered somewhat antiquated bus system and tours, only about half of those arriving at the entrance make their way anywhere into the park. Only about 6,000 or a little over 1% of visitors actually make the journey to Wonder Lake to see the view of Mt. McKinley so often used as an Icon for Alaska (see photo attached). Denali is a vast park of 10,000 sq. mi. or, 6.4 million acres of which only about 5,000 acres is readily available to the average visitor in the 100 day season. The Park is not at its carrying capacity the park road is!

Early on, KHI's engineers determined the to be route technically feasible. Financial analysis concluded feasibility given the number of Denali visitors available in 1994. Since 1991, the Cruise Ship Industry has experienced a 180% increase in passenger volume. KHI envisions a rail-to-road and vice versa operation in the 100 day summer season and a rail operation only during the balance of the year. This creates both shoulder and winter season opportunities for the visitor industry operating in Alaska. The DRS Project will open a 265 day increase in the Alaska visitor season now producing $1.4 billion. Adjusting for the lower visitor volume in the off seasons and on the current seasonal occupancy rates in Anchorage, The DRS could be carrying 525,000 passengers per year. The volume already exists. The rail will take 1300 administrative vehicles events off the Park Road, allowing 50,000 more visitors into the Park.

KHI has reviewed the passenger projections in the NPS 1996 North Access Study and suggests that others consider the sources and assumptions and the need for the NPS to down play the visitor volume to oppose new north access. Also, it's appropriate for one to review the personnel make-up of the study team. The "usual suspects " were and are active participants.

Regarding development capital, KHI has letters of capital availability from the largest infrastructure financing institution in the America's, indicating their ability to fund a project of the size KHI proposes. As with all development financing, one of the first questions asked is: Do you have a right-of-way? The NPS and the environmental industry, with the help of some state personnel have been very successful in blocking access to Denali. It's time for a change in the process and for the development of a new north access to Denali.

I thank you for taking the time to read this lengthy document and I stand ready to answer any questions you might have. Most importantly, please understand, remedies exist for the deficiencies in Alaska's surface transportation infrastructure. The Denali Railway System is just one of them. However, it will take decisive action on the part of the legislature and great strength of purpose to make it come to fruition. The new national administration in Washington, D.C. presents long awaited opportunities for success in many areas and I hope you will consider joining with KHI in making the needs of Denali Park and Alaska known to them.

Best regards.

Joseph N. Fields III, President
Kantishna Holdings, Inc.
"The Denali Railway System"

Hard Copy Cc:
Representatives: Jeanette James; Vic Khoring
Senators: Gene Therriault; Gary Wilken; Jerry Ward; Robin Taylor; Pete Kelly
and Senate President Rick Halford

1. February 24th Anchorage Daily News

2. University of Alaska Land Bill Briefing Document - Dec. 14, 2000.

3. See Anchorage Daily News Banner Headline August 19, 1993

Nome, Alaska, to be owned by the authority, or may finance the project by other means available to the authority. The principal amount of the bonds and other financing provided by the authority may not exceed $30,000,000.

(c) The Alaska Industrial Development and Export Authority may issue bonds to finance the development of a railroad right-of-way within a railroad and utility corridor from near the village of Healy along the general alignment of the Stampede Trail to the eastern boundary of Denali National Park, or may finance this project by other means available to the authority. The principal amount of the bonds and other financing provided by the authority may not exceed $28,000,000.

(d) The Alaska Industrial Development and Export Authority may issue bonds to finance the construction and improvement of the Hatcher Pass Ski Resort, phase 1, located in the Matanuska-Susitna Borough, or may finance the project by other means available to the authority. The principal amount of the bonds and other financing provided by the authority may not exceed $15,000,000.

(e) Subsections (a) - (d) of this section constitute the legislative approvals as or if required by AS 44.88.095(g), as amended by sec. 3 of this Act.

* Sec. 25. RIGHT-OF-WAY FOR RAILROAD AND UTILITY CORRIDOR. (a) The Department of Natural Resources shall grant to the Alaska Industrial Development and Export Authority on the terms the department determines to be appropriate, and as may be more particularly described by the authority, a right-of-way comprised of the land described under (b) of this section for the purpose of financing a project under AS 44.88 to enable Kantishna Holdings, Inc. and its successors and assigns in interest, or Kantishna Holdings, Inc. or its successors and assigns in interest, to develop a railroad and utility corridor comprised of the land described under (b) of this section. The right-of-way grant to the authority may not impair current valid property rights within the land described under (b) of this section.

(b) The right-of-way grant to the authority under (a) of this section must run from near the village of Healy along the general alignment of the Stampede Trail to the eastern boundary of Denali National Park, and must proceed through the following cadastral units:

(1) Township 12 South, Range 7 West

Section 7;

(2) Township 12 South, Range 8 West

Sections 7, 11, 12, and 14 - 23;

(3) Township 12 South, Range 9 West

Sections 1 - 18, inclusive;

(4) Township 12 South, Range 10 West

Sections 1 - 18, inclusive;

(5) Township 12 South, Range 11 West

Sections 11, 15 - 22

Sections 27 - 30; N 1/2.

(c) The right-of-way developed for the project described under (a) of this be 300 feet in width plus any ancillary land necessary for the development.

(d) If the right-of-way developed for the project described under (a) uses less than all of the land contained in the right-of-way granted to the author of this section, the authority's right-of-way shall be modified to exclude the lan for the project.

(e) In this section, "authority" means the Alaska Industrial Developmen Authority.

* Sec. 26. Section 22 of this Act takes effect June 30, 1998.

* Sec. 27. Except as provided in sec. 26 of this Act, this Act takes effect Ju

ENDORSEMENTS FOR
THE DENALI RAILWAY SYSTEM©
AND
NORTHERN RAILROAD ACCESS INTO
DENALI NATIONAL PARK AND PRESERVE

- The Denali Borough - Resolution of Endorsement 93-02 - 2/14/93
- National Park System Advisory Board - Resolution 12/14/94
- The Alaska State House - HJR 28 - Legislative Resolve No. 19 - 2/08/94
- The Alaska State Senate - Resolution of Endorsement SJR 25 - 5/97
- The Alaska Legislature - CSHB 386 -Authorizes KHI Rail/Utility Corridor Signed 6/18/98
- The Fairbanks North Star Borough - Resolution No. 96-035 - 4/11/96
- The Matanuska - Susitna Borough - Resolution No. 96-027 - 6/4/96
- The City of Fairbanks - Resolution of Endorsement No. 3652 - 4/22/96
- The City of Nenana - Resolution of Endorsement No. 96-08 -4/11/96
- The City of North Pole - Resolution of Endorsement, N° 96-10, October 7th, 1996
- The City of Seward - Resolution No 96-053 - 4/22/96
- The Municipality of Anchorage, Resolution of Endorsement, N° 96-274, 11/7/96
- The Greater Fairbanks Chamber of Commerce - Resolution No. 96-0325.3 - 4/16/96
- Anchorage *Star of the North* Chamber of Commerce Resolution #98-99-9 - February 19, 1999
- The Fairbanks Convention and Visitors Bureau - Resolution of Endorsement 7/96
- The Anchorage Convention and Visitors Bureau - Resolution of Endorsement, 11/5/96
- The Citizen's Advisory Commission on Federal Areas - Res. of Endorsement 11/15/95
- The Alaska Visitors Association - Letter - 5/11/94
- The Fairbanks Building & Construction Trades Council AFL - CIO - Letter - 4/24/96
- The Alaska Miners Association - Letter - 7/7/95
- Access Alaska Inc.- Non-Profit Disability Access Advocates - Letter - 5/11/94
- Alaska Democratic Party - Resolution of Endorsement # 97-012 - 10/1/97
- The Alaska Railroad Corporation - Letter - 11/3/93
- The Associated General Contractors of Alaska - Letter - 1/19/96
- Gil Carmichael: Fmr. U.S. Railroad Administrator in: Progressive Railroading -6/95
- Dr. Bradford Washburn, Renowned Mt. McKinley Surveyor/Photographer - Letter -1/30/96
- Bi-partisan State Interior Legislative Delegation- Letter to Gov. Knowles Dec. 16, 1997

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