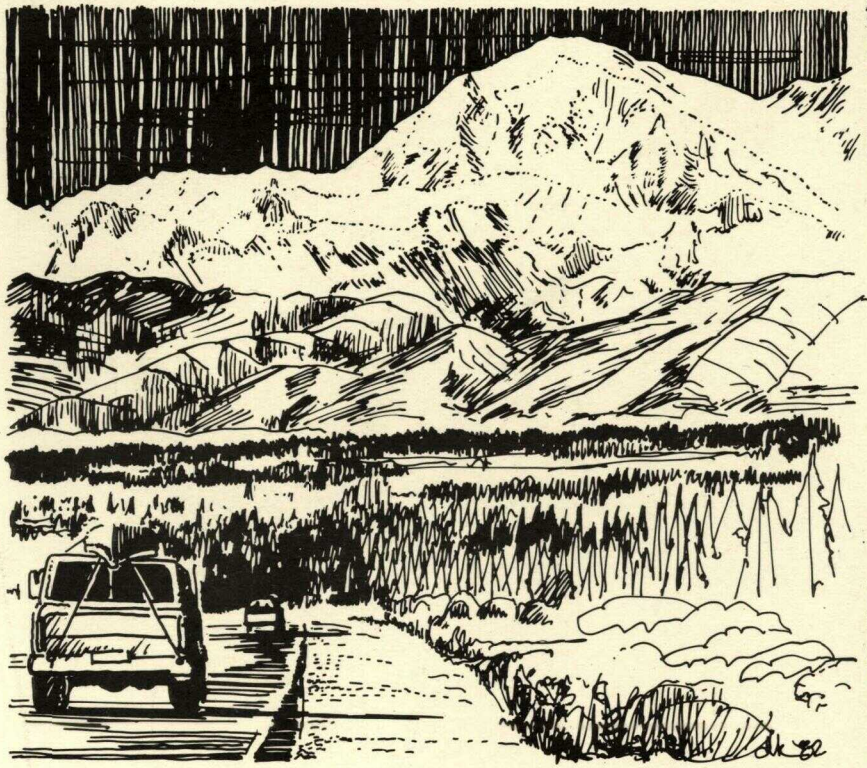
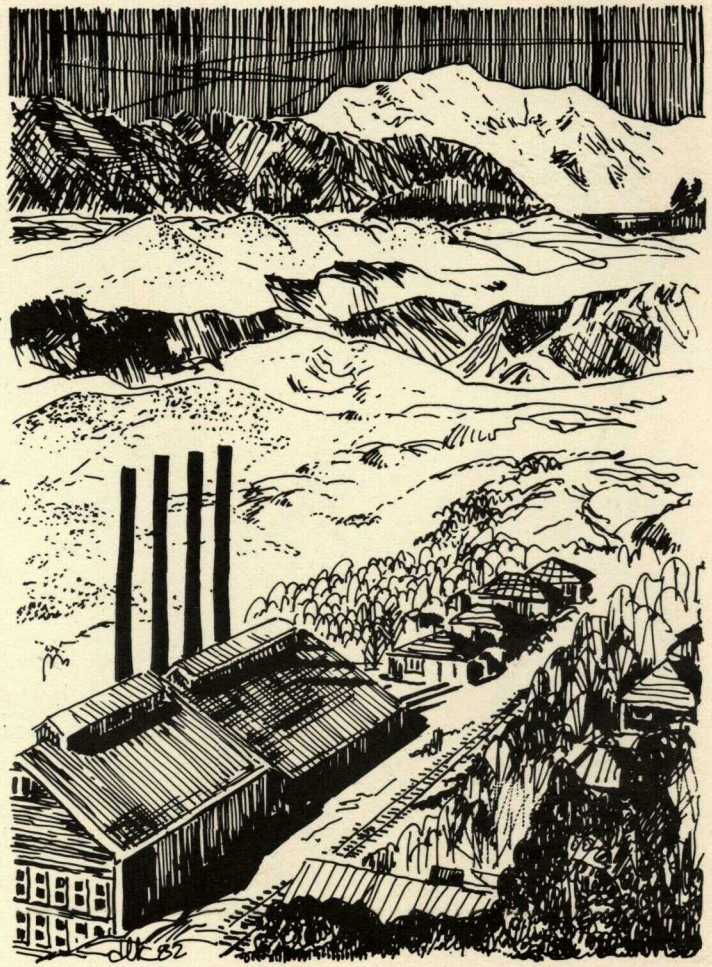
Denali to





Wrangell - St. Elias

Assessment and Management of Scenic Resources along the Highways between Denali and Wrangell - St. Elias National Parks

Denali to Wrangell - St. Elias

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Development Land & Resource
Planning Section
William Beaty, Section Chief

July, 1982

"This ain't no piano."

--A.F.K. 1980

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"All good planning must begin with a survey of the actual resources: the landscape, the people, the work-a-day activities in a community. Good planning does not begin with an abstract and arbitrary scheme that it seeks to impose on the community: it begins with a knowledge of existing conditions and opportunities."

Lewis Mumford
The City in History

"The less of our landscape there is to save, the better our chances of saving it. It is a shame we have to lose so much land to learn the less-lesson, but desecration does seem a prerequisite for action. People have to be outraged. Most of the new land-use legislation and pio - neering programs did not come about as the result of foresighted, thoughtful analysis. They came about because people got mad over something they could see. Some of the most significant legislation can be traced to a small local outrage - a line of trees being chopped down for a highway, a meadow being asphalted for a parking area."

William H. Whyte
The Last Landscape

Part One
Background Information

"There is one other asset of the Territory not yet enumerated, imponderable, and difficult to appraise, yet one of the chief assets of Alaska, if not the greatest. This is the scenery...its grandeur is more valuable than the gold or the fish or the timber, for it will never be exhausted...If you are old, go by all means; but if you are young, wait. The scenery of Alaska is much grander than anything else of the kind in the world, and it is not well to dull one's capacity for enjoyment by seeing the finest first."

--Henry Gannett, Member of the
Harriman Expedition to Alaska 1899

Introduction

This report describes scenic and recreational resource values and recommends how they should be managed along the 335 mile highway corridor between Denali and Wrangell-St. Elias national parks. The integration of scenic resource considerations into land planning and management decisions is a relatively recent occurrence. Before, visual resource values were viewed as too subjective to assess in a meaningful way, impossible to measure quantifiably and integrate with other resource values, too costly to inventory, and of considerably less importance than other resource information, such as commercial timber inventories, soil surveys, market demand analyses, etc. Finally, scenery was often considered to be unmanageable--the visible landscape included millions of acres of land with such a complex pattern of ownership and development interests that meaningful agreement and coordination appeared impossible.

These attitudes are changing. Public officials, land managers and the public at large are coming to recognize both the economic and more intangible values associated with maintaining the visual quality of the landscape around them, and they are taking action to protect these resources. In certain instances, such as this study, scenic and recreational resource values are considered to be of primary importance and require an in-depth assessment. Moreover, research into viewer preferences and systematic assessment techniques have taken much of the subjectivity out of scenic resource evaluations. This information can now be recorded in a variety of tabular and graphic ways to facilitate its comparison with other resource data. The existence of a wider range of inventory and analysis techniques along with the assistance of current technology (computer programs, photographic techniques, inexpensive graphic reproduction methods, etc.) contributes to greater precision and lower costs.

Finally, it has been demonstrated that scenery is manageable. Planning the location of visually objectionable land uses--such as landfills, gravel pits and mines--can take advantage of distance, landform and vegetation to reduce their visibility. Roadside maintenance activities and greenbelts can enhance the driving experience by framing views or retaining desirable vegetation. Sensitive road alignment can create an interesting driving experience and take advantage of special viewing opportunities. Design assistance can be given to private landowners so their land use practices and developments are in visual harmony with their surroundings.

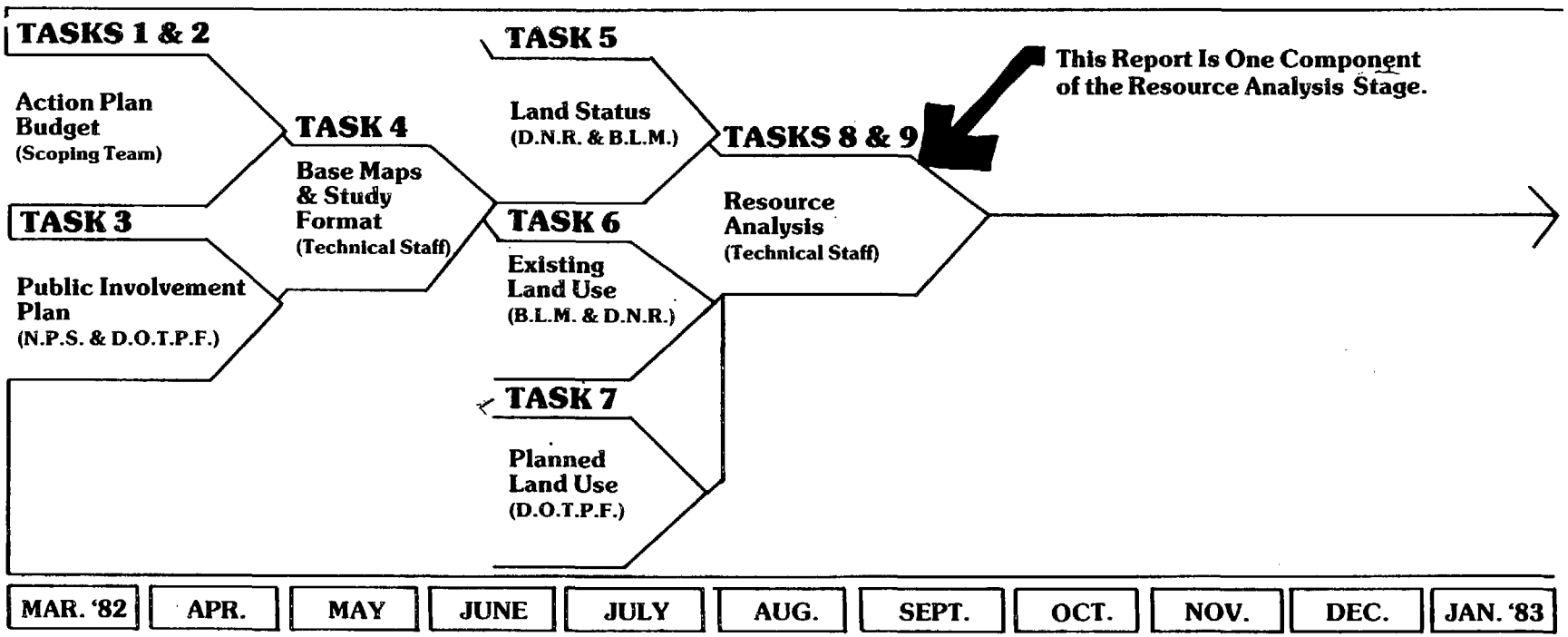
Scenic resource management is not a question of aesthetic considerations precluding other uses; rather it is a question of using or developing the land in manners that respect the existing scenic resource values. This requires some fore-thought in locating structures and land uses, selecting materials, determining the nature and extent of land clearing, defining the type of maintenance program, etc. This report outlines a range of management tools and recommended practices which retain, restore and enhance roadside scenic resource values for some of Alaska's most visually dramatic landscapes, while at the same time respecting the need for use and development.

Study Context

Section 1311 of Public Law 96-487, the Alaska National Interest Lands Conservation Act (ANILCA), states that all public lands within one mile of either side of the center line of the Parks Highway from the entrance to Denali National Park to the Talkeetna junction, the Denali Highway between Cantwell and Paxson, the Richardson and Edgerton highways between Paxson and Chitina, and the existing road between Chitina and McCarthy shall be withdrawn from all forms of entry and appropriation. This legislation goes on to require that a study be conducted by the Secretary of Transportation, National Park Service, Bureau of Land Management, State of Alaska and affected regional Native corporations to:

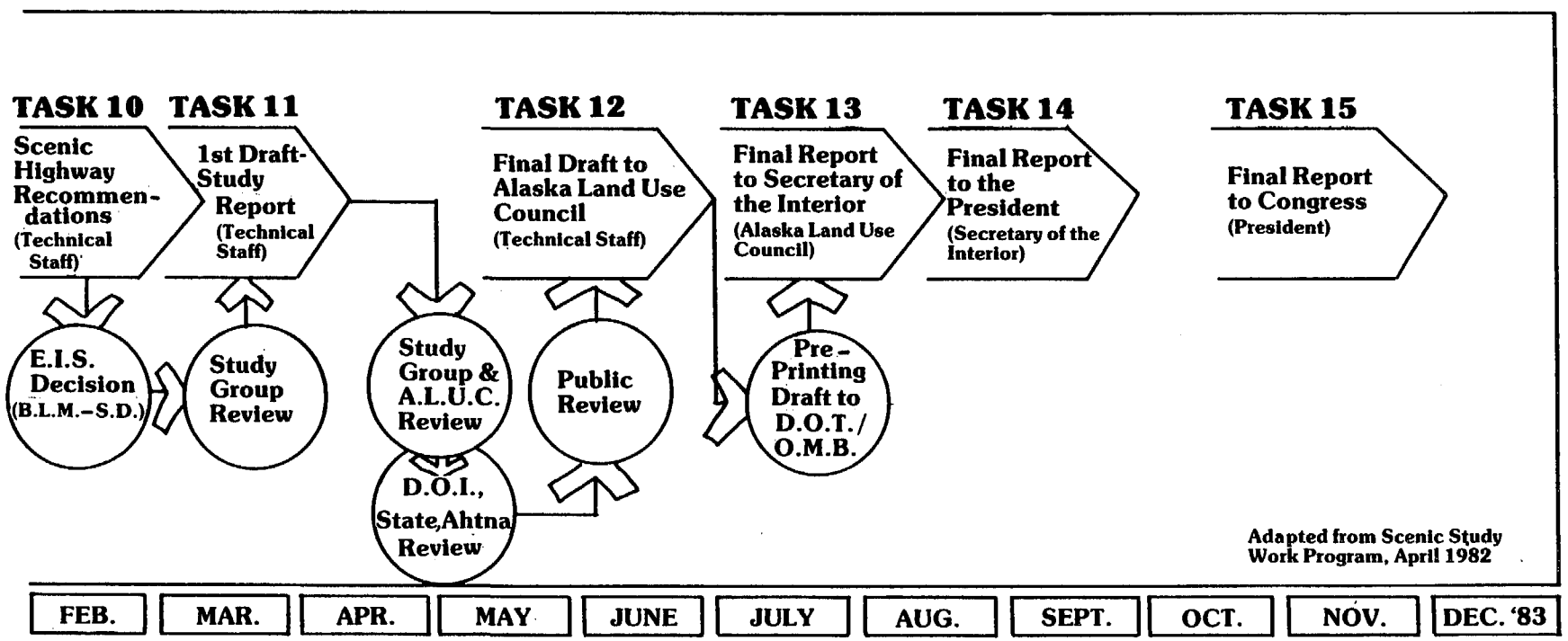
"Consider the scenic and recreational values of the lands withdrawn under this Section, the importance of providing protection to those values, the desirability of providing a symbolic and actual physical connection between the national parks in Southcentral Alaska and the desirability of enhancing the experience of persons traveling between the parks by motor vehicles."

In response to this legislative mandate, interagency federal, state and Native corporation study teams and review committees have been formed and tasks identified (see diagram below). This report relates specifically to tasks 8 and 9, Resource Analysis. It provides the basic assessment of scenic and recreational resource values along



the four roads as well as an outline of recommended management responses. The study teams will evaluate this information along with information pertaining to other resource values, management concerns and public and private interests to prepare a final set of recommendations which respond specifically to the questions outlined in the legislation as well as recommendations for appropriate land use and resource development policies, plans and implementation actions.

In addition to this federal directive, this report and scenic resource inventory is an extension of an interest and commitment on the part of the State Department of Natural Resources to the inclusion of scenic and recreational resource values in its land planning and management efforts. It follows and complements similar inventories prepared for the Parks Highway between Anchorage and Fairbanks and the road into Haines.



Scenic Resource Assessment Methodology

A team composed of landscape architects and resource planners was assembled to execute this study. Approximately five weeks were spent in the field for on-site evaluation of the scenic and recreational resources and assessment of conditions which influence these values and the appropriate management responses. The methodology employed was based upon an inventory system developed for the Parks Highway between Anchorage and Fairbanks. An overview of the study methodology and a discussion of some of the important guiding concepts and assumptions follow. Sample field inventory sheets for one assessment unit are included on pages 6 and 7. A more detailed description of the inventory process and criteria, and a complete set of the original field inventory worksheets and supporting color slides and black and white photographs are on file at the BLM Alaska Resources Library in Anchorage.

• Viewer Expectations and Concerns

Each person traveling in the study corridor has an individual motivation for the journey coupled with their own personal expectations and concerns. Some people live near the road and are intimately familiar with a portion of it. Some people use it frequently for their work; others may only travel it once during their lifetime during a carefully planned vacation. As a means of assessing the scenic resources and determining the appropriateness of the corridor for a special scenic highway designation, this study looked at the road primarily through the eyes of the traveler using the road for recreation purposes. Such travelers usually expect to see and experience a wild landscape, preferring views of high mountains, glaciers, pristine lakes and rivers and the opportunity to see wildlife. They enjoy a diversity of settings and experiences and demonstrate a dislike for seeing extensive development associated with urbanization and population concentrations. This does not mean such viewers would find all development visually undesirable. On the contrary, most travelers welcome a view of interesting and unique human uses--such as the Trans-Alaska Pipeline, a homestead, native community or roadhouse--especially where the uses are a highlight in an otherwise long stretch of natural, undisturbed landscape, such as along the Denali Highway. To the extent possible, this resource evaluation was done from this perspective.

• Viewer Point of View

Scenic resource values discussed here are based upon the "view from the road," or the perception of the landscape while traveling in a moving vehicle. Travel in both directions was considered. The evaluation not only covered the views or what is seen, it also attempted to include an assessment of the experience of traveling through the landscape. Other factors considered include the sequence of views, the changing position of the viewer, and the diversity of spatial experiences. In certain instances--such as at some turnouts and around high use recreation sites adjacent to the road--the analysis was done from the perspective of someone standing or walking around the area rather than from inside a moving vehicle.

- **Integration with Other Resource Values and Concerns**

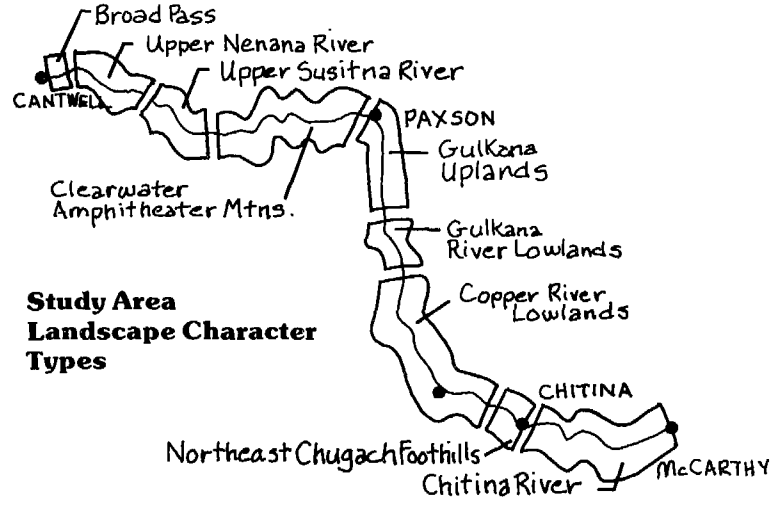
This report focuses on the assessment and management of scenic resources and roadside recreational uses. It is assumed that these considerations are of primary importance for the areas under study. However, final management decisions must balance these resources with other values, human uses and concerns. While the recommendations contained in this report attempt to accommodate other developments and uses, they may require some additional thought and possible modification to balance them with other resource demands. This is the responsibility of the planning team which has access to more informations and more time as well as the responsibility for preparing plans, policies and implementation strategies representing all interests and concerns.

- **Focus of Management Area Recommendations**

The field inventory and management recommendations focus on the foreground--that portion of the seen area closest to the viewer. It is the foreground which is generally the most critical to the quality of the viewing experience. Foreground areas can create spaces, define views and screen visually undesirable features and areas. Foreground lands create variety and visual change in the perception of the landscape from a moving car, more so than the less dynamic middleground and background which appear to remain stationary and exhibit only gradual changes. It is the foreground areas which most often invite the viewer to stop, rest and participate in the environment. And, foreground lands can either "make or break" a view. For example, most people would prefer a panoramic vista of Mt. McKinley or the Copper River framed by a quiet lake, trees and a cabin, rather than one dominated by an open gravel pit or a jumbled array of signs, parking lots and commerical establishments. Finally, by concentrating on the foreground lands, land managers can concentrate on the small but most important portion of the thousands of acres that are visible from within the highway corridor.

- **Landscape Character Types**

The study area is divided into visual Landscape Character Types. A character type is an area of land that has common distinguishing visual characteristics of landform, rock formations, waterforms, and vegetation patterns. Based primarily on physiographic and vegetative divisions, character types are used as a frame of reference to classify specific highway stretches according to their visual qualities. The study area between Cantwell and McCarthy traverses nine landscape character types ranging in length from a minimum of nine to over 65 miles. (Note accompanying map.)



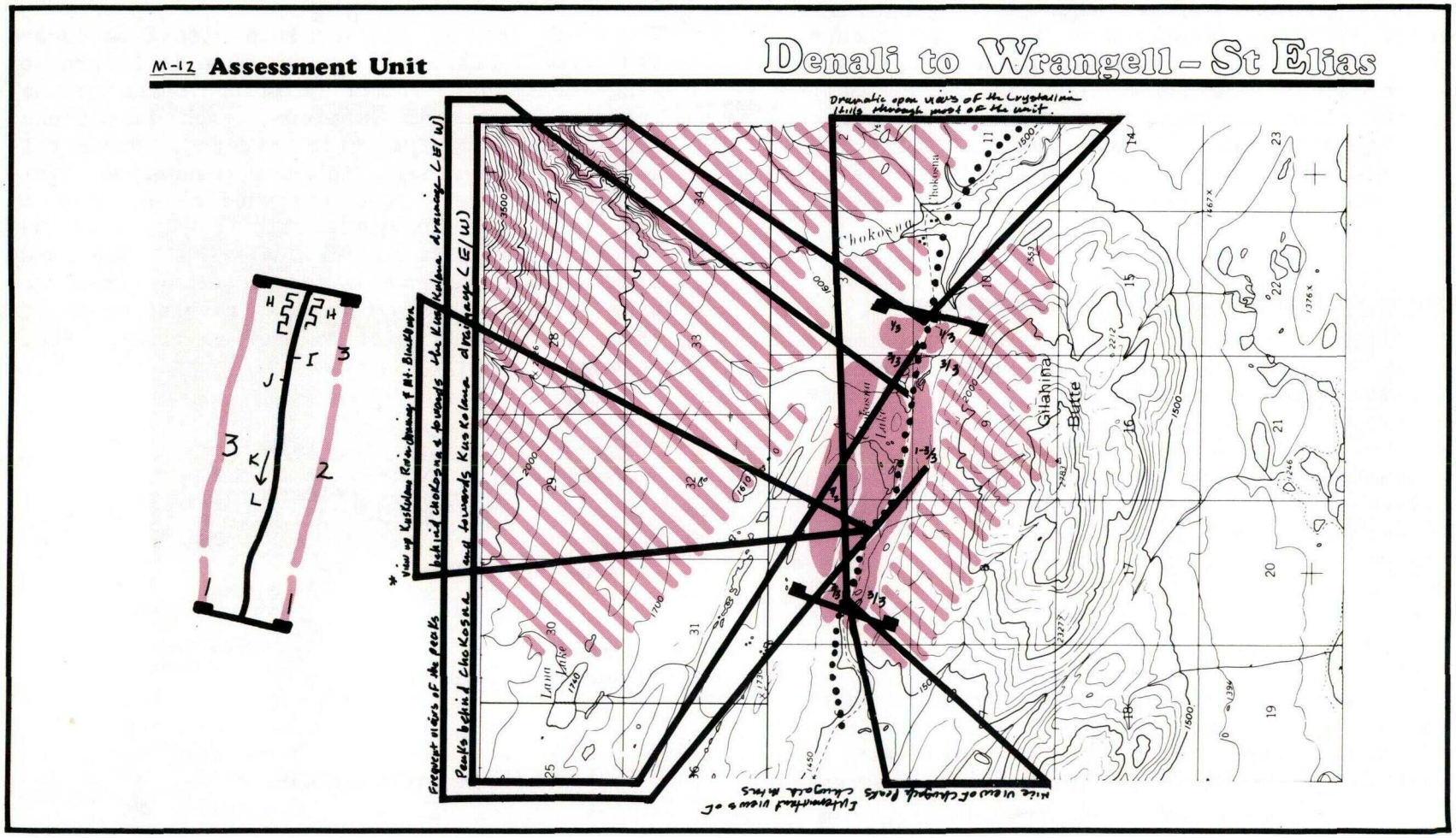
Study Area Landscape Character Types

• Assessment Units

The landscape character types are further divided into Assessment Units. An assessment unit is a small highway section, commonly two to three miles long, that has distinct visual characteristics. It was used as the basic field analysis unit. For example, between Cantwell and Chitina there are 153 assessment units, with another 29 along the Chitina to McCarthy road.

• Intrinsic Visual Quality

Each assessment unit is evaluated for its Intrinsic Visual Quality. Intrinsic visual quality is defined as the degree of expression exhibited by a landscape through the interplay of its various components or elements: the landscape's ability to create visually distinctive and pleasing patterns of form, line, color, and texture. An underlying assumption is that



diversity plays a major role in creating visually distinctive landscape experiences. Thus, those landscapes exhibiting greater variety in their combination of natural elements (land-sky interface, landform, landcover and waterform) generally have a higher intrinsic visual quality. These elements are evaluated from predetermined criteria for each landscape character type. Other factors used to determine the intrinsic visual quality of an assessment unit include surprise, anticipation, sequential diversity, and views. To the extent possible, the intrinic visual quality is evaluated as if the landscape were in its natural state.

• Land Use and Development

Human activities visible from the road are inventoried with respect to location, intensity and visual impact. These include residential,

Scenic Resource Inventory

character type Chitina River date 6/20/82
unit description through generally open, level to gently sloping weather partly cloudy
poorly drained with large and smaller lakes and marshlands right-of-way width
land ownership adjacent to road
issues Road realignment (DOT 1973 realignment closely follows existing alignment except near ends of the assessment unit. recorded by kuklok/heikkala

intrinsic visual quality

	east/south left	east/south rating	east/south right	west/north left	west/north rating	west/north right
land-sky interface		3			2	
landform		3			2	
landcover		3			3	
waterform		3			3	
surprise	D	3			3	A
anticipation		0			3	B
sequential diversity		3			3	
point of view-forward		E			E	
point of view-lateral	E		E	E		E
spatial expression		V			V	
lateral views	E	3	F	C	4	C
unique natural visual elements	D	1			1	D
intrinsic visual quality		22			24	

land use & development

	east/south back	middle	fore	left	rating	right	fore	middle	back
residential									
commercial-institutional									
recreational									
industrial									
historical/cultural sites									
management activities									
visual clutter									
other man-made visual elements									
total					0				

roadway characteristics

	east/south left	rating	right
right-of-way management	0-10'	0	0-10'
road design impact		0	9
signage & structures		0	
total		0	

overall visual quality rating 22.5

notes & observations

A. View of "first" lake heading west and Mountains around Kuskulana River
B. Filtered views which gradually prepare viewer for very nice view of Chokosna Lake
C. Small and large lakes
D. Mt Blackburn and high wrangells through Kuskulana River valley
E. Continuous lateral views across lakes towards distant mountains to north - including Mt. Blackburn
F. Small lake
G. Road along long tangents which do not reflect landforms or water features.

Looking east across marsh

management concepts

greenbelts/screening traveling west, At K a very nice sequence occurs where very brief filtered views of the lake change to views of longer duration until finally it is visible and a nice view back. This sequence should continue.
right-of-way management At "H" and other areas within this unit clearing of road edge brush (predominantly willow) could open up views and blend in roadside edge better into the landscape. At "I" selective clearing could open up better views towards small lake.
turnouts / rest areas At "J", surprised to see lake as come around turn. Good place for waterfowl observation, though poor soil conditions mean any turnout would have to be on fill. Any road widening should be to the south side of road to avoid further encroachment on the wetlands.

reclamation / mitigation concepts At "L" a very good scenic turnout site with excellent views across the lake and towards Mt Blackburn and the higher Wrangells. Visibility of site is good, and there is enough high ground for a small turnout development, though not a lot of space for extensive facilities development.
issue responses The primary visual impact of realignment proposals within this assessment unit would result from the design and maintenance of the road itself. More study as to actual vertical alignment is necessary to know how much higher than the surrounding wetland lakes and marshes the road will be. Existing road is low, and narrow and visually subordinate to the surrounding landscape even though it follows a nearly straight alignment. Any road work within this area should strive to provide visual access to the lakes and open lowlands without encroaching upon them.

Unit M-12

intrinsic visual quality

	traveling east	traveling west
land-sky interface		
landform		
landcover		
waterform		
surprise		
anticipation	depends on extent of road widening and co.w maintenance	
sequential diversity		
lateral views		
unique natural visual elements		
Overall change in intrinsic visual quality rating		

land use & development

0	residential
0	commercial-institutional
0	recreational
0	industrial
0	historical/cultural sites
0	management activities
0	visual clutter
0	other man-made visual elements

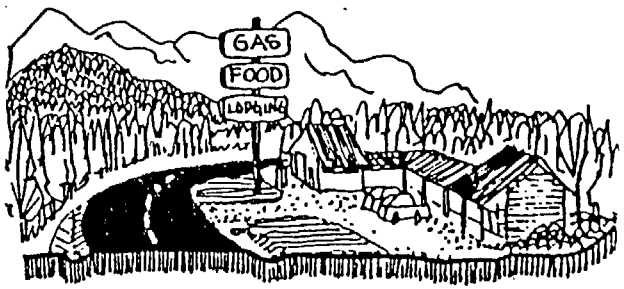
roadway characteristics

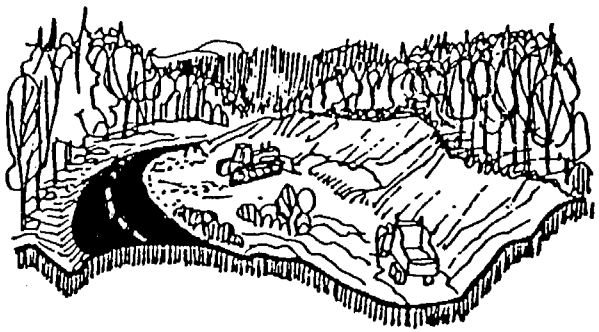
+/-	right-of-way management depends on D.O.T. policy and field maintenance practice
-	road design impact Road widening and alignment would come closer to Chokosna Lake - make visibility of road itself greater
0	signage & structures

McCarthy road realignment

2	total higher ratings
3	total lower ratings
23	total no-change ratings
0	total "need further study" ratings

visual quality ratings





commercial, institutional and industrial developments as well as recreational land use and land management activities such as timber harvesting, mining and material site development. Unique man-made visual elements (historical and cultural sites) are also assessed, as is the visibility of trash, junked vehicles, signs, or other visual clutter.

- **Roadway Characteristics**

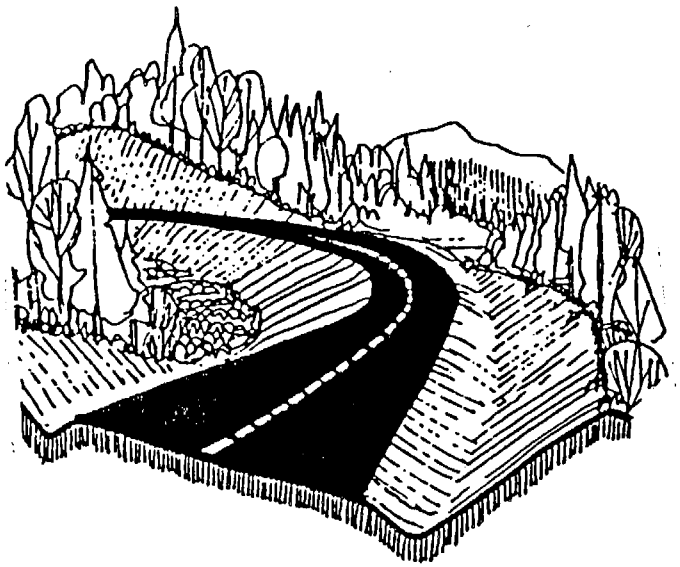
For the roadway characteristics evaluation, the affect of the immediate highway right-of-way area on the visual experience is assessed. Three factors are considered: right-of-way management, visual impacts of the road's design and highway signs and other structures within the right-of-way.

- **Overall Visual Quality Rating**

The overall visual quality rating is a measure of the assessment unit's existing visual quality. It is the numerical sum of the assessment unit's intrinsic visual quality, the land use and development impacts and the roadway characteristics impacts. It is a relative rating, used for comparison with the overall visual quality ratings for other assessment units.

- **Ownership, Issues and Right-of-Way Width**

It is important to be aware of the land ownership patterns immediately adjacent to the road, the width of the highway right-of-way, and any specific issues and concerns associated with the assessment unit under consideration. Consequently this information is researched and recorded on inventory sheets prior to the actual



field work. This helps to insure that on-site observations focus on conditions related to specific managment issues and that preliminary recommendations respond to particular ownership responsibilities. Since the greatest potential for consistent scenic resource management practices over long distances is within the right-of-way, it is important that this factor be clearly understood.

- **Management Concepts**

The field observations and ratings are translated into specific recommendations that employ a variety of land management concepts to preserve or enhance identified scenic resource values. Consequently, appropriate management concepts based upon observations of actual site conditions are identified for each assessment unit. These are divided into five categories: greenbelts and screening immediately beyond the right-of-way, management within the right-of-way, potential for development of turnouts and rest areas, landscape reclamation of severely disturbed sites visible from the roadway, and potential responses to identified issues.

- **Site Specific Observations**

Many factors related to a scenic resource inventory and final management guidelines are best recorded and communicated on maps. These include a depiction of the seen area or viewshed from within the assessment unit, the location and description of distant views and the ability of different portions of the seen area to accommodate modification (visual absorption capability) based upon the vegetation screening potential and the slope of the land with respect to the viewer (visual magitude). Maps are also used to show the location and boundaries of assessment units and the location of potentially significant sites for scenic resource management considerations (material sites, existing turnouts etc.).

Finally, the location of variable management concepts such as differing greenbelt widths and variable right-of-way management strategies are recorded on the unit maps.

- **McCarthy Road Realignment**

One particular issue related to this study is the potential realignment of the Chitina to McCarthy road. Presently, the road follows the old railroad alignment and is under consideration for upgrading and possible realignment to better accommodate vehicular traffic. An assessment of potential changes in visual quality ratings (intrinsic visual quality, land use and development, roadway characteristics) comparing the existing alignment with the proposed realignments was completed. This analysis suggested which alignments would be preferred from a scenic quality perspective.

Definitions

The following are definitions of technical terms which may be unfamiliar to the reader or are needed to clarify the ways that sometimes ambiguous terms are used in this report.

Background: Background commonly refers to that portion of the seen area which is most distant from the viewer. Technically the background is considered to be the area which is more than 3 to 5 miles from the viewer.

Distance Zones: A seen area, or view, is commonly divided into three distance zones to assist in its description and evaluation. These three distance zones are the foreground, middleground and background.

Foreground: The foreground is that portion of the seen area which is nearest the viewer. It is considered to include visible lands and features up to 1/4 or 1/2 mile from the viewer.

Greenbelt: A greenbelt is a management tool for lands beyond the road right-of-way. Greenbelts are usually considered to be relatively narrow, linear management strips following landscape features such as roads, rivers and power lines, or as edge treatments around parks, and between potentially conflicting uses. Greenbelts are often left in an undisturbed or "natural" condition. This study, however, uses a broader concept of a greenbelt. The actual width, character, maintenance and management responsibility of a given greenbelt area is variable and dependent on desired objectives, site conditions and adjacent management activities and land uses. Thus greenbelt widths vary from as narrow as 25 feet to over 100 feet. In some, selective vegetation clearing or land use is allowed and/or encouraged, while in others it is not recommended.

Impact: An "impact" is the effect that some visible element would have on the viewer. Visual impacts may be positive or negative. Thus, for example, an abandoned material site immediately adjacent to the road could have a negative impact on most viewers if it is visually prominant and incongruous with the forms, textures and patterns of the surrounding lands. A small, neatly maintained cabin nestled amongst the trees would, on the other hand, usually have a positive impact on most viewers.

Impact Mitigation: Impact mitigation refers to measures used to reduce negative visual impacts associated with land uses and developments. These measures fall into four classes: Removal of the structure or visually objectionable feature from view. Screening the visually objectionable use, feature or structure from view. Reclamation of the site so that a new use which is more sensitive to visual objectives is found or modification of the landform and/or vegetation take place to make the area more visually compatible with the surrounding landscape. Design actions are taken to make the site or development visually more attractive and in greater harmony with the surrounding landscape.

Information Turnout: These are places along the road where travelers can stop and obtain information related to road conditions, services and recreational opportunities. This report recommends information turnouts be located at highway junctions.

Middleground: Middleground refers to that portion of the seen area between the foreground and background. The middleground is commonly considered to extend from 1/4 to 1/2 mile from the viewer to 3 to 5 miles.

Reclamation: Reclamation refers to measures taken to restore a used or disturbed land area to its previous natural condition or to find a new use for the area which is more compatible with surrounding land uses and has a less adverse visual impact.

Rest Area: A rest area is a place along the road where travelers can rest from some of the rigors of vehicular travel as well as meet personal needs for eating, relieving oneself, napping, and exercising. Rest areas are primarily short term use areas in close proximity to the road. Longer term uses -- such as camping, hiking, fishing and picnicking -- should be located at sites more removed from the noise, dust and visual disturbance associated with the road. This study further considers rest areas as places where travelers should have the opportunity to experience and understand the surrounding landscape by siting such areas in places which clearly display the general character of the region and providing information signs, interpretive displays, trails, etc.

Right-of-Way: As used in this study, the right-of-way refers to the road surface and the land beyond its edge which are under public ownership and are managed by the Department of Transportation and Public Facilities (DOTPF). Right-of-way widths are typically 150 feet beyond the centerline of each side of the road. Narrower widths are often found where roads pass through private lands patented prior to statehood.

Scenic Highway: While there is no one nationally accepted or adopted definition of a "scenic highway," in 1964 the U.S. Department of Commerce defined a scenic route in very basic terms as "...having roadsides traversing areas of relatively high aesthetic or cultural value." A list of inventory criteria was attached and later updated in 1974. More specific attributes of a scenic highway found in these criteria or commonly used in other definitions include: the route provides an appreciation and understanding of the natural landscape, history, geology, and human land use; the visual experience offers diversity; the route is primarily for pleasure travel, not commercial or through traffic; it provides accommodations for picnicking, parking, walking, or camping; it limits or avoids undesirable commercial development at the immediate roadside; and it provides access to or between other points of scenic and recreational interest. Approximately 10 states manage their own scenic highway systems, and some provide for locally managed systems.

Scenic Resource Management: This refers to management policies and actions which, based upon clearly stated and adopted goals and objectives, employ appropriate tools to retain, enhance and/or restore the view and experience of a portion of the landscape. Tools recommended here consist of right-of-way and view management, greenbelts, turnouts, impact mitigation (reclamation, screening, etc.) and road alignment and design. Scenic resource management actions recommended in this report focus on the foreground distance zone, particularly those areas

within and immediately adjacent to the road right-of-way.

Seen Area (See Viewshed)

Turnout: A turnout is a place along the road where travelers can stop briefly. Turnouts typically have limited development consisting of no more than a widening of the road and possibly a locational sign, litter barrel or informational sign. They serve a variety of purposes, including taking photographs, pondering views, reading interpretive information, changing drivers, passing and turning around, depositing litter, etc.

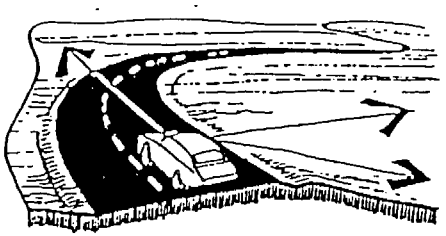
Vegetation Screening Potential: The vegetation screening potential is the rating of the landcover's ability (trees, shrubs, grasses) to screen or soften the visual impact of land development and resource use. A dense stand of white spruce trees would be considered to have a high vegetation screening potential while an open bog with low shrubs and scattered black spruce trees would have a low vegetation screening potential.

View Management: View management refers to those actions taken to preserve, enhance or restore a particular view. These typically include selective clearing, selective pruning and tree and shrub planting.

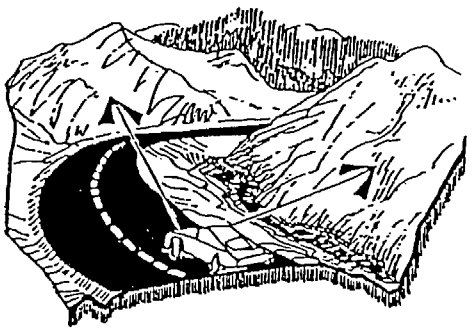
Viewshed: A viewshed or seen area is a means of describing all lands and features visible from a particular viewpoint or location. Viewsheds may be depicted on maps and can be derived from onsite observation or through special graphic techniques. Computers are being used more and more today to map viewsheds.

Visual Absorption Capability: This is a rating of a given land area's ability to minimize the visibility of land development and/or resource use activities. A visual absorption capability rating is a function of two factors: the density and character of the vegetation (see Vegetation Screening Potential) and the slope of the land with respect to the position of the viewer (see Visual Magnitude).

Visual Magnitude: Visual magnitude refers to the slope of the land with respect to the position of the viewer. It is used in conjunction with the vegetation screening potential rating to determine an overall visual absorption capability. An area which is nearly perpendicular to the viewer's line of sight, such as a steep hillside, would have a high visual magnitude rating. Such a rating indicates that anything placed within that area would probably be highly visible and difficult to screen from view. Similarly an area would have a low visual magnitude if the visible landscape surface were parallel to or sloping away from the viewer's line of sight. Such lands provide greater opportunities for minimizing the visibility of structures and uses.



Low Visual Magnitude



High Visual Magnitude

Part Two
Findings and Recommendations

Study Area

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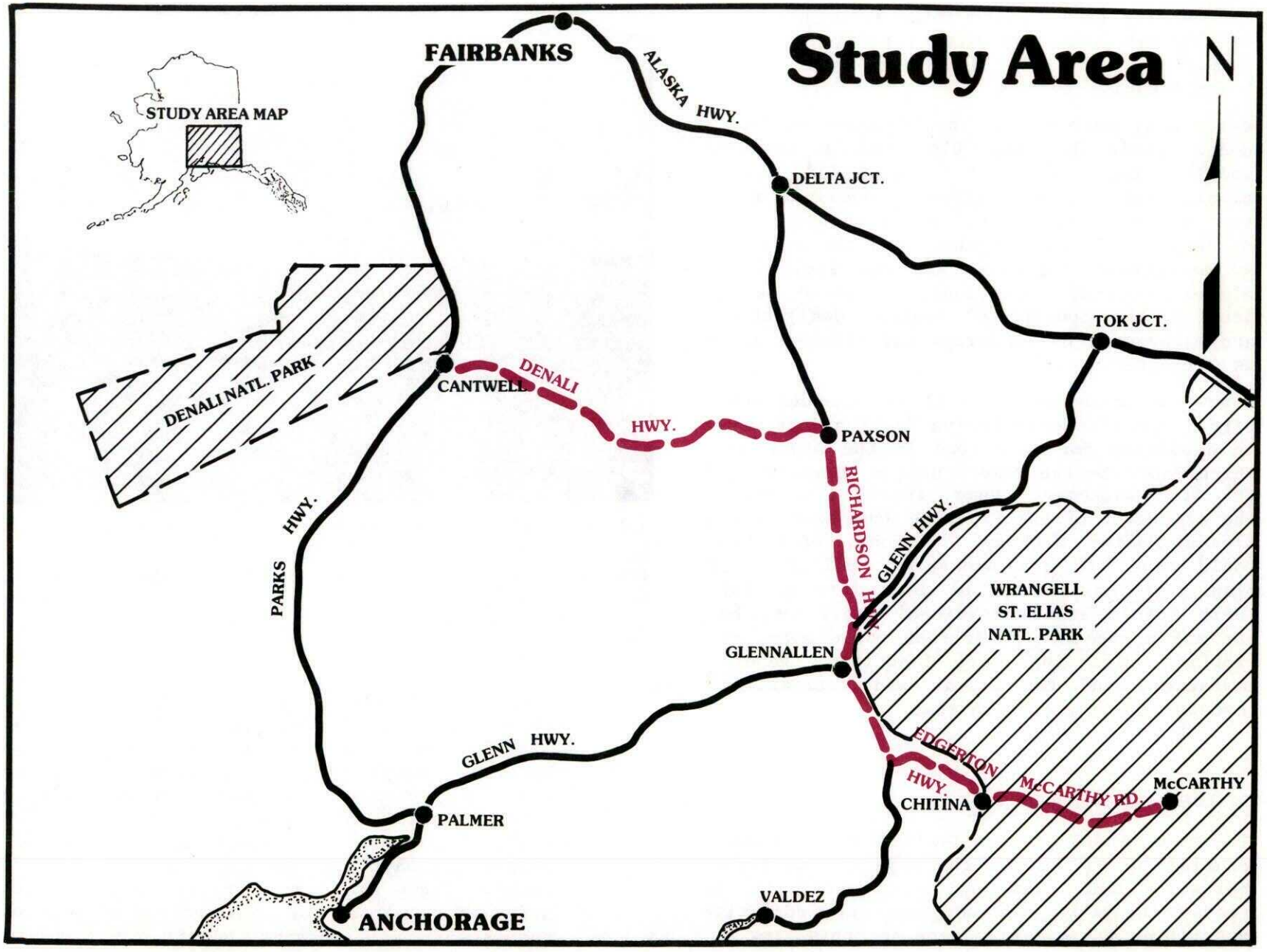
Overview

The findings and recommendations of this study are presented at four levels of specificty or detail. First, the overall findings and recommendations address issues of overriding importance that are common to the entire study area. Next are those recommendations which relate to each of the four individual highways and roads within the study area - the Denali, central Richardson, and Edgerton highways and the McCarthy Road. Each of these highways is divided into visual resource management units, or road segments, which have similar scenic resource characteristics and, therefore, call for similar management responses. These units comprise the third level. Finally, there are the individual assessment units - those short (approximately two mile long) stretches of road which are the foundation of the field inventory and observations and the more general recommendations and findings. Part one of this report described the study methodology and presented an example of a field inventory sheet. A complete set of the field assessment sheets is on file at the BLM Alaska Resources Library in Anchorage.

The study area findings and recommendations discuss the desireability of designating all or part of the Denali to Wrangell-St. Elias route as a scenic highway or recreational corridor. In addition, the section describes the management program, a recommended highway rest area system and a system of roadway information turnouts, as well as summarizes the responsibilities, policy changes, and actions required of various land managers and owners in order to implement the recommendations outlined here.

Denali to Wrangell - St. Elias National Park Scenic and Recreation Corridor Designation

This study was prefaced on the question of whether or not the scenic and recreation resources along the corridor between Denali and Wrangell-St. Elias National Parks deserve special protection and/or official designation as a symbolic link between the parks. The results of the scenic resource inventory and management recommendations indicate that no formal linkage or corridor should be established. This conclusion is based on several study findings. First, few people use, or are likely to use, this corridor as the exclusive route between the parks; travel via the Parks and the Glenn highways will probably be just as common. Moreover, it is unlikely that large numbers of people will visit both parks in one trip. Instead most will travel only on several segments of this corridor at any one time, taking other roads to go to their final destination. Finally, formally designating this as a "scenic" or "recreational" corridor would suggest - inappropriately - that other equally scenic routes should be given less attention. Since Alaska's existing road system is so limited, it is more


Study Area
N
STUDY AREA MAP
FAIRBANKS
ALASKA HWY.
DELTA JCT.
TOK JCT.
DENALI NATL. PARK
CANTWELL
DENALI
HWY.
PAXSON
RICHARDSON HWY.
GLENN HWY.
PARKS HWY.
WRANGELL
ST. ELIAS
NATL. PARK
GLENNALLEN
EDGERTON
HWY.
McCARTHY RD.
McCARTHY
CHITINA
GLENN HWY.
PALMER
VALDEZ
ANCHORAGE

appropriate to call attention to each highway or road in a manner that reflects its use, character, and relationship to the overall transportation system.

While many portions of the highways and roads under study do have high scenic resource values, they are not recommended for a traditional "scenic highways" designation by the federal or state governments. The descriptor, "scenic highway" and the associated management responses are too limited for Alaska's unique conditions. Instead, a new look at the concept of special designations and management of roadsides and adjacent lands is warranted.

A new two-prong approach is recommended here. First, specific descriptive designations would be developed for each road in the study area which describe the road's unique character and set its management theme, somewhat following the precedent of the Pipeline Haul Road or the Alaska Marine Highway. Second, each road would have its own management policies and plan. All roads would be managed to maintain their scenic and recreational qualities, but use and management guidelines would vary, reflecting differing road functions, general character, and the scenic and recreational resource quality of each road.

- Descriptive Designations

The recommended descriptive designations would consist of two parts: the type of the transportation link based upon its position in the road hierarchy and a name or adjective describing the overall theme for this link.

A relatively straight alignment, paved bed and graded shoulders allow faster, high volume travel and give this section of the Richardson its "highway" character.

Presently, Alaska's road hierarchy consists of three levels: "highways, "roads", and "trails", of which the first two are important here. Highways are multi-purpose, paved, modern, all-weather transportation and supply routes linking major population centers. The Parks, Richardson, and Glenn are appropriately called highways. Roads constitute the second level. These are transportation routes which are used primarily for local access or special purposes such as logging, mining, or pipeline

roads. They may be unpaved, often see only seasonal use, and are not as intensively maintained or frequently upgraded as are highways. Grades, alignments, and surfacing standards are designed for slower paced travel. This term can be appropriately applied to the Denali, McCarthy, and the Edgerton. In certain instances, trails can be added as a third level of special use which receive limited maintenance and are typically used only by special vehicles.

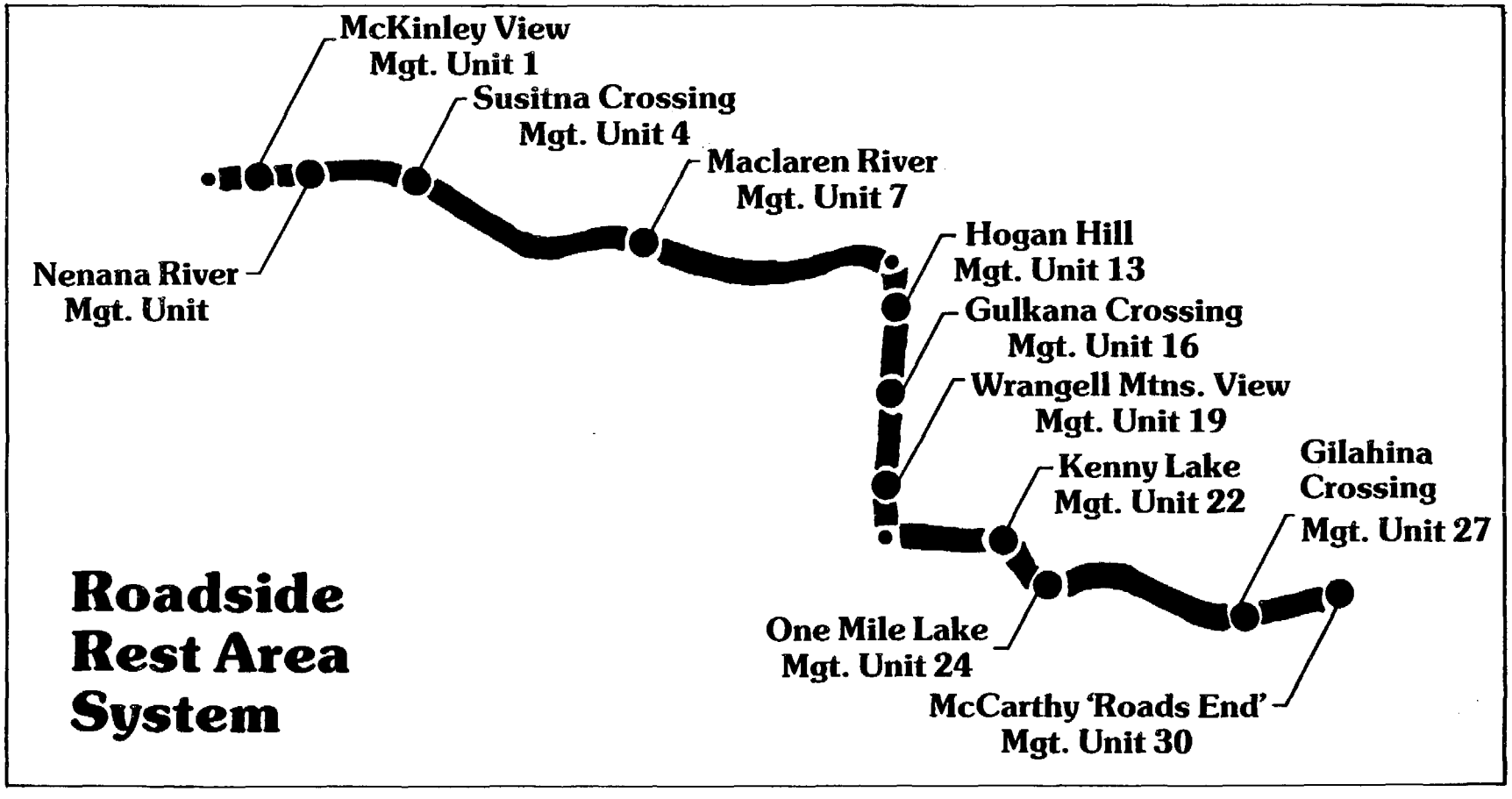
For the second part of each highway designation, names or appropriate adjectives describing the transportation link need to be identified and used. Wherever possible these should include commonly accepted names and words that capture the essence of the road. Thus the Richardson Highway and Edgerton Road should continue to be used for these routes. It is recommended that the Denali Highway be changed to Denali Wild and Scenic Road to better describe its character, and the road between Chitina and McCarthy should be designated the McCarthy Wild and Historic Road. These are more accurate descriptors and establish the theme for the existing and desired character of the roads.

This study recommends that the State take action to officially name the roads in the study area as the Denali Wild and Scenic Road, the Richardson Highway, the Edgerton Road, and the McCarthy Wild and Historic Road. These designations, coupled with the design and management programs specific to the theme of each road, should become the guide for all future land and development decisions along each road and would be used by all land managers. It is also recommended that the State develop appropriate nomenclature and management themes for all other Alaskan roads and highways.

Although this study does not recommend a formal scenic corridor status for the four roads, the scenic resources along both the Denali Wild and Scenic Road and the McCarthy Wild and Historic Road have national significance. Therefore, they merit further study to determine if federal scenic designation and management of just these two roads is necessary or appropriate to protect their unique qualities.

- **Road Design and Management Programs**

Separate management programs would be tailored to the character of each road. Current road maintenance practices in Alaska are generally guided by needs for public safety, road visibility, efficiency, and cost effectiveness. Road and curve alignment, design, grading, paving, right of way clearing, and turnout location often do not consider the individual or cumulative impacts of these management actions on the scenic qualities of the road and surrounding landscape. It is important however, to manage all roads and lands adjacent to them in a manner that protects their scenic and recreational values. Therefore, visual resource management goals and practices should be incorporated in the development of a management program that is appropriate for the character of each road. This study presents management guidelines tailored to the four roads within the study area. Each program addresses those individual management activities that will have the greatest affect on



scenic quality and, taken together, form the overall management program. These activities include:

- Right-of-way management (including brush clearing, road side vegetation management, grading etc.)
- Materials site location and reclamation
- View management
- Greenbelts

Roadside Rest Area System

Travelers have come to expect a system of roadside rest areas along highways and roads which include facilities such as restrooms, trash receptacles, traveler information, picnic areas, and trails. Given Alaska's wilderness and undeveloped character, large amounts of public land, and relatively few travelers, such facilities did not seem needed until recent years. However, as more roadside lands

are becoming privately owned, public lands are set aside for special purposes, and tourism increases, there is a need to provide roadside facilities for the traveling public. Consequently, one of the purposes of this study was to identify appropriate sites for road side rest area development. In identifying and evaluating potential sites, particular emphasis was placed on the following objectives:

- Take advantage of significant amenities-most often distinctive and panoramic views.
- Help the traveler better understand the surrounding landscape. One rest area site is located in each landscape character type - large areas with similar geologic, geomorphic, and ecologic conditions. Each rest area would include interpretive information related to that specific character type.

The map identifies the recommended rest areas, with references to the management units where additional information can be found.

Alaskans make heavy use of areas offering fishing, boating and other recreation opportunities. New facilities must continue to be identified and developed to minimize crowding and maintain a high quality recreation experience.

Scenic Resource Information / Education Programs

There is a limited, and at times preconceived, notion of the definition of a "scenic" or "wild and scenic" road. Moreover, few people understand scenic resource management concepts such as greenbelts, right-of-way management, or how to use vegetation and land form to enhance development. In spite of what some might think, sensitive land use and development does not necessarily cost more, it does not require professionals, nor does it need to be a restraint on private land use. Instead it is an opportunity to incorporate the beauty of the natural surroundings in all land use and development activities for the benefit of all. Developing a better public awareness of these ideas is fundamental to implementing them. Thus it is recommended that public information programs be developed to respond to this need.

Scenic resource management information programs should be directed towards four groups: (1) Government officials, (2) planners, engineers, and professional land managers responsible for management decisions on public and private lands, (3) highway maintenance crews, and (4) the public at large.

- **Elected and Appointed Government Officials**

Many of the recommendations outlined in this study require action by various federal and state elected and appointed officials. Prior to making decisions, these officials will need a clear understanding of the policy implications; short and long range costs and benefits associated with each of these recommendations, and the expected public response. A concise but complete summary of these recommendations should be prepared for this group addressing these primary concerns.

- **Engineers, Planners, and Land Managers**

This study is directed at this group more than any of the others because they are faced with the task of making a broad range of technical and managerial decisions which will influence the implementation of the scenic resource management recommendations presented here. For example, a highway engineer must apply the road upgrading and realignment recommendations; federal and state land planners must implement greenbelt designations; and Native corporation land managers can take the opportunity to develop recreational facilities which capitalize on high quality scenic values.

Furthermore, this group will recommend policies for decisionmaker action or adoption and must also take the initiative to develop public information programs. It is recommended that a scenic resource management seminar designed around the findings of this report be conducted for these professionals as a means of initiating the education and the implementation process. At a minimum participants should include: BLM, NPS, DOTPF (maintenance and operations staff, planning staff, and highway design staff), DNR (central and district office representatives), and AHTNA regional corporation representatives.

- **DOTPF Field Maintenance Crews**

Sensitive highway right-of-way management provides, without a doubt, the greatest opportunity for implementing practices that will continue to protect and enhance scenic resources along these four roads. The highway rights-of-way are generally wide enough to accomodate several activities at once, including screening undesirable development, opening good views, and providing turnouts. It is DOTPF's field operations crews who will translate these report recommendations into action. Realistically it must be recognized that these crews may not read a report such as this or, alternatively, they may choose to ignore the recommendations because they represent change, take a little more time to carry out or because of the limitations of existing machinery.

In response to these concerns, two things are recommended. First a workshop on scenic resource management goals and site specific management practices should be conducted for all field maintenance crews. Conducted as a two way learning experience, landscape architects and planners would outline the desired results in specific locations and the maintenance crew staff would identify appropriate ways of accomplishing them in the field. In this manner, field staff are more likely to understand and then implement the appropriate management recommendations. Second, each year a landscape architect should work in the field with the maintenance foreman for each road to develop a program for the upcoming year's maintenance activities.

Scenic resource management is an ongoing process and it is important that these considerations be integrated into the standard road and right-of-way maintenance programs for roads with high scenic values and recreational use. Thus DOTPF should make a commitment to these goals by allocating funds for: appropriate equipment, seminars, annual maintenance programs developed with the assistance of staff or consulting landscape architects, and more labor-intensive maintenance actions.

- General Public

Without the support and understanding of the general public and land owners adjacent to the road, legislators will not officially designate a wild and scenic highway, agencies will not allocate funds to strengthen road maintenance programs, and a myriad of individual actions may erode scenic resource values. Ultimately, it is the attitudes of the general population which will significantly influence political decisions, and thus it is important that they come to consider the worth of the scenic resources around them as they do fish, or oil and gas. They should come to expect visually sensitive right-of-way management and other sound management practices.

To develop this level of awareness, three types of public information programs are recommended. First, public workshops can be held in communities all along the study area corridor to explain basic scenic resource management concepts as well as present recommendations specific to their area. Best approached as a dialogue, residents should identify the important scenic qualities of their area - a grove of trees next to the road, a mountain view, etc., - and then define how they would like those specific resources maintained and enhanced. This grass roots support for the recommendations is essential.

Second, a small brochure outlining different ways that roadside land use and development can respond to scenic resource values could be prepared for private land owners. This might be distributed through the University of Alaska Cooperative Extension Service or state and federal agencies.

Third, a television special focusing on Alaska's scenic resources that addressed problems, issues, and past and future management responses could be produced and broadcast. Television is one of the best ways of communicating general information to a large

audience and it could effectively introduce these ideas to a large segment of Alaska's population. Already the State Department of Fish and Game is using this medium to convey information to the public and to develop a better awareness and support of their management activities. Such a program could be prepared in conjunction with the brochure for private land development along these roads.

Implementation Responsibilities and Actions

The general and specific scenic resource management action recommendations require changes in policies and standard operating procedures as well as specific actions on the part of key public agencies. These are summarized here for emphasis and clarity.

DOTPF (Division of Operations and Maintenance, Division of Transportation Planning, and Division of Highway Design and Construction)

- Develop right-of-way management guidelines specific to each road that address clearing, grading, view management, and materials site location.
- Adopt the practice of having the crew supervisor and the DOTPF staff landscape architect develop field right-of-way maintenance plans on an annual basis.
- Adopt siting and design guidelines for all road maintenance stations that are in keeping with scenic resource management guidelines, both to minimize visual impacts and set an example for adjacent private development. If existing facilities are poorly sited or present other visual problems, impact mitigation practices should be instituted.
- Adopt guidelines for road improvements and realignments which are sensitive to the desired character and use of individual roads.
- Add a landscape architect to the design team for road improvements and realignments through areas with high recreational use and/or high scenic resource values.
- Take the lead for scenic resource management planning along road corridors and coordinate all decisions with other government agencies so they are consistent with the overall goals and objectives for the road. Work with adjacent land owners and managers to promote appropriate land use and development actions beyond the right-of-way. (DOTPF should employ a landscape architect or planner trained in scenic resource management to play the lead role in this effort.)
- Officially adopt the recommended highway/road themes and associated goals for scenic resource management. Use this nomenclature on all maps, reports, etc., dealing with these roads. Alert travelers to these names through appropriate signage.

Bureau of Land Management (BLM)

- First, implement recommended greenbelts for roadside lands under BLM jurisdiction
- Adopt land development and use policies that complement the highway or road theme and associated scenic resource management goals and objectives
- Give high priority to scenic resource management considerations in areas where these resource values are high and recreational use is also high
- Demonstrate visually sensitive management practices for other landowners and managers to follow, particularly private landowners

Alaska, Department of Natural Resources

- Implement greenbelts as recommended for roadside lands under state ownership

- Incorporate scenic resource management considerations in the location and design of land disposals near these roads or within road viewsheds.

- Demonstrate visually sensitive land development and management for state land adjacent to roads, i.e. when locating field offices, when siting agricultural or other resource developments, etc.

- Encourage state land use and development that is responsive to the recommended road/highway themes and their associated goals and objectives made here with respect to the McCarthy Wild and Scenic Road.

- Investigate the possibility of establishing and funding a design assistance team to advise private property owners on appropriate land development practices.

- Encourage private owners to incorporate greenbelt recommendations in private development projects.

National Park Service

- Actively encourage AHTNA Regional Corporation, Chitna Village Corporation, DNR and DOTPF to adopt the recommendations.

- Evaluate the recommendations for visitor center development at Gilahina River, restoration of the Gilahina River trestle, and other major recommendations to determine if they conform with long range plans for development and use within Wrangell-St. Elias National Park.

- Promote the Denali Wild and Scenic Road as a recreational experience that complements activities in the Denali National Park, and encourage recreation as the primary use for this area.

Regional and Village Native Corporations

- Incorporate recommended greenbelts in future land leases, sales, and developments on corporation lands adjacent to these roads

- Set an example of development practices that are sensitive to maintaining or enhancing scenic resource values for smaller private landowners.

- Promote development and uses on corporation land which are compatible with the outlined road/highway themes and the associated goals and objectives.

Other Private Landowners

- Incorporate landscape design and management practices that compliment right-of-way management

- Take advantage of design assistance available to private land owners who own land adjacent to roads with high scenic resource values.

- Demand that public agencies and other private landowners respond to recommended highway/road themes and associated goals and objectives

Denali Wild & Scenic Road

Denali Wild & Scenic Road

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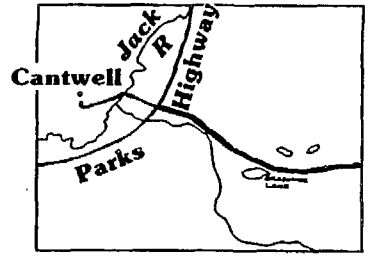
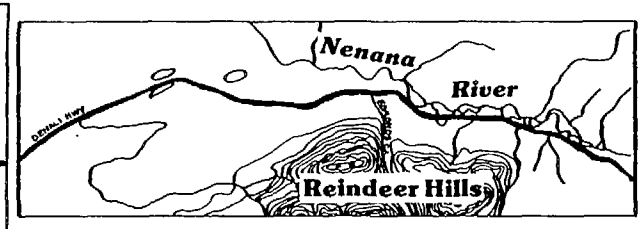


1 Cantwell Area



2 Reindeer Hills & Pyramid Peak

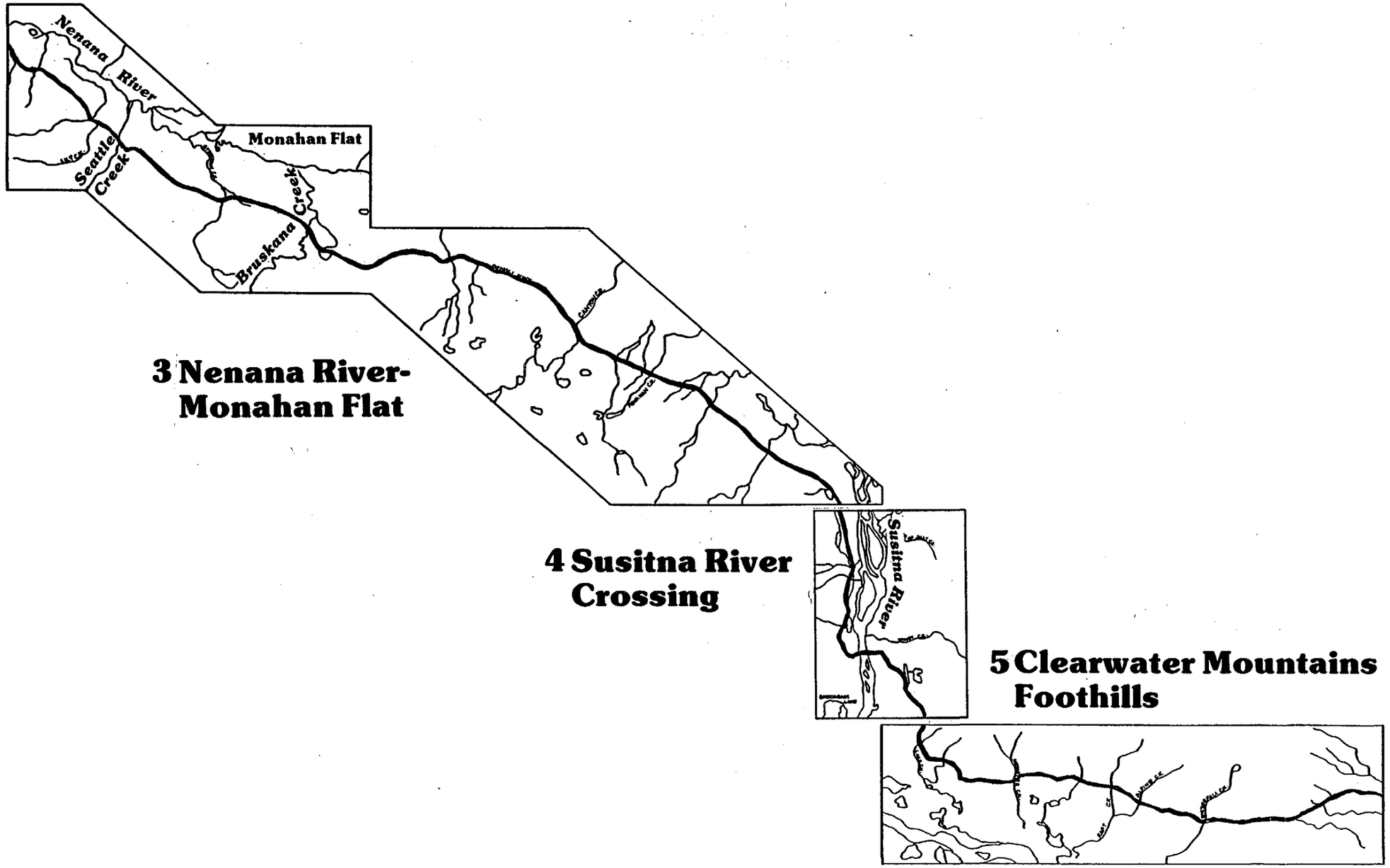
General Description

The Denali Highway, a 135-mile long road across the heart of Alaska, links the small town of Cantwell on the Parks Highway with the community of Paxson on the Richardson Highway. Completed in 1957, it was for many years the only road connection to Denali National Park (Mt. McKinley). In fact, the road takes its name from the mountain's original Athabaskan name meaning "Great One". Today, the Denali Highway offers an adventurous wilderness driving experience through some of Alaska's most scenic and diverse landscapes. From Cantwell, the road parallels the snow covered peaks and expansive glaciers of the Alaska Range. On clear days, Mt. McKinley, the highest peak in North America at 20,300 feet, is visible from the western end of the road. The Monahan Flat area provides a spectacular panorama of Mt. Hess and Mt. Deborah with the glaciers that give birth to the Nenana River.

First paralleling the Susitna River, the road then crosses the river into the broad glaciated valley of the Maclaren River, skirting the southern flank of the Clearwater Mountains. Here the undulating topography as the road winds through eskers and moraines makes the driving experience a lesson in glacial geology. Climbing to Maclaren Summit, travelers enjoy a broad panorama of the river valley and the dramatic, glaciated peaks of the Alaska Range. The Amphitheater Mountains are the backdrop to the alpine tundra landscape at Maclaren Summit. In addition, there are outstanding views of the Alaska Range and even occasional glimpses of the Wrangell Mountains to the southeast. East of the summit, the Denali Highway follows the Amphitheater Mountains through the tundra landscape highlighted by views of Landmark Gap, Tangle Lakes, Summit Lake, the Alaska Range, and the rugged Wrangell Mountains.

Most of the Denali Highway is a rough gravel surfaced road that is impassable during the winter months. Only a 20 mile long portion of the road connecting Tangle Lakes to Paxson is paved. The rough gravel surface keeps travel speeds low, and as a result the Denali Highway is used almost solely for recreation purposes. Traffic volume is also low. The little development that exists is primarily related to recreation and mining. There are some scattered cabins and residences,

Management Units - Denali Wild & Scenic Road (West Half)



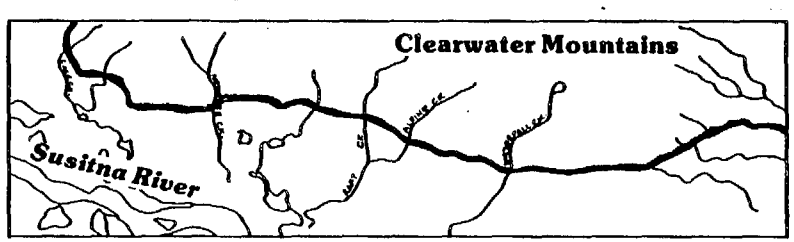
but they are generally concentrated in a few locations such as Cantwell, Denali, the Susitna River crossing, and Tangle Lakes. Thus, travelers have the opportunity to experience a predominantly pristine wilderness environment and observe the diverse wildlife populations that inhabit it. There are a minimal, but adequate, number of commercial services available to meet traveler needs. These establishments are spaced at convenient intervals along the length of the road.

Issues & Concerns

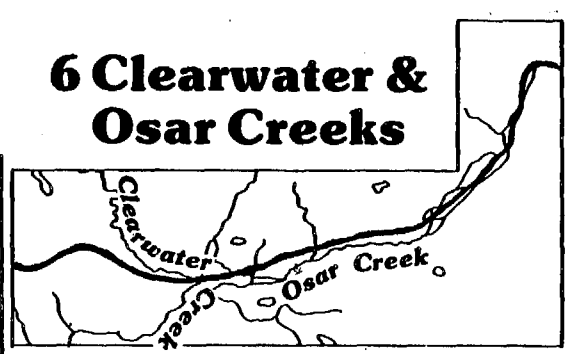
- **Powerline Intertie Route Alignment**

The Alaska Power Authority plans to locate the 100-foot high Anchorage to Fairbanks powerline crossing near Cantwell. This alignment could make the powerline a major visual distraction as it crosses Reindeer Hills. The Powerline Intertie crossing is discussed in Management Unit 1.

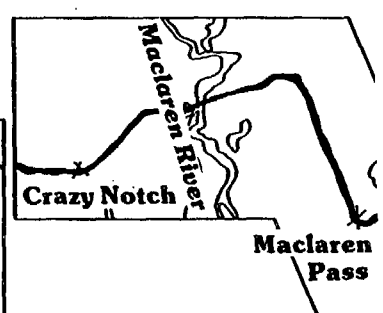
5 Clearwater Mountains Foothills



6 Clearwater & Osar Creeks



7 Maclaren River to Maclaren Pass



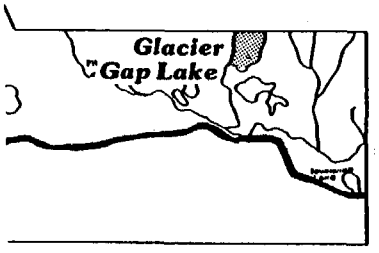
- **Access Route to Susitna Hydroelectric Project**

The western portion of the Denali Highway has been suggested as one of the alternative access routes for to provide access to the Susitna Dam project. If selected, the Denali would require significant realignment and upgrading from the Parks Highway junction to approximately Milepost 41, where the access road would turn south to the dam site. If implemented, this costly project would detract from the road's natural and wilderness character by increasing traffic speed and volume, adding industrial use, and creating a straighter, wider alignment.

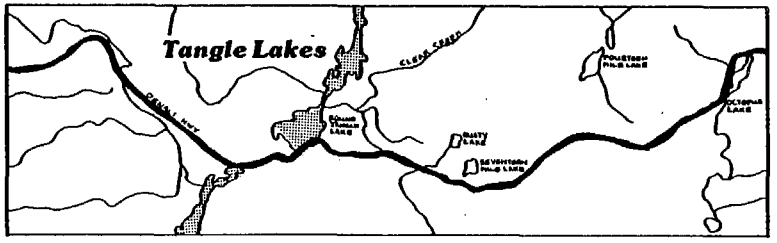
- **Road Junction Information Turnouts**

Because there is little development along its length, there is a need for travel information at the entrances to the Denali Highway. This information should cover road conditions, available services, the nature and speed of the driving

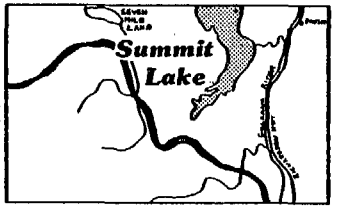
Management Units - Denali Wild & Scenic Road (East Half)



8 Tangle Lakes Area



9 East End- Denali Road



10 Paxson Junction

experience, and available recreation opportunities. Information turnouts are discussed in Denali Highway - Findings and Recommendations and in Management Units 1 and 10.

- **Road Surfacing**

Paving the Denali Highway is an important visual resource management issue because the road surface directly influences the quality and character of the driving experience and the volume and type of road use. This issue is addressed in Findings and Recommendations for the Denali Highway.

- **Roadside Management**

The right-of-way is generally managed to promote highway visibility and convenient road maintenance, and the choice of management practices has a significant effect on the landscape's scenic quality. Existing practices on the Denali Highway range from very good to highly disruptive. See Denali Highway - Findings and Recommendations and all management units under Right-of-Way Management, Greenbelts, Turnouts, and Material Sites.

- **Land Use and Development**

The lack of development along the Denali is an important part of its character, yet there are pressures for growth. Near Cantwell, where there are private landholdings, the demand exists for homesites and recreational cabin sites. BLM is also planning to open federal lands along the Denali for mining, mineral leasing and settlement to meet the government's multiple-use mandate. While some development along the Denali is both appropriate and desirable, how and where it occurs can significantly enhance or detract from the roads high scenic quality. See Denali Highway - Findings and Recommendations (Land Use and Development and Greenbelts) and Management Units 1-10.

- **DOTPF Proposed Road Realignments**

DOTPF is planning a number of road realignments to smooth curves, avoid eroding banks, and improve roadway conditions. The implications of these proposals include increased travel speed, a less visually interesting driving experience, increased traffic volume, and additional landscape alteration. This study addresses specific realignment proposals in Findings and Recommendations and in Management Units 1-10.

- **Material Sites**

While necessary for road maintenance, numerous material sites located within full view of the road constitute a visual resource management problem along the Denali. These sites are in stark contrast with surrounding landforms and surfaces, and detract from the areas otherwise natural scenic qualities. See Findings and Recommendations and Management Units 1-10.

- **Denali Highway Information Plan**

A 1976 document prepared for BLM, the Denali Highway Information Plan, studied the opportunities to provide interpretative information about the natural features along the Denali Highway. The 18 recommended sites were evaluated in this study for their scenic resource values and appropriateness as turnouts. See Denali Highway - Findings and Recommendations and Management Units 1-10.

- **Tangle Lakes**

Providing opportunities for fishing, rafting, canoeing, camping and hiking, the upper Tangle Lakes area is a popular recreation destination. Some additional recreational development may be appropriate here, but local topography and land-cover dictate that any new development will be located close to the road and highly visible. See Denali Highway - Findings and Recommendations and Management Unit 8.

- **Susitna River Crossing**

The Susitna River crossing is a popular recreation node. While facilities development would help accommodate the increasing use demand, river bank development would be visible for miles and could detract from the drama of the river crossing. See Denali Highway Findings and Recommendations and Management Unit 4.

- **Landmark Gap Trailhead**

The Landmark Gap Trail begins at mile 24.6 of the Denali Highway. The trail and the material site which serves as its staging and parking area receive considerable off-road vehicle use which has created some site disturbance and conflicts with other trail uses. Potential impacts on the scenic driving experience are also cause for concern. See Management Unit 8 and Denali Highway - Findings and Recommendations.

- **Denali Townsite Road Improvement**

The mining community of Denali and its access road are visible across the Susitna River from approximately mile 78 to mile 85 of the Denali Highway. Plans to upgrade the access road have raised concerns regarding the scenic impacts of this development. See Management Unit 4.

Findings & Recommendations

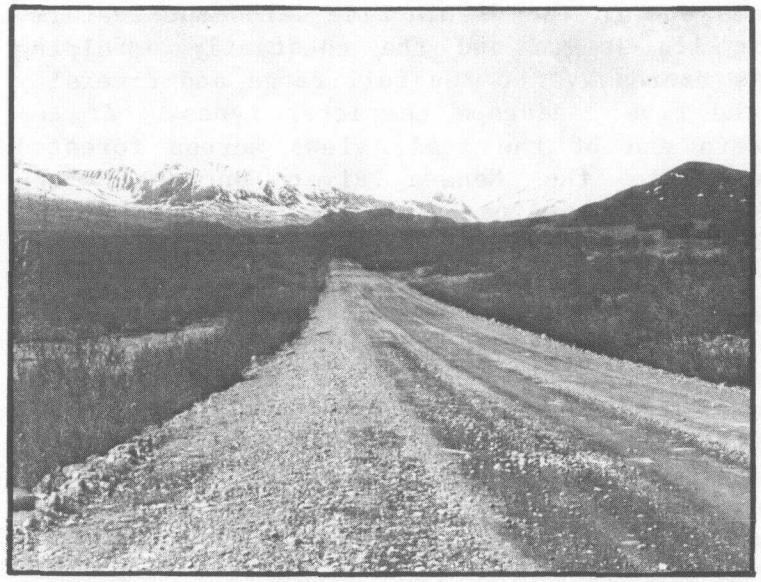
Summary of Scenic Resource Values

The Denali Highway has very high visual resource values due to the distinctive landscape features along its length and the constantly unfolding views expressive of the full range and diversity of the five landscape character types. At the western end of the road, views across forested uplands to the Nenana River encompass the Talkeetna Mountains and the Alaska Range, including the glaciated peaks of Mt. McKinley, Mt. Deborah, Mt. Hess and Mt. Hayes. The Susitna River dominates a broad valley landscape enclosed by the Alaska Range, Talkeetna Mountains and the Clearwater Mountains. Expansive vistas across glacial topography with associated features of moraines, eskers, kettle lakes and pingoes are bordered by mountain ranges, including the Clearwater, the Amphitheater and glimpses of the more distant Wrangell mountains.

The road alignment generally conforms to the surrounding topography so the route provides continually changing views and orientations that include the full range of landforms, waterforms

and landcover elements in each unit. While some areas along the Denali have truly superlative scenic qualities, the entire highway is a rich scenic experience.

The diversity of views is also due to the openness of the landscape. Along most of the highway, the vegetation is low brush or tundra with few trees to obscure vistas. In addition, the flat to rolling glaciated valleys yield broad panoramas that reach from horizon to horizon, adding a feeling of immensity to the landscape. Thus, the visual absorption capability of the road is very low: everything is visible. Intrusions upon the landscape, such as clearing for a material site or lodge development, are difficult to screen. The qualities which help create the scenic diversity also increase the visual sensitivity, since one poorly designed or sited development can affect a large area. To retain the truly high quality of these resources, they must be carefully managed.



Open, rolling terrain bounded by snow covered mountains is the hallmark of the Denali Highway landscapes.

Management Theme

The Denali Highway is a rare resource. The road passes through some of Southcentral Alaska's most spectacular and awe-inspiring natural landscapes. Range after range of rugged mountains dominate the skyline as the road parallels some of the state's major rivers or crosses open tundra that stretches undisturbed for miles. It is home to diverse wildlife populations which can often be observed from the road. The almost total absence of development creates a sense of remoteness and makes travel an adventure in itself.

This is one of the road's most valuable features: it is pristine and remote but at the same time it is accessible. Anyone can choose to take this road and experience first hand the wilds of Alaska. In addition, travelers can set their own pace and select the views they want to savor or the activities they want to participate in: fishing, hunting, camping, etc. In this sense, the Denali Highway is a linear extension of Denali National Park.

The qualities of wildness or remoteness, spectacular expressions of Alaska's diverse landscapes, and easy accessibility by car are critical to maintaining the special character of the road. These features exist nowhere else in the study area, or indeed, Alaska, with the possible excep-

tion of the Haul Road. Thus, the study recommends that the Denali Highway be designated the "Denali Wild and Scenic Road" and that the following themes guide all resource management practices along the road:

Wild

The road traverses rugged wilderness landscapes which contain few human developments and inspire a feeling of solitude as well as provide frequent opportunities to view wildlife. Wildness is also related to the experience and adventure of driving the road.

Scenic

The driving experience offers spectacular views of snow-capped mountains, glaciers, rivers, lakes, glacial landforms, and a colorful variety of landcovers. Scenic resources are diverse, unique, and beautiful.

Road

The Denali is not a "highway": it is not a modern thoroughfare designed for high speeds and moving large volumes of people and goods. Instead, it is a transportation route where there is little traffic and recreational enjoyment is a high priority. It is a low speed route that conforms with the landscape contours and is more appropriately called a "road."

Scenic Resource Management Goals

The management of scenic resources along the Denali Wild and Scenic Road should attempt to maintain the unique "wild and scenic" character of the driving experience. Four primary goals provide direction for the general and specific management recommendations that follow:

- To retain those qualities of the road which contribute to its wild character, both as a wild environment where the visual impact of human use and development is minimal, and as an adventurous driving experience.
- To take appropriate actions which respond to the particularly high scenic resource values; actions which enhance the quality of the experience and the understanding and appreciation of the landscape, retain desirable features, and mitigate the impacts of previous actions which were insensitive to these scenic resources.
- To consider recreation as the primary use of the road corridor and encourage the development of additional recreational opportunities.
- To develop road maintenance practices that promote the desired "wild and scenic" character.

Implementation: Land Ownership & Management Responsibilities

Most of the land along the Denali is publicly owned. Therefore, federal and state agencies have the responsibility for maintaining the road's high scenic and recreational quality through policies, plans, and management practices.

The federal Bureau of Land Management (BLM) manages most of the land within the road corridor and the viewshed. Until recently, land use in this area was guided by BLM's Southcentral Land

Use Plan. The Alaska National Interest Lands Conservation Act (ANILCA) then directed that federal lands be analyzed for potential mineral leasing. The Secretary of the Interior then expanded the possible uses to include mining and settlement. For this area, called the "Denali Planning Block," BLM intends to open all lands outside the scenic corridor study area and two wild and scenic river corridors to mineral leasing and mining. BLM is retaining the option to develop a management plan and development guidelines to protect the scenic and recreational values of the corridor lands. But it is equally important for BLM to recognize that scenic resource management concerns should also be applied to uses outside the one mile wide corridor. The landscape along most of the Denali is open, predominantly flat tundra - almost all uses are visible for miles from the road. Sensitive land use and development practices should guide how these activities take place as well as their location. The location and alignment of access roads serving uses outside the corridor are equally important concerns. In general, other than recreation related developments in selected locations, settlement is not encouraged along the Denali Road.

The State of Alaska should also incorporate similar scenic resource management policies and practices in plans for state land. The Department of Natural Resources manages some parcels at the eastern end of the road.

As manager of a 300 foot right-of-way and numerous material sites, the State DOTPF will directly effect the quality of the driving experience. How they handle the need to provide roadway visibility, clearing, and road maintenance and grading will determine whether or not the Denali retains its natural character. The Department can develop and implement standard maintenance procedures that guarantee sensitivity to scenic resource values in day-to-day management decisions.

A relatively small number of private landholdings are scattered along the road, with the greatest concentration near Cantwell. While there are no established mechanisms to apply scenic resource management practices to private lands, landowners can choose to develop their lands in a manner that maintains the high scenic quality. In fact, this will often be in their own best interest. Private owners should be informed of the merits of voluntary cooperation in the maintaining and enhancing of scenic resource values along the Denali Wild and Scenic Road.

Road Improvements

The gravel road surface significantly contributes to the wild and natural character of the Denali. Moreover, because travel is slow, there is more time to appreciate the spectacular landscape. Unfortunately, the road bed is poorly maintained; road pot holes also capture the driver's attention. In fact, many people avoid driving the Denali Road due to the noisy, bumpy, and dusty ride and the unpredictable road conditions. Paving additional sections of the Denali Wild and Scenic Road to increase the driving comfort was considered during this study. Some implications of both paved and gravel road surfaces are outlined below:

A Gravel Surface:

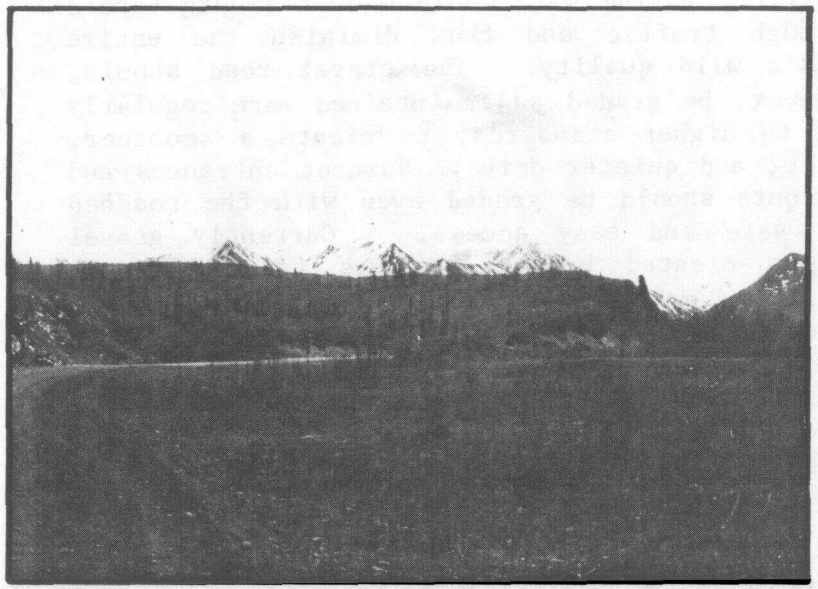
- Leads to slower travel speeds,
- Provides more opportunities to appreciate the landscape and observe wildlife,
- Offers a more wild and rugged driving adventure,
- Is less expensive to maintain, but requires more regular attention, and
- Discourages some use because of the long, rough and dusty drive.

A Paved Surface:

- Provides a smoother, quieter and more comfortable drive,
- Encourages additional use, but at faster travel speeds,
- Detracts from the wild and adventurous driving experience, and
- Costs more to construct and maintain.

In light of these considerations, a compromise solution is offered. The Denali should be paved from Cantwell to the Susitna River crossing. Paving this portion of the road would provide easy driving access to some of the most scenic and recreational landscapes on the west half of the road and would shorten the unpaved, slow portion of the drive. It would continue to deter the Denali from becoming a fast thoroughfare and avoid paving one of the most difficult road segments.

Paving practices should be governed by strict standards. To maintain the wild character of the road, the existing alignments should be followed,



D.O.T.P.F. proposed realignments would straighten winding portions of the road, such as the one shown here, eliminating changes in point of view and decreasing the sense of anticipation for the view around the next bend.

leaving curves and grades intact. The paved road should be designed for a a 35 mile per hour travel speed with this speed limit posted. Also, the width of the pavement should be narrow (18-20 feet) in order to minimize the visual impact of the road and discourage fast driving speeds.

The gravel surface should be retained on the remainder of the Denali Wild and Scenic Road - from the Susitna River crossing to Tangle Lakes - to protect the wild and remote driving adventure. Frost-heaving would pose major maintenance problems for a paved road across this area. In

addition, paving here would encourage high-speed through traffic and thus diminish the entire road's wild quality. The gravel road should, however, be graded and maintained more regularly and to higher standards, to create a smoother, safer, and quieter drive. Turnout entrances and turnouts should be graded even with the roadbed for safe and easy access. Currently gravel ridges created because graders ignore turnout entrances make many of them difficult or impossible to use.

The DOTPF proposes to realign portions of the Denali Wild and Scenic Road. Most of these realignments are designed to straighten curves. A few call for major changes to relocate the road on a better foundation so it will be easier to maintain. This study recommends that existing realignments be retained where possible to protect panoramic views, frequent changes in point of view, and the overall recreational driving experience.

Land Use & Development

One of the distinctive qualities of the Denali Wild and Scenic Road is its undeveloped character. The few commercial establishments that presently exist, however, are adequate in number and location to meet the travelers' needs. In general, new development along the road should be discouraged, with two exceptions. First, additional recreational development is appropriate in selected locations where use presently exists and the visual impacts will be low. Second, commercial and residential expansion can occur, but should take place near existing development at Cantwell, the Susitna River crossing, Maclaren River, Tangle Lakes, or Paxson.

Development on public lands, including recreational facilities, should be located in areas with screening potential. Land disposals and permanent development should occur outside greenbelts in areas that are not visible from the road. Major developments visible from the road should comply with the adjacent greenbelt regulations and respond to the landscape character in site location and design development and construction.

BLM is discouraged from opening the Denali Block land to settlement. They should also set scenic resource management guidelines for mining and activities related to mineral leasing if within the road viewshed. Special guidelines should be developed for the location, clearing, and alignment of access roads from the Denali Road to these sites.

Because of the unique qualities of the Denali Wild and Scenic Road, private landowners should be made aware of how they can maintain the scenic resource values on their land. This information can be conveyed in a short manual: ie. "Design and Land Management on the Denali" prepared for distribution by the Cooperative Extension Service. Or, alternatively, presentations at community workshops or a statewide television special could be used. Gaining the support and involvement of private landowners and residents along the Denali is critical. Although the overall landholdings are small, they are concentrated in strategic locations.

Private owners are encouraged to adopt the following development practices:

- Select development locations that are close to existing communities
- Select sites which are set back as far as practical from the road edge, preferably outside the greenbelt
- Retain as much natural vegetation as possible within the greenbelt.
- Utilize topography and vegetation to screen development from road traffic and dust
- Limit the number and visibility of access roads

Recreation Development

Today, recreation-fishing, hunting, camping, boating, hiking--is the primary use of the Denali Road, and it is likely that it will continue to be the popular and predominant use well into the foreseeable future. Presently, public facilities are inadequate to meet recreation needs during the peak summer season.

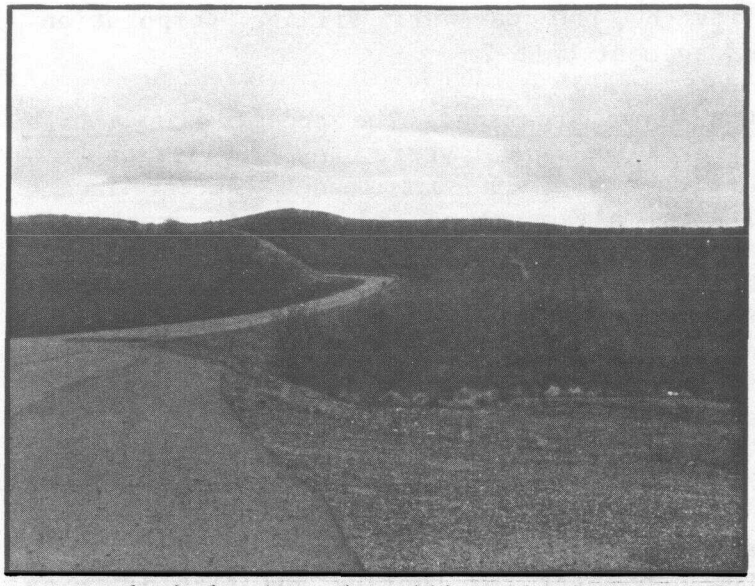
Four areas have been identified for their potential to provide additional public recreation opportunities: (1) the Nenana River area near Cantwell, (2) Susitna River crossing, (3) Maclaren River, and (4) Tangle Lakes area. Short term or day use recreation activities and rest areas are discussed in the Turnouts section.

Nenana River Area: There are only limited recreation opportunities near Cantwell, but the area's many lakes and rivers and high scenic values make additional development for boat launching, campgrounds, and recreational homesites highly desirable. These facilities could be publicly developed, or developed and operated as a private facility by the Cantwell Village Corporation. See Management Unit 2.

Susitna River Crossing: The crossing is a high use recreation node where few facilities now exist except a small boat launch. Better launch facilities, a campground and a picnic area would be welcome additions; however, they should be carefully sited and designed to minimize impacts on the river edge as well as on the dramatic visual experience of crossing this major landscape feature. The various facilities could be dispersed to decrease the development scale and create a more intimate recreation experience. See Management Unit 4.

Maclaren River: The Maclaren River Lodge is a jumping off point for hunting and fishing trips up the river. Nestled in hummocky glacial topography, it is a prime location for a recreation facility, and there is room for additional development for picnicking and possibly camping. See Management Unit 7.

Tangle Lakes Area: Probably the most popular area along the Denali, Tangle Lakes offers camping, fishing, boating, hiking, and picnicking opportunities, in addition to two lodges (one is closed) and other roadside services. The wide variety of use possibilities, area accessibility, and the screened location in rolling glacial topography make this a prime location for additional recreation expansion. Day use recreation opportunities exist nearby at Tenmile and Octopus lakes. Trails could be developed there and near Landmark Gap. This area is also suitable for some scattered recreation homesites. Along with the Susitna River, Tangle Lakes is the priority site for recreational use and development on the Denali Road. See Management Unit 8.



The road winds through rolling glacial topography near Tangle Lakes making it possible to site and screen additional recreation development in the area.

The following guidelines should be applied to the design and development of roadside recreation facilities:

- Locate campgrounds at least 1/8 mile away from the road and retain vegetation as a natural buffer.
- Control creek or river access near bridges so campsites and other river recreation uses focus on only one bank. Locate them at least 300 feet from the bridge.
- Use a single or loop access road for commercial recreation developments retaining natural vegetation between the facility and the right-of-way. Avoid the common situation where the entire road frontage becomes an open gravel parking lot.
- Encourage commercial establishments to store supplies inside a structure, or to screen supply and storage areas from the road.
- Take advantage of the vegetation screening potential and/or local landforms to screen development from the road.
- Site access roads so they conform to natural contours and topographic features.
- Locate recreational cabins and homesites back from the road, retaining natural vegetation between the road and the structure. If possible, locate them outside the greenbelt. Buildings need not be totally hidden from view. If somewhat distant from the road and well-designed, they can be visual amenities.
- Site trailhead and other recreational use parking areas so they are not visible from the road.
- Encourage commercial developments to use well-designed signs for advertising. Avoid flashing neon or large oversized signs typical along many highways. Small signs painted on wood and lit by incandescent bulbs are preferred.
- Locate power generators away from campgrounds and recreation use areas. Buffer sounds with sound absorption baffles, berms, or other appropriate means.
- Take advantage of the local microclimate in designing recreation facilities. Site recreation developments on warm, south facing slopes which are sheltered from winds, and avoid exposed high ridges and open river bottoms.

Turnouts & Other Roadside Facilities

Prior to this study, recommendations for road turnouts were identified in a document prepared

Denali Highway Visitor Information & Points of Interest Evaluation

from: The Denali Highway Information Plan

Site	Mgt. Unit and Site Location	Study Recommendation
1. Visitor Information Center	Unit 9 Site: T-2	No
2. Wrangell Mountains Viewpoint - Views of Mt. Drum and Mt. Sanford	Unit 8 Site: Rec-1	Yes
3. Landmark Gap Viewpoint	Unit 8 Site: R-6	Yes
4. Alaska Range Viewpoint	Unit 7	No
5. Maclaren River Viewpoint - includes nearby pingoes, several vegetation types	Unit 7 Site: Rest-1	Yes
6. Geologic Point of Interest - Pingoes	Unit 7 Site: T-4	Yes- But no parking location
7. Geologic Point of Interest - Sinkholes	Unit 7 Site: T-3	Yes
8. Maclaren Glacier Viewpoint	Unit 7	Not evaluated
9. Geologic Point of Interest - Crazy Notch	Unit 7 Site: T-1	Yes
10. Wildlife Point of Interest - Beavers	Unit 6	Not evaluated
11. Wildlife Point of Interest - Waterfowl and Shorebirds	Unit 6	Not evaluated
12. Geologic Point of Interest - Esker	Unit 6 Site: T-2	Yes
13. Geologic Point of Interest - Talus Slopes	Unit 4 Site: T-4	No
14. Denali Viewpoint - Historical/Landscape Interpretation	Unit 3 Site: T-14	Yes
15. Wildlife Point of Interest - Waterfowl and Caribou	Unit 3 Site: T-12	Yes
16. Botanical Point of Interest - Effects of permafrost, climate, altitude, and aspect on plant growth	Unit 3 Site: T-2	Yes, slightly different location
17. Nenana River Viewpoint	Unit 3	Not evaluated
18. Visitor Information Center	Unit 2 Site: IT-1	No as info. center, yes as viewpoint

by consultants to BLM. The Denali Highway Information Plan (1976) identified 18 turnouts to interpret natural features visible along the road, emphasizing geologic features. The DOTPF also identified potential turnouts as part of a recent highway improvement proposal. Most of these sites are cleared and graded areas that were created during road construction which DOTPF now plans to retain and enhance. The BLM and DOTPF sites were evaluated along with existing turnouts and other potential sites identified during field work. Recommendations for each site are discussed in detail in each management unit. Factors taken into consideration when evaluating the existing, proposed and potential turnouts include:

- Safe entry and exit
- Adequate size to accommodate anticipated use
- View potential from the site
- Suitable site conditions for cost effective development and maintenance
- Potential for interpretive opportunities
- Visual impacts of site development

This study recommends three general types of turnouts: Roadway Information Turnouts located near highway junctions, Rest Areas, and General Turnouts.

Roadway Information Turnouts

Roadway Information Turnouts respond to travelers' needs for information on road conditions, emergency services, commercial services, recreational opportunities, and other special road features. Information turnouts are recommended at both ends of the Denali Road. At the Parks Highway junction, there are two alternatives. One is a series of three separate information turnouts, accommodating travelers arriving from the north, south, and east, respectively. The second option consists of a single turnout located at the junction. Management Unit 1 discusses these proposals in more detail.

At the Richardson Highway junction, a single turnout is recommended on the east side of the Gulkana River crossing. This turnout is located close to the junction so signs will direct travelers arriving from all directions to it. Information related to this turnout may be found in Management Unit 10.

Rest Areas

The four rest areas recommended on the Denali Wild and Scenic Road are part of a system of roadway rest areas that encompasses the Parks Highway and the other segments of this study corridor (the Central Richardson Highway and the Edgerton and McCarthy roads). One rest area is recommended in each landscape character type, those large areas which have similar geologic, geomorphic, and ecologic characteristics. The Denali Road crosses five character types: Broad Pass Depression, Upper Nenana River, Upper Susitna River, Clearwater-Amphitheater Mountains, and the Gulkana Uplands. Site specific information is contained in the appropriate management units.

General Turnouts

General Turnouts respond to a multiplicity of traveler needs. The are road widenings which provide a place to leave traffic for a variety of

Rest Area / Interpretive Sites

Location	Landscape Character Type	Mgt. Unit	Description
Assessment Unit D-19: East of Canyon Creek	Upper Nenana River	3	Site is used for gravel extraction and would need considerable reclamation. It is an excellent viewpoint with a nearby lake that provides a good expression of the forested landscape dominated by near and distant mountains.
Assessment Unit D-26: East of Susitna River crossing	Upper Susitna River	4	Located a a former material site close to the Susitna River crossing, the site can be developed as a day use rest area/interpretive center, as well as a campground. Construct a boardwalk to the northeast bank of the river, and a foot trail up the south side of an esker to a point with views of the Alaska Range, Susitna River, and Talkeetna Mountains. This viewpoint should also include a small roadside parking area and an interpretive sign.
Assessment Unit D-56: East of Maclaren Summit	Clearwater/Amphitheater Mountains	7	Site is now a large turnout with a litter barrel. It offers a spectacular panorama of those elements characteristic of this landscape: the expansive Maclaren River Valley, snow-capped peaks of the Alaska Range and Clearwater Mountains, and associated glaciers. This site was identified both in the BLM Denali Highway Information Plan and by DOTPF. A short hiking tail to view small lakes and pingoes could be developed.
Assessment Unit D-1: Near Cantwell	Broad Pass Depression	1	In addition to the rest area recommendation, the site was identified for a turnout by DOTPF and a visitor center site in the Denali Highway Information Plan. Mt. McKinley is visible from here along with development around Drashner Lake and Cantwell. Because of the openness of the landscape, sensitive site design is required and a 300 foot greenbelt should be established around the perimeter of the site. A trail link to Jack River could be developed from the rest area.

purposes: photography, wildlife observation, exercise, eating, turning around, etc. Portions of the Denali Road currently have an adequate number of turnouts to comfortably meet travelers' needs while other portions need more safely accessible and appropriately sited turnouts. Turnout recommendations found in each management unit fall into the following general classes:

- Existing and proposed turnouts which might be suitable for interpretive information. Of the 18 information turnouts proposed by the BLM Denali Highway Information Plan, ten of these were determined to be suitable for development as small, interpretive turnouts (Three sites were not evaluated in the study.)
- Scenic turnouts with distinctive panoramic views.
- Turnouts in areas presently lacking adequate turnout opportunities and where development costs would be low (such as nearly level, abandoned material sites).
- Potential turnouts where proper access must be provided.
- Existing turnouts where, for one reason or another, access should be blocked and the site reclaimed.
- Existing turnouts where the visual impacts of turnout design or maintenance should be reduced.

Litter Barrel Siting and Design

Commonly provided at turnouts, litter barrels encourage people to dispose of trash properly. However, in many cases, the trash receptacles become elements of visual clutter. The typical orange oil drums sharply contrast with the color of the natural surroundings. In areas of low or non-existent vegetation, the three-foot high barrel appears out of scale. Often the barrels are used for roadside target practice, and soon look derelict. In addition, they are placed in the center of the turnout, becoming an unattractive centerpiece for an otherwise panoramic view. These problems are more acute when the litter barrel is the only sign of human use for miles along the road.

Better litter barrel design and siting will help maintain the scenic quality of the Denali Wild and Scenic Road. The following design guidelines are recommended:

- Design and use a more attractive litter barrel that incorporates or blends with natural materials and colors.
- Where drums are still in use, paint them brown, green, rust, or an alternate color that blends in with the surrounding landscape.
- In open landscapes where the vegetative cover is low or non-existent or views are open, consider:

  Burying the trash can level with its lid and mark the location with a sign, or

  Providing several lidded, shorter receptacles so the size is not so out of scale with the surroundings
- Avoid placing barrels in the center of turnouts.

  Where there is little screening potential, site barrels at the corners of the turnout, near the road to avoid interrupting the view

  Locate the barrel close to natural landforms or vegetation where they exist, in order to take advantage of partial screening through the juxtaposition of forms
- Replace "shot-up" barrels as a part of regular road maintenance activities, and encourage the State Patrol to enforce fines for those caught vandalizing the facilities.

Right-of-Way Management

DOTPF's management of the 300 foot right-of-way along the Denali Road, together with road design and upgrading practices, will have the greatest influence on maintaining the road's wild and scenic quality. Management actions designed to restore or enhance roadside visual resource quality are generally directed at the right-of-way and those lands immediately beyond. At the moment, right-of-way management along this road includes gravel extraction for road maintenance, roadside brush control, road grading and edge maintenance, and water drainage. Gravel extraction concerns are addressed in the material sites discussion.

The following recommended management practices are designed for use by DOTPF field maintenance crews. In addition, a landscape architect should be employed to work with the maintenance supervisor in developing one or two year roadside management action plans.

Roadside Brush Control

In general, brush control along the Denali Road is minimal and is in keeping with the wild and scenic nature of the driving experience. Future actions should respond to the following considerations:

- Encourage/allow native vegetation to grow as close to the road edge as possible so the road right-of-way blends with the landscape.
- Allow brush and other scrub vegetation to grow in ditches and drainageways, so long as water flow is not impeded.
- In areas where high brush and trees may block views around road bends, clear only the inside edge of the curve and leave the outside edge vegetated.
- Where vegetation clearing is needed, vary the depth of the cut to avoid creating a linear, hard-edged swath along the road.
- In areas of high brush and trees, clear selectively. Cutting can take place in phases. Some trees can be cut, leaving adjacent areas untouched for several years.
- Remove all slash from cleared areas.
- Revegetate cleared road edges with low brush or other plants to create a natural appearing edge.

Grading Practices

Roadside grading practices cause two common problems: (1) surface grading creates relatively tall ridges of loose gravel along the road edge, and (2) it disturbs the right-of-way by developing gravel extraction sites, turnarounds, and equipment parking and storage areas.

Roadside ridges result when graders run along the road without taking care also to grade turnout entrances. This careless practice restricts vehicle access to many turnout sites, visually accentuates the road edge, and restricts surface drainage. In some cases, however,where vehicular access should be intentionally restricted--particularly where gravel extraction sites are being reclaimed--the gravel ridges serve a useful function. Gravel extraction within the right-of-way should not be permitted and equipment operators need to be more careful in how they use the right-of-way for routine maintenance operations or as impromptu sources of materials along the edges of road cuts.

Water Drainage

Culverts and ditches are the primary methods of roadside drainage. Their visual impacts are generally low except in a few specific instances. There are several locations along the road where culverts are improperly sized and located, leading to erosion around the culvert and road settling. While these areas should be repaired, care should also be taken when placing new culverts to avoid creating similar problems.

In some areas, drainage ditches can be designed to blend with adjacent landforms by varying the slope of the ditch margins and allowing vegetation to grow inside. Culvert ends are often visually prominent because of their reflective surfaces and absence of vegetative screening. They could be painted a dark earthen color to reduce visual contrasts.

Greenbelts

As a scenic resource management tool, a greenbelt is a strip of land beyond the right-of-way where additional visual resource considerations are applied. It is not necessarily a "no touch" area, although it is most often kept in a natural condition and landscape alteration minimized. Development or landscape modification may take place in a greenbelt if it follows guidelines and performance standards. For roads and highways, the most effective scenic resource management occurs in the foreground, the right-of-way and the lands immediately adjacent to it. Greenbelts can complement right-of-way management practices, or alternatively, can serve as a second line of defense for inappropriate activities within the right-of-way.

The usual image of a greenbelt as a narrow, continuous strip of trees is inappropriate along the Denali Road. First, most roadside vegetation is low growing tundra which has little potential for screening or buffering. Second, the open, expansive views characteristic of the landscape mean that narrow management strips would be completely inadequate to protect resource quality. To accommodate these special conditions, three greenbelt categories are recommended along the Denali Road:

- **25 to 100 foot wide greenbelts:** In some areas, particularly along the western-most portion of the road, only a narrow strip of land is needed to protect scenic resource values because the existing vegetation is dense and the topography is relatively steep.

- **100 to 1000 foot wide greenbelts:** In many areas the open terrain dictates that a wider greenbelt is necessary for effective scenic resource management. Generally, this setback width will be adequate for most land uses and developments.

- **Viewshed greenbelts:** Finally, there are a number of very open areas with particularly high scenic resource values along the Denali Wild and Scenic Road. In such areas, even a 1000 foot wide greenbelt is inadequate because everything is visible. In these locations, the entire viewshed becomes a greenbelt management area. While development would not be prohibited, all proposed land uses should be evaluated with respect to their visual impacts.

Important guidelines and objectives associated with each type of greenbelt are described in the individual management units.

Along the Denali Road, public agencies, primarily BLM, and private land owners will be responsible for implementing the greenbelt recommendations.

On public lands, agencies can officially designate greenbelts and specify scenic resource guidelines and performance standards for land use actions. On private lands outside of boroughs or other local government jurisdictions, no effective implementation or control measures exist. Here there are two principal implementation options. First, individual land owners can be encouraged to follow examples set on adjacent public lands. Public agencies should make a concerted effort to educate private landowners about greenbelts and scenic resource management--the rationale for their designation, associated management practices, and the resultant benefits to landowners and the public could be part of a more comprehensive public information/education program for scenic resource management. Second, private landowners with large land holdings next to the road, such as village and regional Native corporations, should be encouraged to incorporate the greenbelt management recommendations in their land sales, leases, and other developments.

Material extraction in the immediate right-of-way is unsightly and detracts from the wild, natural character of the road. Gravel pits should be sited away from the road and screened from view.

Material Sites

Perhaps the most unattractive features associated with driving the Denali Wild and Scenic Road are the numerous, highly visible material sites located in the right-of-way in stark contrast with surrounding landforms and landcovers. However, with some planning and sensitivity to scenic resource values, these essential facilities can be sited so they are convenient to use and do not detract from the road's scenic quality. In order to encourage proper location and use of material sites, educational and training programs should be directed at those in DOTPF concerned with selecting and operating these sites. This must include planners who identify potential new sites and secure permits and/or leases, administrators who develop and adopt policies relating to material site location, and field crews who perform routine road maintenance and develop the sites.

Management recommendations are directed to three situations: new sites, active material sites, and exhausted material sites.

New Sites

All new material sites should be located outside the road right-of-way. DOTPF should work with BLM

as the adjacent landowner, to identify appropriate sites and secure any necessary permits. The selection process should identify sites that:

- Can be adequately screened by topography and/or vegetation
- Have reasonably convenient access
- Are located in the opposite direction from general viewer orientation and away from recreation use areas such as turnouts, rest areas, campgrounds, or lodges

In addition, a system of smaller sand and gravel storage areas can be developed between the primary sites where convenient access to materials is needed. These sites should use surrounding landforms to help provide proper screening.

Active Material Sites

From a visual management perspective, there are several problems associated with existing sites. These include proximity to the road, clearing and unnatural contours that contrast with the surrounding environment, and equipment and structure visibility and dominance in an otherwise natural landscape.

There are two strategies for mitigating these problems: 1) reduce the visual impact of the existing activity and 2) prepare for future use of the site. Since most of the Denali Road is above treeline, it is difficult to screen existing gravel extraction sites with vegetation; therefore, constructing a berm is often the only solution. This is easier at existing material sites where heavy equipment is already available. The berm shapes and contours should reflect nearby landforms and they should also be revegetated so they blend in with surrounding landcover to the extent possible. Equipment storage, structures, and access roads should all be located to minimize visibility.

Management recommendations and actions also address the future use of the site. In cases where the visual impact is high and effective screening impossible, recommendations may call for the site to be immediately reclaimed. Otherwise, the site should be managed for long term use for road maintenance, materials storage, or continued material extraction.

Exhausted Material Sites

The numerous abandoned material sites along the Denali Wild and Scenic Road require treatment to reduce their visual impact. Possible approaches include the following:

- Complete reclamation. Attempt to return the site to its natural condition or one which blends with the surroundings.
- Active reclamation for a new use, such as a turnout, rest area, or campground.
- Screening with berms or vegetation to reduce adverse visual impacts.
- Limiting access. Close the site to vehicular access and let time and nature heal the scars.

Complete reclamation is extremely costly and is recommended only in those situations where the impact is severe and the site detracts from the area's recreational and scenic values. In some cases, reclamation is recommended to convert the

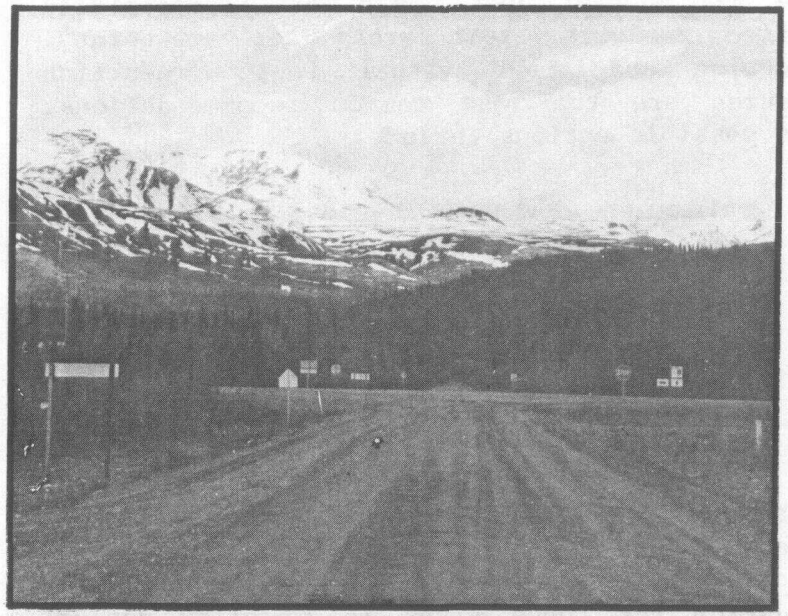
site to another use, such as inexpensively created turnouts, rest areas, or viewpoints. Screening and other visual impact reduction measures are the most common recommendations. Some possible actions include:

- Establishing roadside vegetation and/or berms, either in the right-of-way or adjacent to the site.
- Directing viewer orientation away from the site.
- Controlling access to minimize future disturbance and use and allowing natural revegetation to occur.

Because of the quantity of material sites and the extent of the problem, many sites were not specifically identified. The general recommendation for these sites is to allow natural revegetation to occur. Due to the harsh climate and poor soils, revegetation is a slow process. The following measures have been identified to aid the revegetation process:

- Control access to eliminate site disturbance. This can be accomplished by using roadside grading to create a low berm which will prevent vehicular entrance and closing the site to heavy equipment storage, staging, or parking use.
- Refrain from any brush control within or adjacent to disturbed areas.

Cantwell Area



A dramatic Alaskan Range backdrop and a confusing array of signs mark the west end of the Denali Wild and Scenic Road. An information turnout here would organize the provision of road information and create a visual symbol of the road entrance.

General Description

Management Unit one includes the first five miles of the Denali Wild and Scenic Road near the community of Cantwell. Traveling east from the junction with the George Parks Highway, the road follows the nearly level lower terraces of the Jack River through dense stands of bottomland spruce-poplar forest. Beyond Drashner Lake it climbs slightly onto rolling uplands where semi-open stands of spruce are inter-mixed with wet tundra and alpine tundra. This very broad, open valley is an extension of the Broad Pass depression immediately to the southwest. The road skirts the base of the Reindeer Hills to the north which play a strong visual role due to their proximity to the viewer. More distant landforms associated with the Talkeetna Mountains, the Alaska Range and Broad Pass are typically visible throughout the management unit. Mt. McKinley is a dominant landmark visible from the eastern parts of this management unit on clear days.

Scenic resource values are moderately high and are affected by the considerable amount of land development and visibility of management activities in this unit. Residential development is generally in scale with the surrounding landscape. It is located some distance from the road and there is adequate retention of the natural landcover to minimize visual impacts. The strongest negative scenic impacts result from road construction and maintenance activities - particularly near Jack River and the local dump. The visual absorption capability of this area is variable: it is generally high on the level, densely forested Jack River terrace and low on the open tundra uplands typical of the eastern portion of this unit.

1 Cantwell Area

Assessment Units D1 – D2

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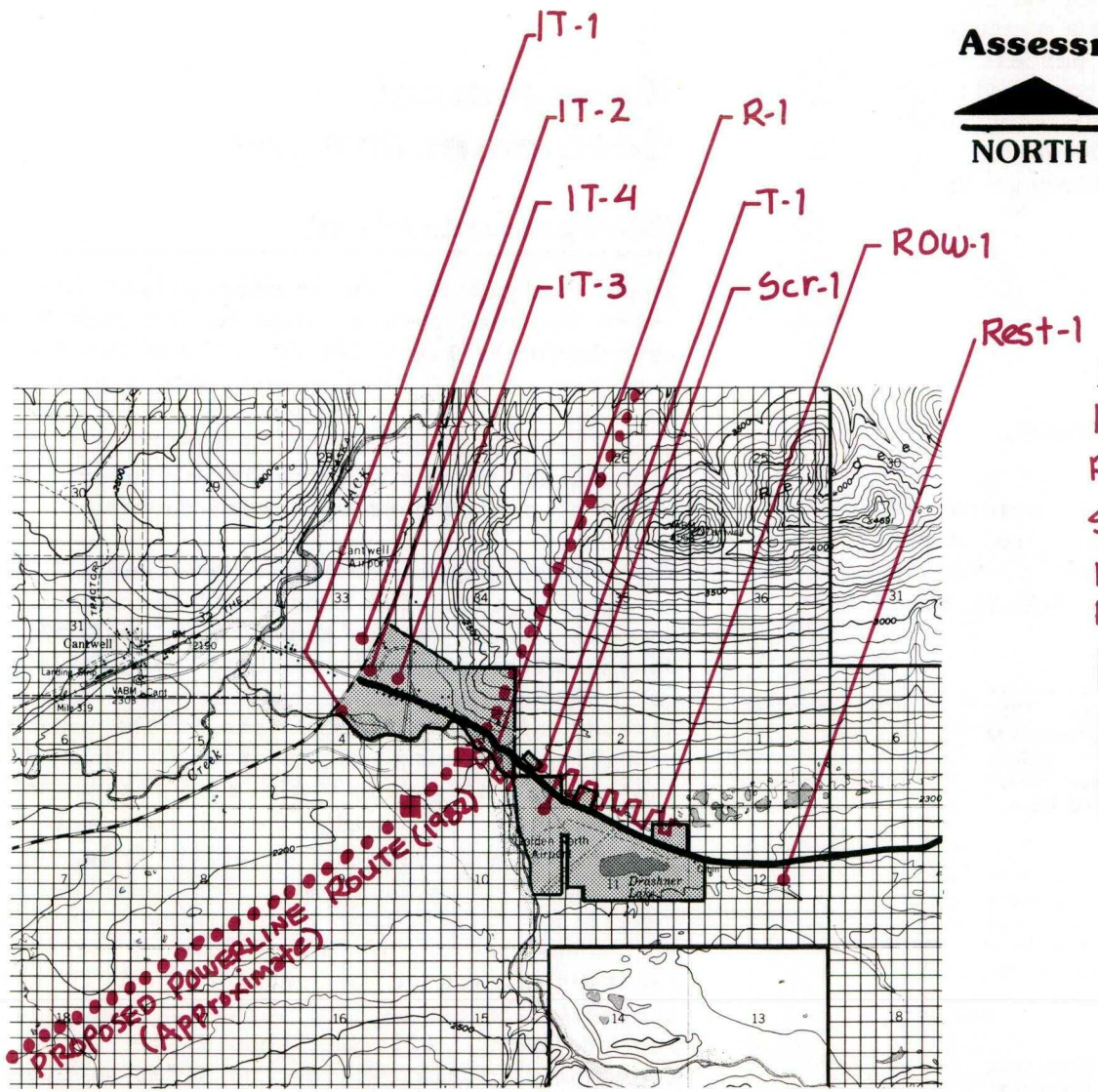


KEY

IT - Information Turnout

R - Reclamation

Scr - Screening

ROW - Right-of-Way Mgt.

Rest - Rest Area

Native Corp. Land

Federal Land

Private Land

Land Ownership & Management Responsibility

Ownership adjacent to the road is a mixture of large and small privately owned parcels with the remainder to be owned by Cantwell Village Inc. The DOTPF manages a 300 foot wide right-of-way through most of the unit. The right-of-way is narrower in some areas where private land abuts the road.

Visual Resource Management Objectives.

Visual resource management objectives recommended for this unit relate to three broad themes: sensitive development, impact mitigation, and Denali Wild and Scenic Road entrance.

Sensitive Development: To encourage landowners and managers to recognize the distinctive scenic resource values associated with this area and to take appropriate measures to minimize potential negative visual impacts resulting from developments and uses.

Impact Mitigation: To take necessary actions to reduce the negative visual impacts associated with road construction and maintenance and other land uses which have resulted in a deterioration of the scenic and experiential quality of this area.

Entrance Experience: To create an appropriate entrance/exit experience that is in character with the wild and scenic theme of the Denali Road and also serves as a recreational link with Denali National Park.

Management Recommendations

Realignments (Real)

Road realignments are proposed along the area where the road passes close to the Jack River, approximately 1.4 miles from the Parks Highway Junction. This realignment would place the road on fill on the Jack River floodplain to avoid landslide and slope instability problems associated with the present alignment. It would also eliminate some road curves.

The visual impacts of this realignment would be significant. The road would be constructed on fill and would completely destroy the sparse river edge vegetation. It would add yet another level of disturbance to this already highly impacted area. The proposed powerline crossing is located in this unit, and the new alignment would make the powerline more visible. It would move the road away from the hills and vegetation which help screen powerline visibility and, instead, increase powerline visibility and view duration. For these reasons it is recommended that the existing alignment be retained and that the unstable slopes be cut back and stabilized. In addition, efforts should be made to reestablish poplar-willow and alder vegetation along the south (river) side of the road.

Intertie Powerline Routing

The proposed powerline route would follow the upper western slope of the Reindeer Hills and cross the Denali Wild and Scenic Road near where it passes close to the Jack River. Visual impacts of this powerline would be high while traveling in both directions. Heading east from the Parks Highway Junction, the line and towers would either be on the horizon or just below it and visible for the first mile of the road. Traveling west on the existing alignment, the line would only be visible for a brief time as the viewer comes around a corner and passes under it. While view duration would be short, the visual impact would be high due to the size of the tower, its proximity to the viewer and its surprise effect. Moreover, the line crossing the open Jack River floodplain and extending towards Broad Pass would be highly visible. It is assumed that this routing cannot be changed. However, it is recommended that this area be considered a priority for employing appropriate measures to reduce adverse visual impacts. The following considerations are suggested to help accomplish this:

- Careful selection of the towers used in this area. Tower design (shape, height, materials, color) should try to minimize contrast with the alpine tundra vegetation of the Reindeer Hills during the time of most intensive recreation and driving use (mid-June through mid-September).

- Special consideration given to the tower to be located on the Jack River floodplain immediately adjacent to the road. Preliminary alignments suggest that a "pivotal" tower would be necessary because this is a point where the powerline changes direction. From a visual management perspective, a tower located on the hills above the road would have less impact-particularly for travelers heading west. Retention of as much of the existing river edge tree and shrub vegetation should be considered a priority in this area, as well some replanting to help reduce visibility of both the tower and the line heading towards Broad Pass.

- Helicopter construction and maintenance should be used for all towers on Reindeer Hills and along the Jack River to eliminate potential scars and clearings between towers associated with road construction and maintenance.

- Location of the line over Reindeer Hills so it is below the "ridge" of the hill as seen from the Parks Highway and the first portion of the Denali Wild and Scenic Road when heading east.

- Coordination of specific powerline routing and design with road realignment and roadside land reclamation and revegetation plans to minimize landscape disturbances and take maximum advantage of the screening potential of existing landforms and vegetation.A landscape architect should work with the DOTPF, Alaska Power Authority, and Native Corporation representatives to coordinate land use and development plans for this highly sensitive area.

Land Use & Development (LU)

Because of this unit's private ownership pattern and its proximity to existing development and services along the Parks Highway, it is reasonable to assume that the area will be a focus of community growth in the future. Very likely the greatest pressure will be for residences near the road - either permanent residences or recreational homesites for part year occupancy. As already noted existing development is not highly visible and in a number of cases adds to the road's visual interest. The existing development patterns of

large setbacks from the road and minimal land clearing and disturbance near the road should be encouraged to continue. The following general recommendations point out ways to minimize visual impacts associated with development and respond to the goals and objectives already outlined:

- Concentrate road related commercial development near existing commercial activity--near the junction of the Parks Highway and Denali Wild and Scenic Road.
- Encourage smaller lot development in those areas with high visual absorption capability (on nearly level, densely vegetated river terraces), while using the open uplands for more dispersed development and land use. In these more open areas, development setbacks from the road and sensitive use of topography changes can be useful tools to minimize visual impacts.
- Minimize the number of access roads to individual parcels from the highway itself. Feeder roads and collector streets are preferable to numerous driveways which are not only visually disruptive but also create problems for safe entry and exit, drainage, and maintenance.
- Encourage developers to use trained architects and/or landscape architects as consultants for in private land developments larger than single residences. As noted in other parts of this report, the state should provide financial aid or other incentives for such professional assistance on developments adjacent to the Denali as well as other scenic roads.
- Avoid further development on the north side of the road from the existing dump acess road to just past Drashner Lake. Here the road overlooks a small valley and lakes with the Reindeer Hills as a backdrop, and it is a particularly attractive view. Development on the opposite (south) side of the road would be preferable and have much less visual impact.
- Adopt greenbelt width and management recommendations for all roadside lands.

Greenbelts (G)

Through privately owned lands roadside greenbelts can be a useful tool to help maintain scenic resource values as well as a means of buffering private landowners from road noise, dust and loss of privacy. Within this management unit three types of greenbelts are recommended:

- Along existing private landholdings with road frontage, it is recommended that a 25 foot wide greenbelt management strip beyond the road right-of-way be adopted. Within this area, the general objective is to retain a "naturally" appearing edge to the roadscape. Selective tree and brush clearing could take place in accordance with the individual landowner's needs as long as the alterations do not significantly modify the natural character. Structures within this area would not be appropriate.
- On roadside lands to be owned by Cantwell Village Inc., it is recommended that a 100 foot wide greenbelt management strip adjacent to the right of way be established. The first 25 feet of this greenbelt would be subject to the same considerations outlined above. Within the remaining 75 feet vegetation clearing and landform modification would be acceptable, however, no permanent structures would be encouraged in this area. This functions as a setback to help keep development away from the road.
- Where the highway passes near the Jack River a 100 foot wide greenbelt beyond the right of way should be established along the south side of the road. No vegetation clearing or landform alteration is desirable here in order to help preserve a naturally appearing foreground for views towards Broad Pass. (See management unit map, area R-1)

Right-of-Way Management (ROW)

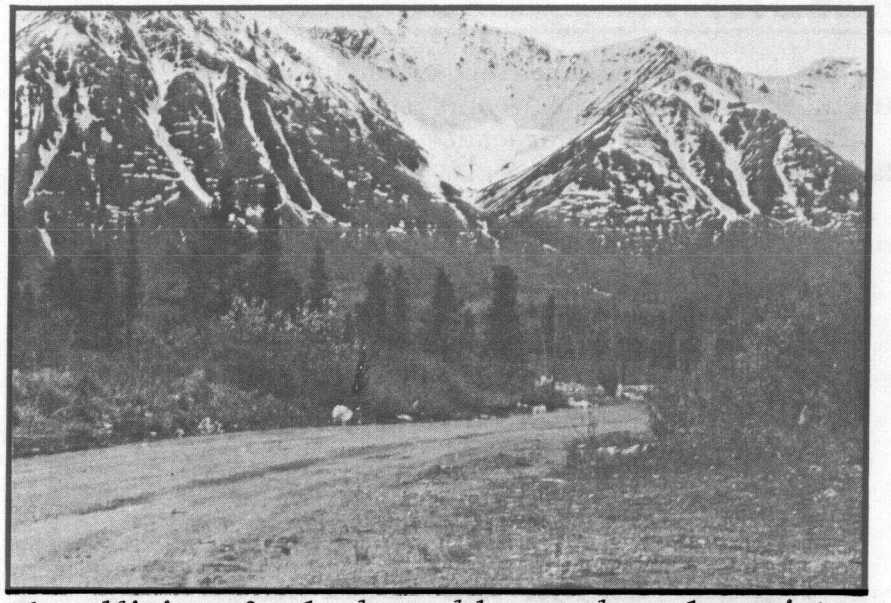
Because of extensive private land ownership within this unit, the greatest opportunity and responsibility for effective scenic resource management rests with the DOTPF. Right-of-way management should strive to minimize the visual impact of the road itself and also provide a natural and visually pleasing foreground from which to view the surrounding mountains. This is best accomplished through a minimum of roadside brush control measures and by encouraging the natural landcover to encroach upon the road edge as close as possible. At the same time, right-of-way management should be coordinated with greenbelt management so management actions within the two areas are directed towards the same end:

ROW-1 Within this area, right-of-way management should encourage viewer attention and focus to the north, across a low creek valley with small lakes. Vegetation on the south side of the road should be trees and shrubs to screen views in that direction. Right of way vegetation on the north side of the road should be scattered trees and low shrubs to allow views while retaining the natural appearing character.

Impact Mitigation (M)

The following sites require special attention to mitigate significant visual impacts.

R-1 Reclamation This area where the road passes the Jack River and its floodplain has been severely disturbed by road construction and maintenance activities. As noted under the discussion for road realignments, the existing alignment is preferred. Efforts need to be directed at reestablishing riparian vegetation adjacent to the south side of the road (poplars, willows and alders). Roadcuts on the north side need to be stablized and vegetation established where possible.



The addition of a landscaped berm and regular maintenance would minimize the visual impact of this unattractive garbage dump. All similar facilities should be better screened and located further from scenic roadways.

Because of the proposed powerline routing through this area road turnout development is not recommended. Existing gravel turnout areas should be revegetated now to promote natural reclamation.

Scr-1 Screening The existing dump is highly visible and only 1/8 mile from the road. Garbage overflow and windblown trash adds to the negative impact. Effort should be devoted to containing garbage at the present site; but in addition, it is desirable to relocate the dump away from the road in a lower, more sheltered location. Proper solid waste management practices should be adopted to contain trash within the site and provide for regular removal. The existing dump should be screened by a berm at the edge of the right-of-way to minimize its negative impacts. The berm could be designed and planted to visually blend with adjacent landforms and vegetation.

Turnouts (T)

Two types of turnouts are recommended in Unit 1, including a rest area - interpretive site for the landscape character type and a roadside pull off.

Rest-1 Rest Area This general area has been identified by the DOTPF as a turnout and by the Denali Highway Information Plan as a visitor center site. The site noted here is recommended for development as a roadside rest area with an interpretive theme related to the Broad Pass landscape. This site provides views of Mt. McKinley on clear days in addition to panoramic views of all surrounding landscape features and the development around Drashner Lake and Cantwell in the distance. Safe traffic entry and exit from both directions is possible due to site location on a hillslope and the long straight road alignment. Facilities should include rest rooms, some picnic sites and an interpretive display. This display should identify where to look for Mt. McKinley as well as name other visible landscape features. There is also the opportunity to develop a trail connecting with another trail easement to the east which could provide travelers with the opportunity to hike down to the Jack River.

The one limitation on site development here is the open nature of the landscape. Not only can rest area development have a significant visual impact on the surrounding area, but also the development of adjacent private lands can impact the views from the turnout. The layout of the rest area and the design of the structures must be sensitive to the high visibility of the area. In addition, a 300 foot wide greenbelt management strip should be established around the rest area site to keep development at a distance and to retain an undisturbed foreground for the panoramic views.

T-1 Turnout This site has been identified for turnout development by DOTPF. It would be used primarily by travelers heading west since it is on the north side of the road and entry-exit for eastbound vehicles is poor. While this site does provide for pleasing views out over the small creek valley and towards Reindeer Hills, its major problem is its proximity to the local dump. While this site could be a pleasant small turnout that is relatively easy to develop because it is already a gravel surfaced, graded area turnout use is not encouraged as long as the dump remains in its present location.

Information Turnouts (IT)

Two development alternatives for information turnouts are possible around the junction of the Parks Highway and the Denali Wild and Scenic Road. The first is to establish three small turnouts within the road right of way, one for travelers arriving at the junction from each direction (Sites I T 1, 2, and 3). The second alternative is to develop a single information turnout for all travelers (site I T 4). This alternative would require the greatest amount of land, could not be done within the right of way alone, and would be the most costly due to land acquisition costs.

IT-1 The information turnout for travelers arriving from the south along the Parks Highway would be located just beyond the crossing of the Jack River on the east side of the highway. This site offers good visibility for exit and return to the road, is visible from the junction, and provides some views up the Jack River. Its proximity to development would help reduce vandalism. Traffic is slower here as it is approaching the junction and the presence of roadside activity also helps to slow vehicles. Existing roadside vegetation adequately screens adjacent development and some of it near the Jack River could be selectively cleared to open up better views. The primary problem with the development of this site would be its proximity to

commercial roadside development. However, if the small turnout area and information board is kept as close to the bridge as possible and special care is taken with respect to right of way management this problem can be easily overcome.

An alternative site would be near the south side of the bridge over the Jack River. Here the views are much better up towards the Denali Road and there is more space for development. gravel extraction has sevrely impacted this site, and it would require considerable reclamation in order to make it into a comfortable turnout.

IT-2 This information turnout is recommended for travelers on the Parks Highway arriving from the north. It is located just north of milepost 210, or.2 mile from the actual junction on the west side of the Parks Highway. There are no amenities or distinctive views--its primary attribute is its proximity to the actual junction. Development would consist of a road widening to provide turnout and stopping space for 2 to 3 vehicles and an information board. Development would be within the existing right of way. Proper planting and vegetation management within the right of way could provide adequate screening from adjacent land development. The major limitation to the development of this site would stem from intensive commercial development of adjacent private lands resulting in numerous access roads and signage which could conflict with the visibility and functioning of the information turnout.

One alternative site is an existing paved turnout approximately 1 mile north of the highway junction. This site could be readily developed at minimal cost since only an information board would need to be added. Its shortcomings stem from its distance from the actual junction, assuming travelers prefer road information close to the actual decision point.

IT-3 For travelers arriving from the east this information turnout is recommended. It is approximately .2 mile from the junction and on the north side of the Denali Road. Development would be within the road right of way and consist of a small gravel area providing stopping space for 2-3 vehicles and an information board. Landscaping would be needed to effectively screen and separate the turnout from adjacent land developments.

IT-4 This information turnout which could be developed to meet the information needs of travelers arriving from all directions could be developed on vacant land at the northeast corner of the actual road junction. This corner lot would need to be purchased since the right of way alone would be inadequate. Primary entry and exit should be from the Denali Road rather than the Parks Highway in order to minimize safety hazards. The site has no particularly distinctive viewing opportunities or other amenities other than its central and visible location. Because it would be designed to service travelers arriving from all directions, the design of the circulation system and information boards would be more complex and costly and more extensive parking would need to be provided. In addition, the site would require landscaping to make it visually attractive. In spite of these limitations, it would be a useful travel information center - including restrooms, telephones and trash receptacles - and would undoubtedly receive considerable use.

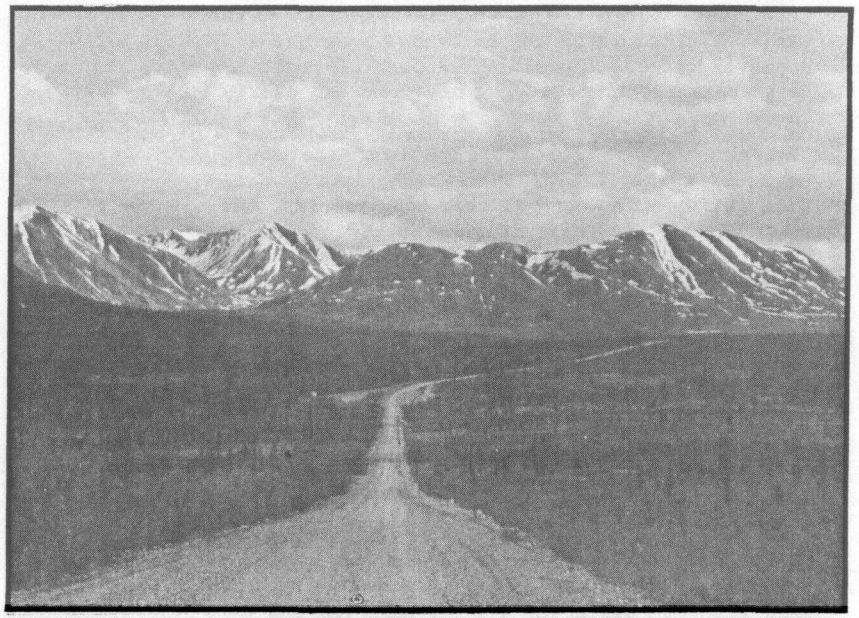
Reindeer Hills & Pyramid Peak

General Description

Management Unit 2 begins about 5 miles east of the Parks Highway junction and extends 14.3 miles east. The western portion of the roadway skirts the south side of the Reindeer Hills through an extension of Broad Pass, then its eastern portion follows closely along the south bank of the Nenana River. This change from Broad Pass to the Nenana River is dramatic from a visual standpoint; the traveler leaves a broad plateau contained by distant mountains and enters a narrow river corridor enclosed by nearby mountains.

The visual diversity of this unit contributes to its high scenic quality. The Alaska Range continually defines distant views, and in clear weather Mt. McKinley is visible. Reindeer Hills and Pyramid Peak dominate the middle ground, and together with the Talkeetna Mountains to the south, create a sense of enclosure. Distinctive views of the Nenana River and other small streams and lakes contribute to the overall richness of this landscape.

This is a particularly important road segment because it is the gateway to and exit from the wild and scenic Denali Road. Land use and development is minimal other than gravel extraction sites associated with road maintenance. Opportunities exist for recreational and homestead development.



The open plateau of Broad Pass bordered on the north by the Alaska Range is characteristic of the western end of the unit. The openness of the terrain calls for carefully landscaped turnouts.

Land Ownership & Management Responsibility

The Cantwell Village Corporation and AHTNA Regional Corporation own or will own the majority of the land near the roadway in approximately the

2 Reindeer Hills & Pyramid Peak

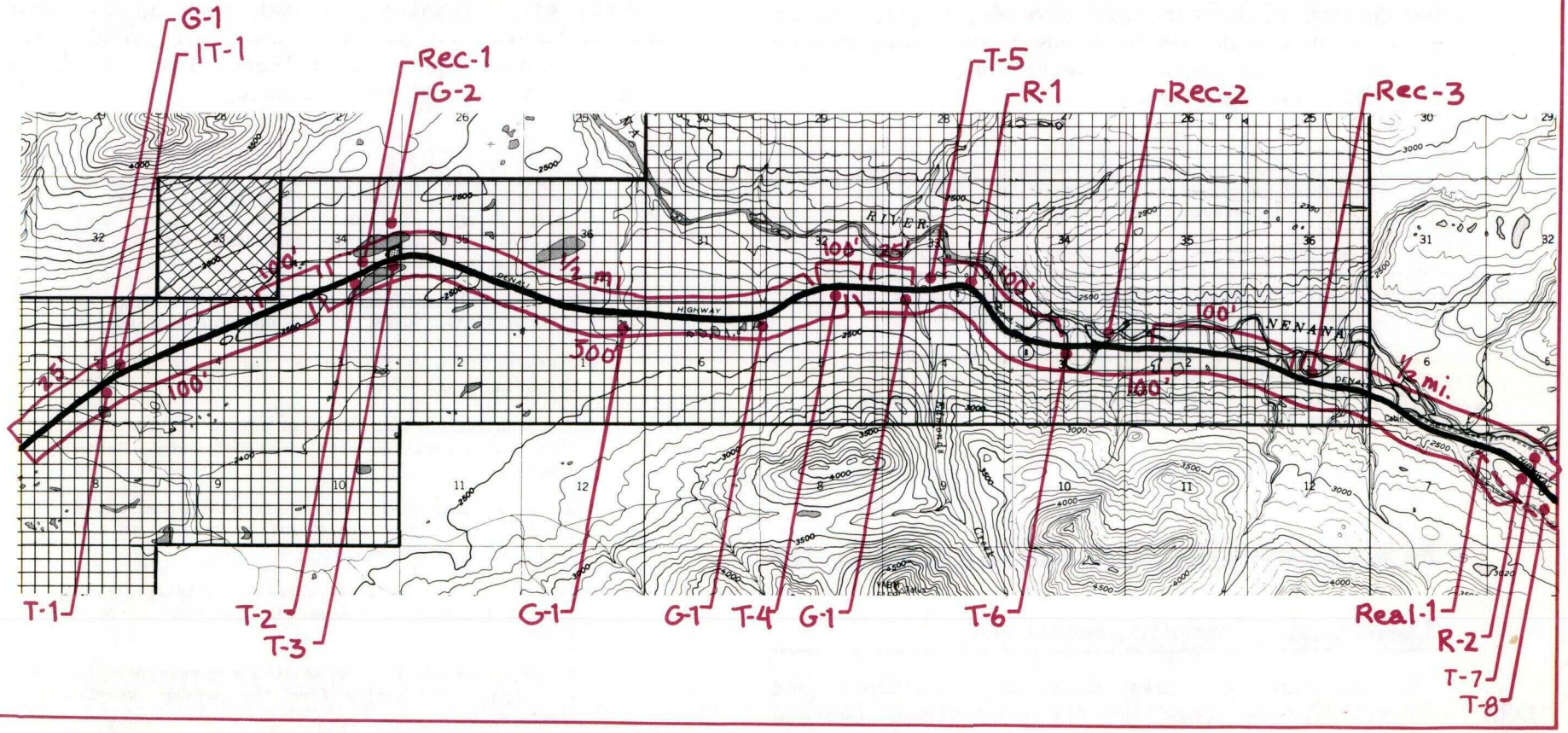
Assessment Units D3-D8

KEY

- T- Turnout
- G or 35 - Greenbelt
- Real- Proposed Realignment
- R- Reclamation
- Rec- Recreation
- IT- Information Turnout

- Native Corp. Land
- Native Selected Land
- Federal Land

NORTH 0 1 2 mi.



western 12 miles of the unit. Land surrounding the eastern 2 to 3 miles is managed by the BLM. In addition, the unit contains a recreational withdrawal and several DOTPF material sites. DOTPF manages a 300 foot right-of-way (R.O.W.) throughout most of the unit.

Visual Resource Management Objectives

Management goals for this diverse, highly scenic portion of the Denali Wild and Scenic Road relate to three broad themes: retention, reclamation, and sensitive development.

Retention: To retain and enhance those natural landscape elements which make this unit a distinctive gateway to the Denali Road.

Reclamation: To reclaim those areas disturbed by gravel extraction and right-of-way maintenance practices which significantly detract from the quality of the driving and entry experience.

Sensitive Development: To encourage sensitive development which will enhance the traveler's recreational experience and sense of entry to the Denali Wild and Scenic Road.

Management Recommendations

Land Use & Development (LU)

The location of this unit near Cantwell and Denali National Park and the predominent pattern of private ownership makes it attractive for both recreational and residential development. In particular, recreational development can provide additional opportunities for hiking, camping, and fishing, thus increasing the enjoyment of the area's numerous resources. At the same time, developers should be reminded that the area's undeveloped quality is a major part of its attraction, and thus one of the area's most marketable features. Therefore, development that decreases scenic values will tend to decrease the area's popularity as well.

Careful site planning can both open up the area for increased use and enjoyment and protect its scenic resources. Guidelines for sensitive development include the following:

- Locate development away from the roadside, thereby using distance to reduce the structures visual impact. This will also reduce the impact that the road and its associated dust, noise, and other negative factors have on development.
- Locate structures behind trees or landforms so they will blend with the natural surroundings.
- Minimize the modification or disturbance of landforms and vegetative cover.
- Use construction materials in colors and textures that are compatible with the surrounding landscape.
- Design structures so that their shapes and sizes harmonize with the scale and character of the surrounding landscape.
- Use Alaskan historical/cultural building types such as log cabins, lodges, etc. as much as possible.
- In open, exposed landscapes locate development in the opposite direction from the primary scenic views.

Greenbelts (G)

In this unit, separate greenbelt recommendations have been developed for private land and public land.

Private Land

As stated previously, the wilderness or undeveloped character of this area is one of its most attractive features, and private land owners should consider this quality when they develop their land. A greenbelt is one management tool which can aid land owners in maintaining the existing landscape character as viewed from the road by retaining a natural strip of vegetation between the road right-of-way and the land use. These greenbelt recommendations are established for the voluntary cooperation of private land owners as a means of helping them retain the area's scenic resource values.

Appropriate greenbelt width is determined by the area's visual absorption capability, which is a function of the existing vegetation density and the slope of the land. Five greenbelt categories are recommended for this unit:

- In areas with high visual absorption capability, a 25 foot greenbelt beyond the R.O.W. is adequate.
- In areas with moderate to low visual absorption capability, a 100 foot greenbelt beyond the R.O.W. is recommended.
- In areas with a very low visual absorption capability (usually very open land with few or no trees), a 300 foot greenbelt beyond the R.O.W. is recommended.

G1 Where stream beds cross the road, lateral views often extend far up the valleys. Greenbelts in these visually unique places are recommended to cover the entire visible creek drainage channel.

G2 Lakeshores should be protected by a 100 foot greenbelt which allows public recreation use.

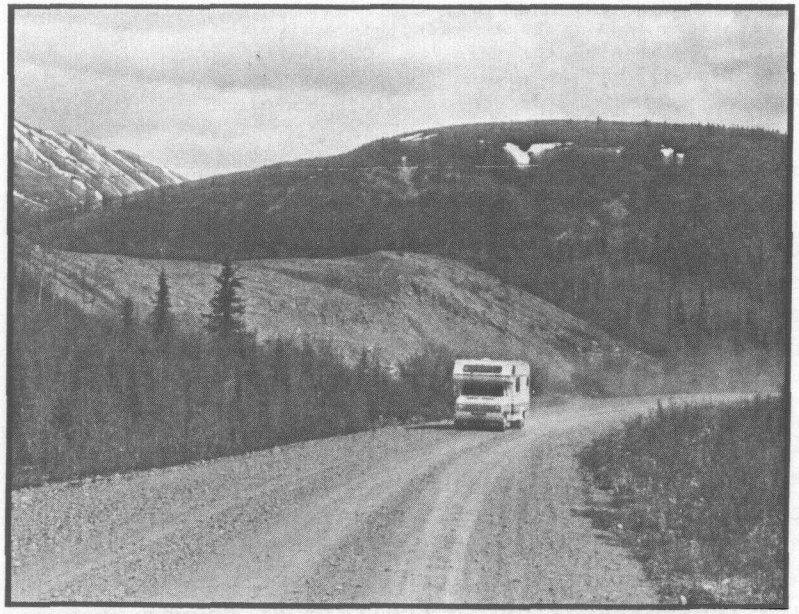
Within these greenbelts it is recommended that no structures be built, no landform alteration take place, and all vegetation be retained. Greenbelt recommendations are shown on the unit map.

Because they own large parcels of land, Native corporations could adopt these recommendations for the use of their land, hence making a significant contribution to the retention of the regions scenic character. Any future corporation land sales, leases, or other development could incorporate these standards in the form of scenic easements.

Public Land

The use or development of BLM land in this unit should conform to greenbelt recommendations for adjoining lands in Management unit 3. Briefly, these recommendations are:

- A 100 foot greenbelt is recommended for areas with adequate screening potential (these areas are shown on the map).
- A 300 foot greenbelt is suggested for all areas on the south side of the road which do not have the 100 foot designation.
- A one-half mile special greenbelt is recommended for the north side of the road for all areas not having the 100 foot designation. Development may occur in this greenbelt, but must meet performance standards for minimizing visual impact.



Roadside gravel extraction conflicts with the Denali's "wild and scenic" qualities. Existing sites such as this one should be recontoured to a natural profile and revegetated.

Materials Site Location & Reclamation (R)

Roadside gravel extraction is the major source of disruptive visual impacts in this otherwise very scenic management unit. Gravel extraction for roadway maintenance need not be incompatible with scenic quality, and the DOTPF should establish practices which meet road maintenance requirements while maintaining and enhancing visual quality.

Since the on-the-job decisions by maintenance crew supervisors and heavy equipment operators most directly affect the appearance of the road, they should employ extraction practices which maintain visual quality. A roadside management manual for scenic resources, covering gravel extraction practices among others, should be prepared and distributed in conjunction with a training session/workshop for road maintenance crews. Guidelines for such techniques are:

- **Use extraction practices that minimize the disruption of adjacent slopes and vegetation.**
- **Locate gravel extraction sites outside the R.O.W.**
- **Carefully site access roads to materials sites to minimize their visibility.**
- **Give a high priority to reclamation of highly visible existing materials sites.**

There are too many gravel clearings and extraction sites for each to be individually mentioned in this report. However, the DOTPF should establish as standard operating procedure, policy and practices for reclaiming material sites and mitigating negative visual impacts. The following sites do merit specific attention:

R-1 This large gravel pit and exposed bank is highly visible for 1/2 mile along the road. Reclamation at this site is a priority because it is in full view of the proposed Edmonds Creek turn out.

R-2 Additional site analysis of this eroding roadcut is necessary to determine the source of the erosion problem and the options for mitigation.

Right-of-Way Management (ROW)

Indiscriminate brush clearing within the R.O.W to reduce wildlife road kill and improve driving visibility also impacts scenic quality. In general, natural vegetation should be left to the road

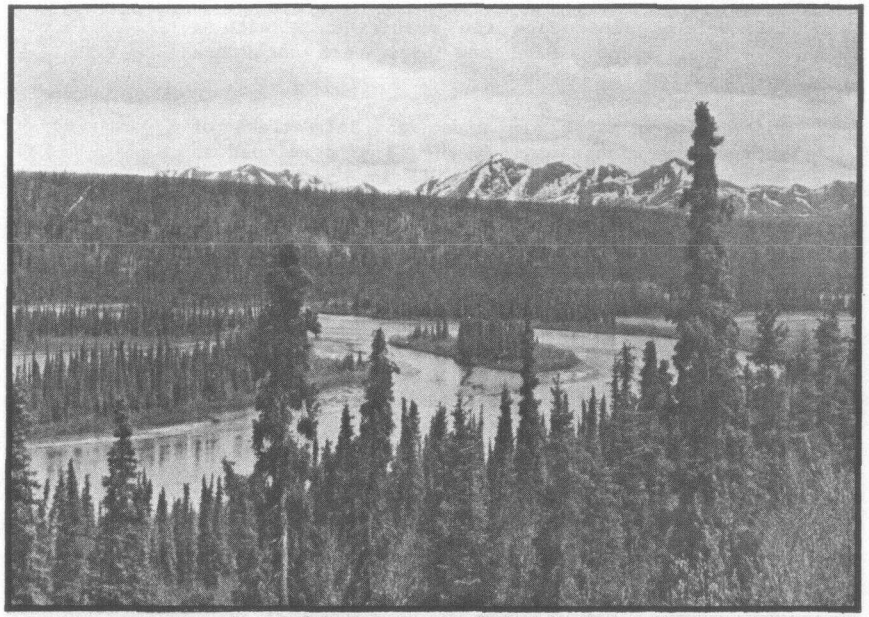
edge; however, where brush clearing is necessary, the following guidelines should be used:

- Minimize the amount of trees and brush that are cleared.
- Remove all slash from the R.O.W.
- Allow and encourage low growing vegetation - low brush or herbaceous plants - to colonize cleared areas.
- Vary the width of roadside management strips to produce an uneven, more visually interesting edge.
- Vary the height of the cut vegetation to create a "feathered" edge.

Turnouts (T)

Several management considerations are associated with roadside turnouts in this unit. Some existing turnouts accommodate use and do not require extensive maintenance. Others are in need of surface levelling and grading to make them fully functional. In several cases, the turnouts serve no particular need since they have neither good views, nor are they in demand as a pull off or turnaround. These latter turnouts should be closed off so that they can revegetate. There is also a need for new, sensitively designed turnouts where views are exceptional, especially to take advantage of views of Mt. McKinley. Turnouts with special facilities should have signage to alert travelers to their location.

T-1 The existing turnout at Fish Creek provides foot access to the creek. Any development in this area would be highly visible, and so development should be minimized. Maintain gravel surface on the high level area off the road. Good panoramic views are available from this clearing.



New turnouts should be located to take advantage of attractive vistas that are expressive of the landscape character like this expansive overlook of the Nenana River near the east end of the unit.

T-2 This existing 2 to 3 car turnout next to a lake provides nice views across the lake to the south of the Alaska Range and the Talkeetna Mountains. The turnout needs minor improvements in levelling and surfacing. The size should not be increased as it would become visually obtrusive. Large vertical elements, such as signs and tall trash barrels, should be avoided because they would detract from the view of the lake. A trail leading to the lake on the other side of the road could be added.

T-3 This wide turnout/parking lot is apparently for lake recreation. It is too large and dominates views from the road. The entry should be

narrowed to accomodate two passing cars with a five foot berm. Seed the berm, and encourage revegetation.

T-4 This vantage point has wide panoramic views of surrounding mountains. It should be developed as a road widening for 2 cars, 12 to 15 feet wide. There is no vegetative screening potential here.

T-5 The DOTPF's proposed turnout at Edmonds Creek is in a good location. The vehicular entrance and parking should be located a minimum of 150 feet from the creek. Provide a boardwalk or other minimal impact trail to the creek.

T-6 This site has an exceptional view up the creek bed to a rock ravine and mountain peak. It is an ideal pullout for photography. This should be developed as a 12 to 15 foot road widening, accomodating one car.

T-7 Of the several turnouts which have evolved in this vicinity to take advantage of particularly distinctive views of the Nenana River, this turnout appears to be the safest. It also has exceptional views of the Alaska Range. Severe erosion problems in this area require reclamation attention.

T-8 A turnout may be developed here if the realignment on the east is constructed. (See "Real-1")

Information Turnouts (IT)

Traveler information turnouts are recommended at each of the major road junctions.

IT-1 The BLM Denali Information Plan proposes a visitor information center at this location because of its unobstructed views of Mt. McKinley. This study recommends that a similar facility be developed instead at the Parks Highway junction so travelers can get road condition and recreational facility information without driving several miles down the Denali Road. Furthermore, Cantwell Village selections may place extensive roadside development in some jeopardy. While this site is not recommended for a visitors center, it is a good candidate for scenic viewpoint.

Recreation (Rec)

There is a need for improved recreation facilities in this management unit. Private land owners can provide these facilities if developed sensitively. Options for development include boat launching areas, campgrounds, or recreational home sites. There are also opportunities to develop public facilities in this unit. Because they are all located in sensitive and distinctive areas, careful site planning is necessary to protect high scenic values.

Rec-1 This BLM recreational withdrawal could be developed for lakeside activities such as canoeing, hiking, or possibly fishing. The screening potential in this area is limited, so vertical elements and parking areas must be carefully located to minimize negative visual impacts.

Rec-2 This DOTPF proposed boat launch could have high impact on this rare view of the Nenana River. Screened parking will be necessary. It could be located in a dense spruce grove on the east side of the site. Careful site planning is required in this sensitive area.

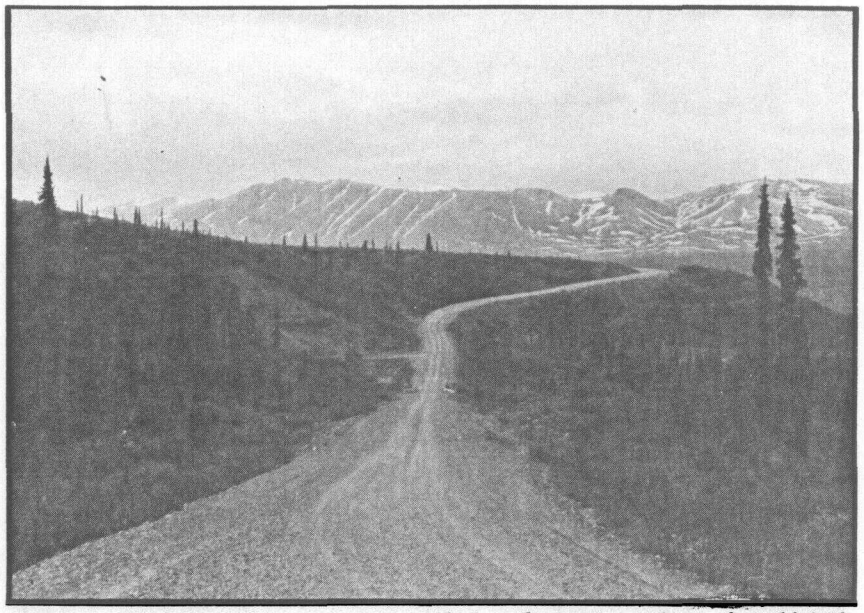
Rec-3 This alternative DOTPF boat launch site is also located in a highly scenic area. If possible, parking should be located on the uphill side of the road. Again, careful site planning is vital in this sensitive riverside site.

Realignments (Real)

The DOTPF has plans to upgrade and realign portions of the Denali Road. One of these realignments will have a significant effect at the eastern end of the unit:

Real-1 This realignment is apparently proposed to avoid a severely eroding slope. The realignment could orient travelers away from some of the most memorable views of the Nenana River. However, it also provides the opportunity to develop a turnout on the knoll to its north. If properly designed, this would offer a nice viewpoint of the Nenana, particularly if the foreground vegetation is carefully thinned to open and frame views.

Nenana River - Monahan Flat



The open, sparsley vegetated landscape makes it difficult to screen management activities adjacent to the road, like this large material site near Seattle Creek, a popular recreation area.

General Description

Management Unit 3 begins about 19 miles east of the junction of the Parks and Denali highways and extends 32.2 miles east to where the road turns south to parallel the Susitna River. In this unit,the road follows the Nenana River for about 10 miles, then travels southeast along the foothills of the Talkeetna Mountains. To the north is Monahan Flat, an expansive lowland area bordered by the Alaska Range and the Talkeetna and Clearwater Mountains.

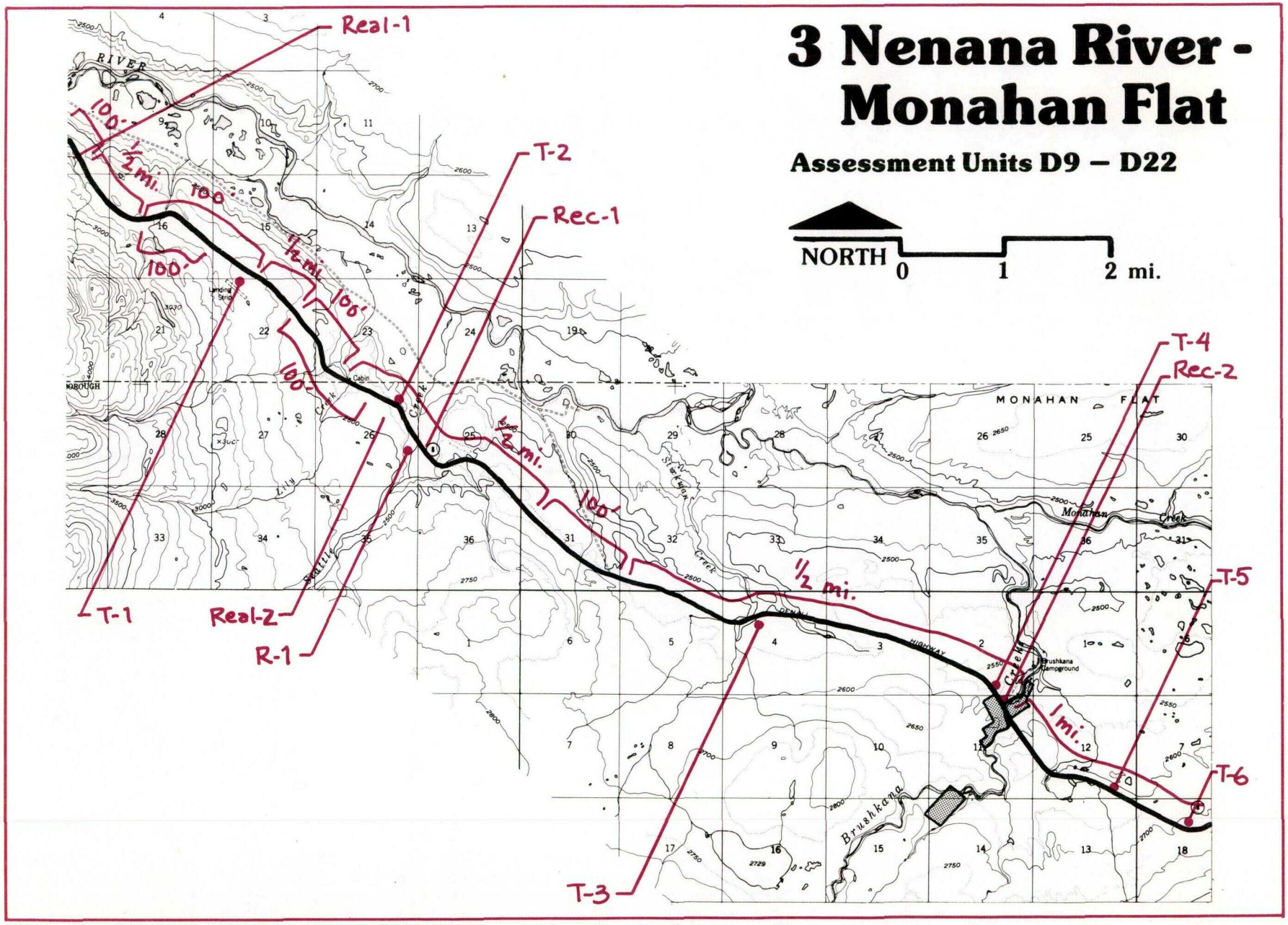
The dominant visual features within this unit are the lower peaks of the Talkeetnas to the south and the impressive Alaska Range to the north. In the eastern portion of the unit, the Clearwater Mountains dominate the horizon. There is a dramatic display across Monahan Flat of Mt. Nenana, Mt. Deborah, Mt. Hess and associated mountains and glaciers in the eastern half of the unit.

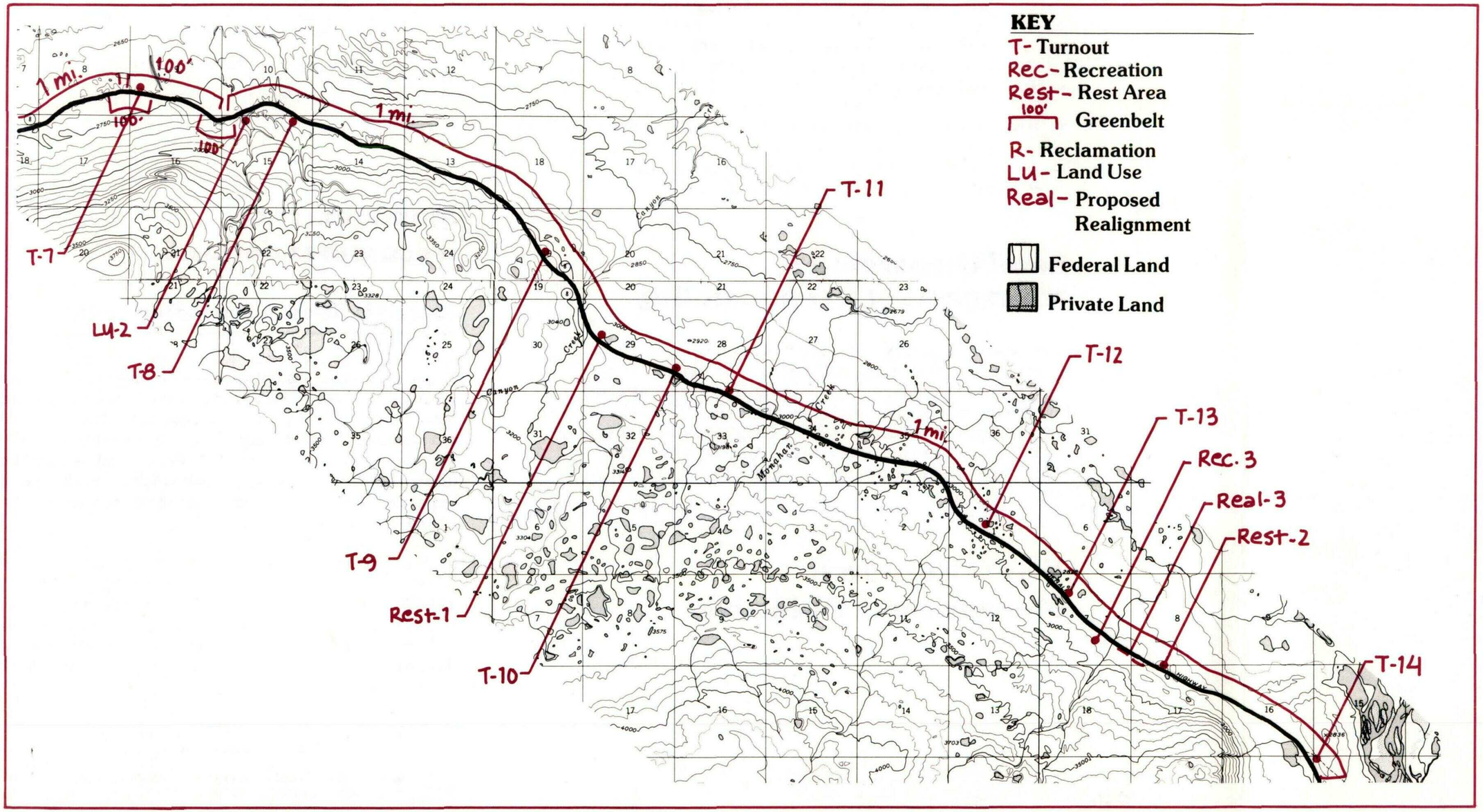
With the relatively sparse vegetation, roadside views generally encompass broad, expansive landscapes. Because of its low visual absorption capability, this landscape is particularly sensitive to development.

There has been little development in this unit. The two main nodes are located at Brushkana Creek and Adventures Unlimited Lodge. Other land uses are the roadway related gravel extraction sites and clearings

3 Nenana River - Monahan Flat

Assessment Units D9 – D22




KEY
T- Turnout
Rec- Recreation
Rest- Rest Area
100' Greenbelt
R- Reclamation
LU- Land Use
Real- Proposed Realignment
Federal Land
Private Land
1 mi.
100'
T-7
LU-2
T-8
T-9
Rest-1
T-10
T-11
T-12
T-13
Rec. 3
Real-3
Rest-2
T-14

which dot the right-of-way throughout the length of the unit. These gravel extraction sites, located immediately adjacent to the roadway, detract from the area's otherwise high visual quality.

In this broad, largely undeveloped area, wildlife is plentiful and the opportunity to observe animals in their habitat is an important part of the driving experience.

Land Ownership & Management Responsibility

The vast majority of land adjacent to this portion of the road is owned and managed by the BLM. There are two recreation withdrawals at Brushkana Creek and Canyon Creek and private land holdings at Brushkana Creek. A 300 ft. right-of-way is managed by the DOTPF and they also maintain a material site in this unit.

Visual Resource Management Objectives

Management objectives in this highly scenic and relatively undeveloped unit relate to three broad themes: reclamation, retention, and enhancement.

Reclamation: To reclaim those areas where gravel extraction has caused extensive disruption of right-of-way land.

Retention: To retain the existing wild and scenic character of the landscape through sensitive right-of-way management and land use.

Enhancement: To enhance the traveling and recreational experience by providing additional facilities to meet travelers' needs.

Management Recommendations

Material Sites & Reclamation (R)

Roadside gravel extraction and grading practices are the major cause of negative visual impacts in this otherwise very scenic management unit. Gravel extraction for roadway maintenance need not be incompatible with scenic quality. The DOTPF should establish new practices that accommodate road maintenance needs while maintaining and enhancing visual quality.

It is the actions of maintenance crew supervisors and heavy equipment operators that directly affect the appearance of the road. For this reason, training sessions should be held which teach grading techniques that support visual quality. Guidelines for such techniques are:

- Adopt grading practices that minimize disruption of adjacent slopes and vegetation.
- Restrict gravel extraction from within the R.O.W.

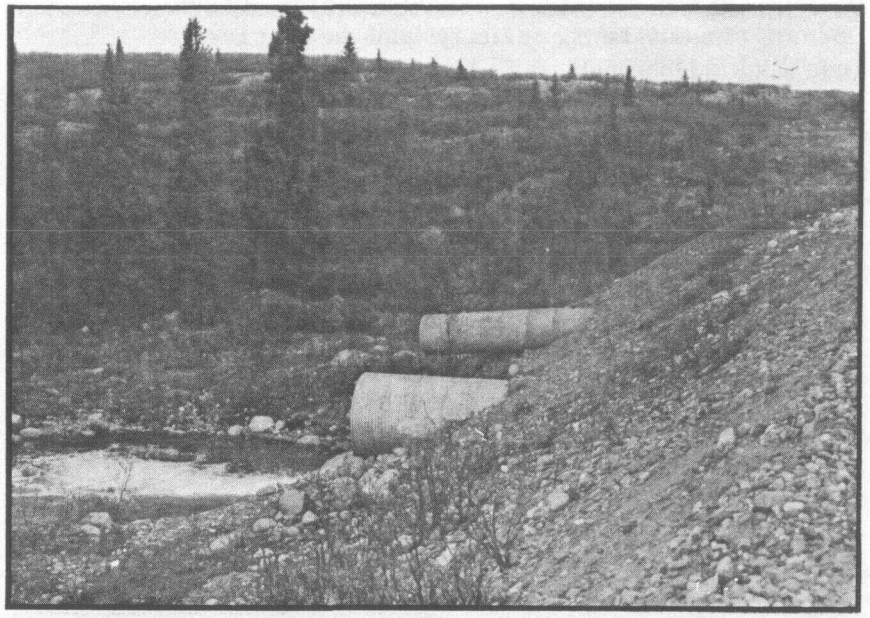
- Locate any new material sites so they are screened from view of the road.
- Screen entrances to material sites to minimize visibility.
- Give high priority for reclamation to those highly visible active material sites.

There are far too many gravel clearings and extraction sites for each to be cited in this report. Those sites which should be given a high priority for immediate reclamation are identified, but general reclamation and maintenance practices must be established to repair the extensive roadside disruption in this management unit.

R-1 The gravel extraction cuts in the hillside here severely degrade Seattle Creek's scenic quality, particularly as a recreational use node. Because of the importance of recreation at this location, gravel extraction should be discontinued and the site regraded and revegetated to conform to surrounding landforms.

R-2 Assessment Unit D-19 should be given special attention to reclaim the 14 gravel clearings immediately adjacent to the road. A rest area (Rest-1) and two turnouts (T-10 and T-11) have been recommended to reclaim three of these clearings. Those remaining should be reclaimed by grading the sites to their natural contours and revegetating them.

R-3 If this proposed material site is mined, there should be 100 feet plus the right-of-way retained for screening. Trees in this particular location offer adequate screening if the pit is properly sited and developed.



With proper placement, fill contouring, or screening, culverts can be made to be less visually obtrusive.

Right-of-Way Management

Indiscriminate brush clearing along the R.O.W. to reduce wildlife road kill and improve visibility also influences scenic quality. It often diminishes the wild and natural quality of the road by removing a broad swath of vegetation and disturbing the soil. Current practices must be re-evaluated to first determine where clearing is actually necessary and then to identify appropriate practices which provide visibility yet minimize the visual disturbance.

Where vegetation clearing is necessary, trees and brush should be carefully and selectively cleared and all slash and debris removed from the roadside. Low shrubs and ground cover should be allowed to colonize these areas. Long cleared swaths of consistent width have a very unnatural appearance and so the width of clearings should be varied to create an uneven, more natural appearing edge.

As discussed in the general recommendations for the Denali Wild and Scenic Road, a system of right-of-way management techniques can be implemented that will both maintain the road to a safe standard and also enhance the scenic quality of the area.

Turnouts (T)

There are many turnouts recommended for improvement to enhance the experience of driving this stretch of highway. At present, a large number of gravel clearings serve as unmaintained turnouts. There are so many, in fact, that they become a source of visual clutter. Those not specifically recommended for improvement should be closed to auto access and further gravel extraction so that revegetation can occur.

Turnouts with special facilities such as information and interpretive signs, trailheads or camping facilities should be signed to alert travelers to their location.

T-1 This location offers a unique opportunity for a 360° panoramic view of the mountain landscape. There is no screening potential, therefore, this turnout should be developed as a simple road widening for one or two cars to minimize its visual impact.

T-2 This unpaved widening has excellent panoramic views. The edge at the entrance needs regrading, and the outer edge drops off sharply. The BLM Denali Information Plan identifies a botanical point of interest near this location to illustrate the effects of permafrost, climate, altitude and aspect on plant growth. This turnout may serve this same purpose.

T-3 This DOTPF proposed turnout at Stickwan Creek would provide an interesting view across the road and up the creek drainage channel. However, this is a fragile area with no screening potential and development should be limited to a road widening for two cars.

T-4 This is an excellent viewpoint of the Alaska Range in close proximity to the valley floor. To reclaim this gravel extraction site, the large mound of gravel should be regraded to provide more viewing opportunities and a walking trail should be developed to a photographic point of interest. Additional vegetation, particularly at the turnout corners, would reduce the visual impact of the clearing. This may be a good location for an interpretive sign that describes the lowland landforms, plants, and wildlife.

T-5 A road widening large enough for two cars could be provided here, offering expansive views of the Alaska Range and Monahan Flat. Development should be kept at a minimum due to the low vegetative screening potential.

T-6 Views of the Alaska Range and a wooded portion of Monahan Flat are available from this existing small turnout. There is safe access, ut the entry and surface need regrading. Planting vegetation around its edge would improve its appearance.

T-7 This existing turnout and small campsite is nicely tucked away off the road and has pleasant mountain views. The site should be retained; however, the green and white garbage can should be moved closer to the trees to provide screening.

T-8 This small gravel clearing next to a small lake would make a good trailhead for a short

hike to numerous lakes. Views from this turnout are similar to those in nearby turnouts, so the trail potential is the impetus for its development.

T-9 This existing gravel clearing is proposed as a turnout by DOTPF Its excellent views of Mt. Deborah, Mt. Hess, and the glaciated Alaska Range make it a good location for interpretive information about the mountain peaks, and the origins of the Susitna and Nenana Rivers. The site requires minimal development.

T-10 This existing gravel clearing offers excellent views. Regrading the entrance and turnout surface is necessary.

T-11 This DOTPF proposed turnout is a good location for views of mountain peaks across Monahan Flat. For reclamation, the existing gravel extraction and storage site needs regrading followed by revegetation to soften the edges.

T-12 Both the Denali Highway Information Plan and the DOTPF recommend this site as a turnout. BLM identifies it as a wildlife point of interest since the nearby kettle lakes attract waterfowl, and caribou sightings are fairly common. Mountain views from here are also notable. To make the site usable, the entrance and surface should be graded and the edges of the site planted with brushy vegetation.

T-13 This existing gravel clearing will make a good viewpoint because of its position slightly above the road. Regrading of the entry and surface is necessary.

T-14 The BLM has proposed this area be developed as a historical/landscape interpretive point. Besides breathtaking views of Mt.Deborah, Mt. Hess and the Susitna River, the site has an excellent view of Denali—the old goldmining town. Site development would be both expenive and disruptive. The parking lot must be carved out of a glacial till deposit in an area with no screening potential, and a 600 yard trail must be constructed to the hilltop view. The trail must cross wet tundra and should be sensitively designed to minimize the impact on the terrain and the local wildlife populations. In spite of these difficulties, the potential for views, wildlife observation, and interpretation of the placer mining process makes this a good candidate site for turnout development.

Rest Areas (Rest)

A system of rest areas is proposed along the four roads to provide travelers a place to stop for a time, have lunch, or take a short hike and also to learn about the character of the landscape they are traveling through. This requires a larger site than for a simple turnout, one that provides for a variety of facilities and the opportunity for a good expression of the landscape. Two sites have been recommended for this purpose, but only one should be selected for development.

Rest-1 This site is the preferred location for the rest area. It offers an excellent view of Mt. Nenana, Mt. Deborah, and Mt. Hess as well as foreground views of a lake and Monahan Flat. At the end of a short drive to the north, the existing clearing has room for 15-20 parking spaces. A trail leading to the nearby lake is possible. This site needs considerable reclamation—removing trash and regrading gravel piles and the driving surface. Revegetation of some of the disturbed area is also necessary since this site is exposed to storm winds which blow loose soil and create a nuisance.

Rest-2 The alternative rest area site has nice views typical of this area, however it lacks other site amenities. In addition, development here would require reclamation of the materials site, including grading and revegetation. If not developed for a rest area the site should be used as a turnout.

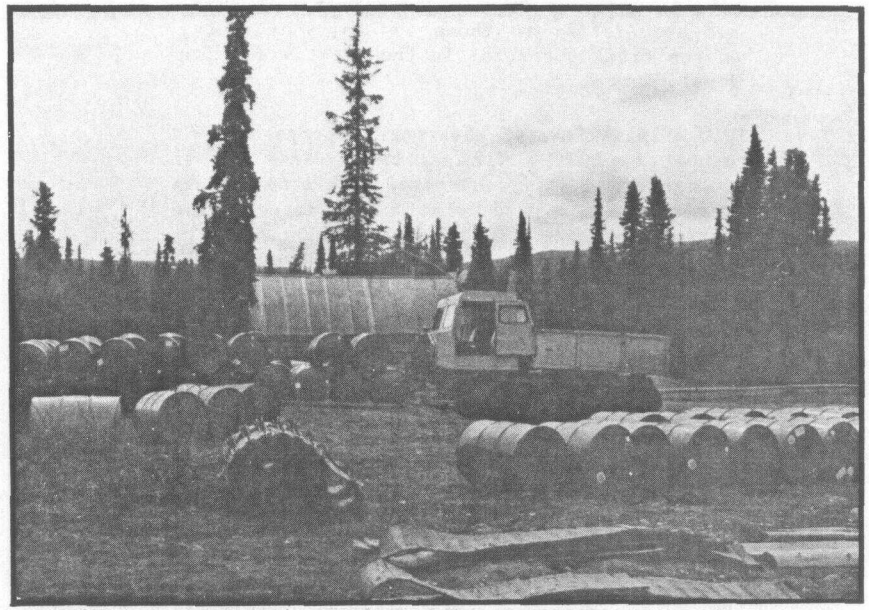
Recreation (Rec)

Although natural amenities abound, there are few developed recreational facilities in the unit. While this encourages travelers to independently explore the off-road area, the addition of another campground and several marked trails would make the Denali more "accessible" to visiting recreationists who feel more comfortable in developed recreation areas. Moreover, this development need not diminish the wild quality of the road. Additional study is needed to determine specific sites and site designs, but the following recommendations should form the preliminary basis for investigation:

Rec-1 Seattle Creek, which already attracts regular use from fisherman and sightseers, has additional use potential. The turnout should be located at least 200 feet from the creek, with a boardwalk constructed across the muskeg for creek access. The entire site is highly visible, and could easily appear congested with heavy use. There is a small developable area on the southeast side that could provide some screened parking. Nearby gravel clearings may serve for overflow parking. Reclamation of the disturbed area on the northeast side is necessary to maximize this site's potential.

Rec-2 The Brushkana Campground is heavily used but is sited in a well-screened location off the road. Additional planting at the entrance would make the present open clearing look more natural. A sign is needed to note the viewpoint and the trailhead in addition to the campground.

Rec-3 This well-screened area along a creek could provide a limited number of campsites. The site would require grading for access. On-site vegetation should be retained to help screen the site from the road.



In addition to the services they provide, lodges can be an important human element on the landscape. However, clutter and unscreened open storage can turn a potential attraction into an eyesore.

Land Use & Development (LU)

Most of the land adjacent to the road is managed by BLM. This, coupled with the relative remoteness of this area and harsh climate, suggest that little development will occur in this management unit in the near future. The most likely development would include mining operations, roadside recreation facilities, and, to a lesser extent, some scattered homestead developments. Because of the expansive views in this unit attributable

to the sparse vegetation and flat or gently sloping land, these activities could be highly visible. If not sensitively sited and constructed they would diminish the Denali's wild and scenic character. The following guidelines are suggested for future development in Unit 3 and could be incorporated into BLM's plan for the Denali Block.

- Give highest priority to protecting scenic, wildlife and recreational resources.
- Encourage the development of recreational facilities and scattered recreational homesites in selected nodes. Discourage the scatteration of uses visible from the road.
- Other than for recreational purposes, discourage commercial, industrial or settlement uses.
- Discourage mining and mineral leasing within one mile of the road. Access roads through the 1 mile corridor and development outside the corridor should conform to guidelines designed to protect the road's scenic quality, such as minimizing vegetation clearing, using landforms to screen structures and guide road alignment, etc.

LU-1 The Adventures Unlimited Lodge is an attractive wooden lodge structure, but the visual clutter between the lodge and the road detracts from the view of the lodge and its surroundings. Gas barrels belonging to BLM and other government agencies line the front of the building. These agencies should pay the cost of constructing a wood screen to mitigate the barrels' appearance. Other unnecessary clutter should be removed from the roadside.

Greenbelts

The land adjacent to the roadway in this management unit is predominately under the management of the BLM. The BLM is a multiple use agency and could possibly open this area to certain kinds of development. It is important that the agency establish greenbelts as a management tool to mitigate the visual impacts of future developments in this highly scenic area.

Because of generally sparse roadside vegetation, and flat or gently sloping lands which expose broad views of the landscape, this area is particlarly sensitive to the visual impact of development. To respond to the special needs of this area, a unique system of greenbelts is recommended. Primary views in this unit are oriented north towards Mt. Nenana, Mt. Deborah, Mt. Hess, and their associated mountains and glaciers. Because of this, the impact on visual quality is a lower priority south of the road, and special considerations are required north of the road.

In areas which have adequate screening potential, a 100 foot greenbelt beyond the R.O.W. is recommended. In this greenbelt, no structures should be built, no landform alteration allowed, and all vegetation should be retained. Areas with this greenbelt designation are located on the management unit map.

A 300 foot greenbelt beyond the R.O.W. is recommended for all areas south of the road which do not have the 100 foot designation. Within this greenbelt, no structures should be built, no landform alteration allowed, and all vegetative cover retained.

A one half mile special greenbelt is recommended on the north side of the road from Brushkana Creek west to the end of BLM land, and a one mile special greenbelt from Brushkana Creek east to the end of the management unit are recommended for those areas where a 100 foot greenbelt is not specified.

In these greenbelts, no development of public land may occur within 500 feet of the R.O.W. In the remainder of the greenbelts, development may occur but must conform to performance standards to minimize visual impacts. Each potential developer could be required to submit a visual impact statement and show through photographs, sketches, or other visual simulation techniques, the visual impact the proposed development would have.

Techniques for minimizing visual impact, around which performance standards should be developed are:

- Site development some distance from the road.
- Site structures behind trees or landforms which would screen its view from the road.
- Use construction materials whose colors and textures blend with the surrounding landscape.
- Minimize disturbance of landforms and vegetative cover.
- Design structures so that their shapes and sizes harmonizze with the scale and character of the surrounding landscape.
- Use Alaskan historical/cultural building types such as log cabins, lodges, etc.

Realignments (Real)

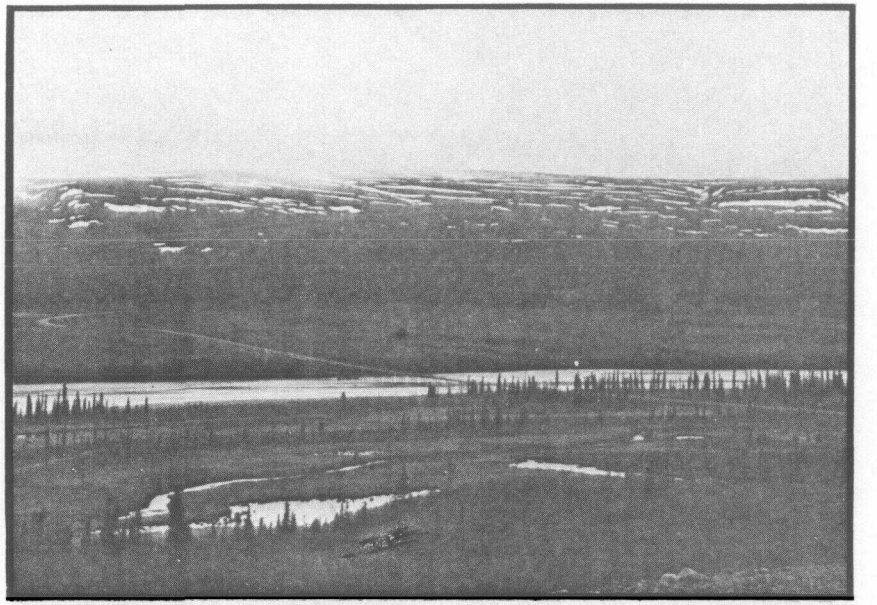
The DOTPF has proposed three road realignments in this unit. Their general purposes are to avoid problems of road maintenance with the existing alignment, or to straighten curves to permit faster travel.

Real - 1 This alignment was discussed in Management Unit 2.

Real-2 This realignment straightens a low speed curve. The old alignment could be developed as a scenic turnout.
See T-2 under "Turnouts."

Real-3 This proposed realignment would straighten a descending curve which adds a unique driving and visual experience. The proposal would most likely require additional large cuts and fills that would have significant negative visual impacts. From the standpoint of scenic quality, it is recommended that the existing alignment be retained.

Susitna River Crossing



The dramatic Susitna River crossing is a prime recreation area, but the site's low visual absorption capability demands sensitive development to retain the high scenic value.

General Description

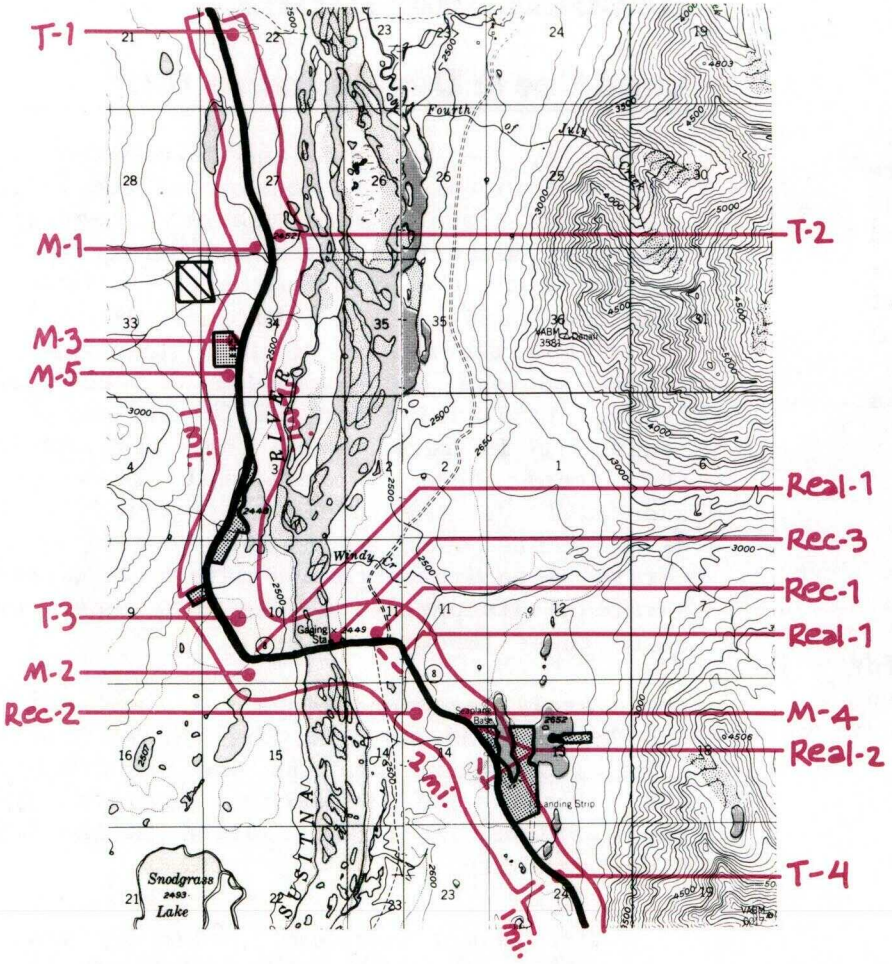
Management Unit 4 begins 5 1/2 miles northeast of the Susitna River crossing and extends across the river to approximately 3 miles southeast of the crossing. This is a highly scenic area, full of the anticipation of crossing the "Big Su." The road parallels the Susitna River along its west bank until it turns sharply east to cross the one-lane, canted bridge over the Susitna. (It is the longest bridge on the Denali Road). The traveler's views are strongly oriented toward the river, with opportunities to experience the Susitna from many varying points of view. The alignment of the road also gives the traveler a sense of anticipation in the eastbound direction as there is a dramatic change to a mountain landscape along the southern edge of the Clearwater Mountains.

The historically and culturally interesting townsite and mine of Denali are visible across the Susitna River from within this management unit. However, due to its distance from the highway, it is difficult to decipher any detail in the view without binoculars. The Denali Townsite access road intersects with the Denali Wild and Scenic Road just east of the river crossing.

Other land use and development activities within this management unit are located on both sides of the river and include recreational homesites, lodges, gravel extraction

4 Susitna River Crossing

Assessment Units D23 – D27



NORTH 0 1 2 mi.

KEY

T - Turnout
M - Impact Mitigation
Real - Proposed Realignment
Rec. - Recreation
2 mi. - Greenbelt

State Owned Land

Federal Land

Private Land

sites and an airfield. However, no permanent structures are visible from the Susitna River crossing. At present, there are few established recreational facilities near the Susitna River crossing.

Land Ownership & Management Responsibility

Land management within this unit is predominantly the responsibility of the BLM. There are several (5) private landholdings scattered along the road, however, all of the land immediately adjacent to the Susitna River crossing is managed by BLM. The southwest bank of the crossing has been set aside by BLM as a recreation withdrawal. The DOTPF maintains a 300 foot right-of-way throughout this management unit.

Visual Resource Management Objectives

The management recommendations presented for this unit focus on the themes of retention, enhancement and impact mitigation.

Retention: To retain those characteristics which contribute to the particularly high scenic resource values and interesting driving experience within this management unit.

Enhancement: To enhance the traveler's understanding, appreciation and use of this area through the development of appropriately sited and designed roadside recreational facilities.

Impact Mitigation: To take appropriate action to mitigate adverse visual impacts resulting from previous roadside maintenance and development.

Management Recommendations

Land Use & Development (LU)

Currently, the land use and development activities within this unit consist of two lodges, a small boat launch site, several recreational homesites, material sites and an airfield. It appears that the existing private lands have been developed and any future development would be at the discretion of the BLM, which currently manages the remainder of the roadside lands. In planning for the future use of these lands, it is recommended that development of the scenic and recreational resources be addressed as the highest priority. Other developments such as mining, homesites, commercial establishments and material extraction should be discouraged unless they retain or enhance these resource values.

The overall recommendations for the Denali Wild and Scenic Road outline some general considerations for sensitive land use and development. The following points describe how these management actions should be applied to the Susitna River crossing area:

- Recreational development (both day and overnight use) should be encouraged near the Susitna River crossing as the most appropriate land use within this unit.

- The land adjacent to the Susitna River crossing and that visible from the recreational sites should be retained for public recreational use only.

- Further commercial and homesite development should not be located within view from the Susitna River crossing and should respond to the greenbelt recommendations for this unit.

- With the exception of recreational homesites, federal land disposals should be discouraged in this unit.

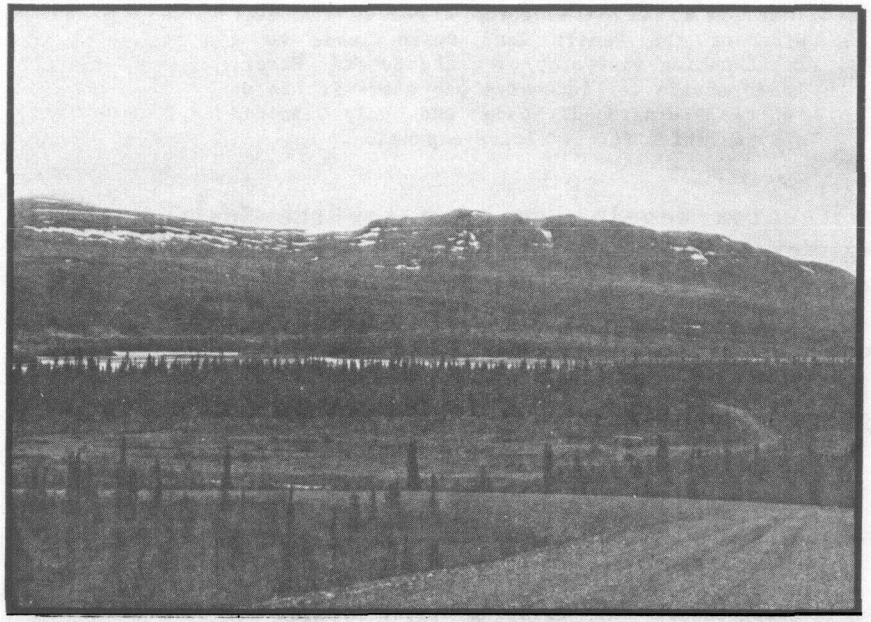
- All mining and material extraction activities should be restricted from locating within view from the road.

Recreation Development (Rec)

The Susitna River crossing is a major recreation focus along the Denali Wild and Scenic Road. However, current use has a low visual impact on the area and the only existing public recreational facility is a small boat launch ramp on the northeast bank of the river. BLM has withdrawn the southwest bank of the crossing for recreational use, but no development has yet taken place.

In order to respond to the existing and future demand for recreational use at the Susitna River crossing, there may need to be several facilities developed within close proximity to the river which provide camping sites, scenic viewpoints, picnic sites, boat launches, river access and hiking trails. The following development opportunities and constraints have been identified:

- The west banks of the Susitna River crossing have very low visual absorption capabilities.



With proper site design and landscaping, this unsightly gravel pit is the recommended location for campground and rest area development (Rec - 1). While it is removed from the river bank, the site has easy access and good screening potential.

- The east banks of the crossing have moderate visual absorption capabilities.

- The existing boat launch site is well-sited, but too small and has no off-road pull-out space.

- There are no established picnic, camping or toilet facilities near the crossing.

- There is a large, former material site approximately .2 mile east of the river at the Denali Townsite road junction. It has development potential as a campsite and day use facility.

- There is a narrow ridgetop drive on the east side of the Denali Road which leads to a breathtaking viewpoint over the Susitna River. It is unsafe for intensive use since it has no vehicle turnaround space and only limited opportunities for sensitive expansion.

A recreation development plan for the Susitna River crossing should be prepared, taking advantage of the site's outstanding amenities while minimizing facility development. Recreational development should be restricted to the east side of the river, where the visual absorption capability is highest and existing landscape alterations are concentrated.

Rec-1 **Rest Area and Campground:** The former materials site on the east side of the river crossing should be developed as a combined rest area and campground. This existing disturbed area now appears to be used as a parking area by recreationists at the Susitna River. Site development and reclamation should include the following actions:

- Construct a vegetated berm at the roadside to provide partial screening from traffic.
- Regrade the site and establish masses of vegetation within the site according to a landscape design scheme. This will provide some privacy and break up the site's expansiveness.
- Minimize the number of access points. There may be some conflict with the Denali Townsite access road; this needs further investigation.
- Remove or relocate the abandoned trailer on the site.
- Establish a short boardwalk through the spruce grove to the river edge.
- Post information indicating the location of the ridgetop viewpoint to the south as well as recreation-related information for the Susitna River (i.e. fishing, boating, etc.).

Rec-2 **Ridgetop Viewpoint:** This short drive along the top of a very narrow ridge leads to spectacular views of the Susitna River. This viewpoint should be developed in conjunction with the Rest Area (Rec-1) to provide travelers with an interpretive site for the Upper Susitna River landscape. Since this site has extremely limited space for development, rest area facilities should be provided at the recommended rest area site approximately 1/2 mile to the northwest. The following site development guidelines should be applied:

- Prohibit vehicle access on the ridgetop road. Provide a small gravel turnout (2-3 cars) at the roadside and maintain a foot trail to the viewpoint.
- Provide interpretive information regarding the Susitna River landscape and wildlife at the parking area, leaving the trail undeveloped to experience the full effect of the spectacular panorama.

Rec-3 **Boat Launch:** The existing boat launch site may need to be expanded to provide adequate space to safely back off the boat ramp without entering the road. If necessary, this should consist of minimal clearing and gravel surfacing in order to maintain the natural character of the river bank. Regular litter control would eliminate visual clutter. The existing trash barrel should be placed in a more appropriate location to minimize its visibility from the road. As an option, a wood slat enclosure for the barrels could be located among some trees at the southeast or northeast corner of the site. Parking should be restricted to the recommended rest area/campground site (Rec-1).

Greenbelts

Within this management unit, greenbelts can be an effective scenic resource management tool for visible lands outside the right-of-way. This unit is characterized by generally open, rolling tundra with scattered masses of trees, so lands adjacent to the road are highly visible. The predominant view orientation shifts from the east to the west side of the road, but the views are generally panoramic. Therefore, a narrow greenbelt would be relatively insignificant in maintaining the scenic resources of this area. The most appropriate greenbelt designation for this unit is a viewshed greenbelt. A viewshed greenbelt does not restrict all use within its width, but rather defines guidelines for sensitive use. The viewshed greenbelt for this unit should extend approximately two miles to the east and one mile to the west of the Denali Road, encompassing those lands with the highest visibility. (The unit map indicates more precisely the necessary greenbelt width). The following development recommendations are aimed at retaining the scenic resources of the area:

- All development should be set back at least 100 feet from the road so distance provides a visual buffer.
- Plans for development or land use other than scattered residential cabins should be evaluated for their visual impact on views from the road.
- Development site design should take advantage of natural opportunities for screening, setbacks and should use materials that blend in with the surrounding landscape.
- No more than 25% of the natural vegetation should be removed within any one site.
- The number of access roads should be minimized by encouraging adjacent developments to share or consolidate access.
- Large scale landscape alterations, such as large mining or material sites or residential subdivisions, should be strongly discouraged within the viewshed greenbelt.

Existing private land is not subject to greenbelt designations. However, private landowners are strongly encouraged to adopt the greenbelt guidelines as a means of maintaining the scenic quality of their home and its surroundings. BLM, on the other hand, should incorporate these recommendations in their land use plan for the Denali Block and formally apply the management guidelines to any future use or development of this area.

Right-of-Way Management

DOTPF manages a 300 foot right-of-way within this unit which serves as the foreground to the many exceptional scenic views from the road. The current management practices for most of these lands is sensitive to the scenic resource values. Both water and vegetation are retained close to the roadside minimizing the visual impacts of the road on the landscape and enhancing the wild and remote character of the area. This type of right-of-way management should be encouraged throughout this unit. The areas in most need of improvement are the cut banks and the gravel extraction sites within the right-of-way. Natural revegetation should be

encouraged in these areas, and this process might be accelerated through the initial seeding of the sites with nitrogen-fixing plants (alder, vetch, lupine). The gravel extraction areas are in need of more intensive management and are addressed under Impact Mitigation.

Turnouts (T)

High scenic quality, many opportunities for exceptional views, as well as the sense of arrival after a long period of anticipation, invite many travelers to stop and enjoy the scenery in this unit. To accomodate those who prefer to make brief stops alongside the road rather than spend more time at a rest area, a series of scenic viewpoint and interpretive turnouts is proposed for this area.

T-1 Existing unmaintained turnout. The following measures are recommended for development and maintenance of this existing site which has an excellent view across the Susitna River to the Denali Townsite and the Alaska Range:

- The turnout and its entrance should be regularly graded to maintain access.
- The existing right-of-way vegetation should be retained to provide partial screening of the site.
- A short foot-trail should be constructed to the top of the hill for a better vantage point.

T-2 DOTPF proposed turnouts/gravel sites. In their realignment plans, the DOTPF has proposed reclaiming two gravel extraction sites for turnouts, one on either side of the road at the same location. The site on the east side of the road is recommended as a good location to develop a turnout. From there, it has good views of the Susitna River and the potential to develop short foot trails which would provide several different views of the river. This can be partially screened by regrading and revegetation within the right-of-way.

The gravel site on the west side of the road has a high visual impact and views from there are oriented to the gravel site on the opposite side of the road. This site should be actively reclaimed to return it to a more natural character. (See Impact Mitigation, M-1 for reclamation recommendations).

T-3 Existing viewpoint turnout. This existing turnout has views north up the Susitna River to the N.W. Alaska Range. It is recommended that this site be maintained as a turnout and the following measures taken to improve its amenities:

- Remove the excessive amount of refuse that has accumulated at the site and continue regular pick-up.
- Provide a short interpretive information sign describing the view.
- Annually grade the turnout entrance to provide easier vehicular access.
- Establish additional vegetation or construct a vegetated berm on either side of the entrance to reduce the impact of the clearing from the road.

T-4 Proposed turnout. This site is proposed as an interpretive turnout for the talus slopes in BLM's Denali Highway Information Plan. Development of the site would require minimal changes and it has good visibility for entrance and exit. However, it offers no other site amenities, such as views of the surrounding landscape. It is recommended that this site be given a low priority, and instead, development should focus on sites that are oriented to scenic views of the Susitna River Valley.

Realignments (Real)

DOTPF has proposed minor realignments of several curves within the area near the Susitna River crossing. It appears that the purpose of these realignments is to flatten curves and create longer tangents. In general, this type of upgrading is unnecessary in view of low traffic volumes and the function of the road as a scenic and recreational driving experience. Additionally, each of the road segments proposed for realignment currently add to the driving enjoyment through the landscape, and these qualities should be retained.

Real-1 Susitna River crossing approach. The sharp curves on either side of the Susitna River bridge cause definite changes in direction before and after the crossing which lend visual excitement and anticipation to the overall experience. Flattening these curves as proposed appears unnecessary for highway safety or convenience and would detract from the drama of the river approach. It is recommended that the alignment of the existing curves be maintained.

Real-2 Susitna Lodge approach. The existing alignment is a pleasant approach to the Susitna Lodge, providing a series of filtered and framed views that then open to a full view of the lodge and small lake. Flattening the curves would not only detract from the visual experience, but would necessitate extensive fill at the edge of a roadside lake and a steep embankment. It is recommended that the existing alignment be maintained in order to minimize landscape disruption and retain the pleasant quality of the present experience.

Denali Townsite Access Road

The Denali Townsite Access Road currently has little visual impact within this management unit because it is only visible from distances greater than a mile. The proposed road upgrading should attempt to minimize exposed soils on cut banks that would create distinct color or line contrasts, since patterns are more visually discernible from long distances than are details.

Impact Mitigation (M)

The major source of negative visual impacts within this management unit is the presence of many roadside gravel extraction sites. If the DOTPF would mitigate the impacts of these sites it would serve not only to enhance the visual experience, but also to provide private landowners and other public land managers with an example of public efforts being made to maintain the Denali as a wild and scenic road. The following site specific recommendations encompass materials sites as well as one commercial establishment.

M-1 Gravel Extraction Site. As described in turnout (T-2), this long, wide gravel site has a high negative visual impact and virtually no amenities that merit turnout development as recommended by DOTPF. Instead, the site should be screened and reclaimed. Regrading, particularly at the road edge, and construction of a large berm with tall vegetation in the right-of-way is recommended.

M-2 Material Site-Susitna River Approach. Material extraction at this highly visible site dominates the view of the northwest-bound traveler from the Susitna River bridge. Constructing a berm with tall vegetation 40-50 feet back from the road would help screen the site by directing the view up and over the cut hillside. While the site is still in use, only a single narrow entry/exit should be maintained. Refuse presently scattered at the roadside should be removed. The proposed realignment at this corner would accentuate the impact of this site, making reclamation an even higher priority.

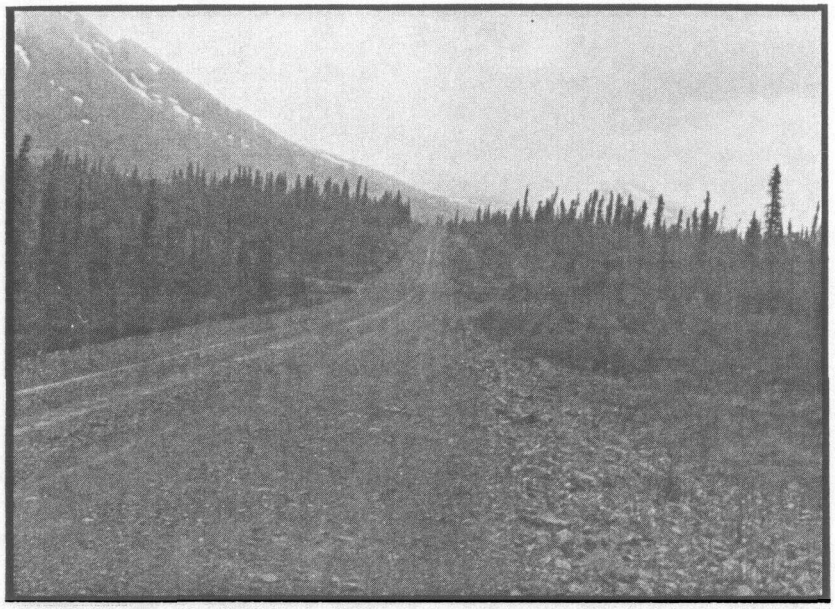
M-3 Gravel Clearings and Associated Clutter. Concentrated just north of the Gracious House Lodge is a series of gravel extraction sites which detract from the natural landscape and the commercial establishment. This impact is accentuated by an excessive amount of clutter, such as burned out and broken down structures, old barrels, and trash left within the sites. This is a good opportunity for DOTPF to set an example for private landowners by mitigating these severe visual problems. Recommended mitigation measures for this area include:

- Remove all refuse and unused structures from the sites
- Construct berms with tall brush vegetation along the roadside to screen the material sites from view.
- If necessary regrade the sites to provide adequate screening with roadside berms.
- Encourage natural revegetation within these sites by restricting vehicular access.

M-4 Material site. This gravel scar is in high contrast to the surrounding natural landscape. Complete screening of the site would be difficult because of the height of the cut area. However, recontouring the site to a more natural form and encouraging revegetation would mitigate some of the impact. Additionally, a strip of tall vegetation and brush should be established at the roadside next to the site to provide a partial visual screen.

M-5 Gracious House Lodge. The major reason for the site's negative visual impact is the lack of continuity and its overall cluttered appearance. The lodge itself is lost amongst numerous other structures. Repeating colors and materials used for the lodge in other structures on the site (particularly the visually dominative quonset hut/service station in front) would improve visual continuity. Also, removing unnecessary clutter and locating storage areas behind or within structures would improve the overall site appearance.

Clearwater Mountains Foothills



Uniformly wide cut strips prevent the road from blending with the landscape. Instead, the depth of the cut can be varied, allowing trees close to the road near the crest of the rise to frame the next view.

General Description

East of the Susitna River, the Denali Road climbs the foothills of the Clearwater Mountains and from there skirts the river valley for the full 17.4 miles of Management Unit 5. On the north, the steep, rough rock faces of the Clearwaters dominate the near views, while on the south a panoramic vista takes in the flat terrain of the Susitna basin to the jagged Talkeetna Mountains on the horizon.

The Susitna River is the outstanding visual element in this unit as it meanders through a broad valley densely forested in black spruce. The vegetation changes with altitude. From the river, the road climbs through stands of spruce and high brush to where it stays above tree line and low brush and barren slopes predominate. Foreground elements, such as small lakes and creeks, add visual diversity and are important highlights along the drive. Some of these features would serve as the focus for a turnout or recreation area.

The scenic quality in this unit is very high, offering a more or less continuous panorama of close, steep mountains, the broad Susitna River and distinctive mountain ranges. However, the fact that there are few suprises in this unit because of the continuous views somewhat detracts from the unit's drama. The visual absorption capability of land to the north of the road is low because of its steep slopes, but on the south side below tree line it is higher, which is attributable to the flatter terrain and dense, tall vegetation.

5 Clearwater Mountains Foothills

Assessment Units D28 – D34

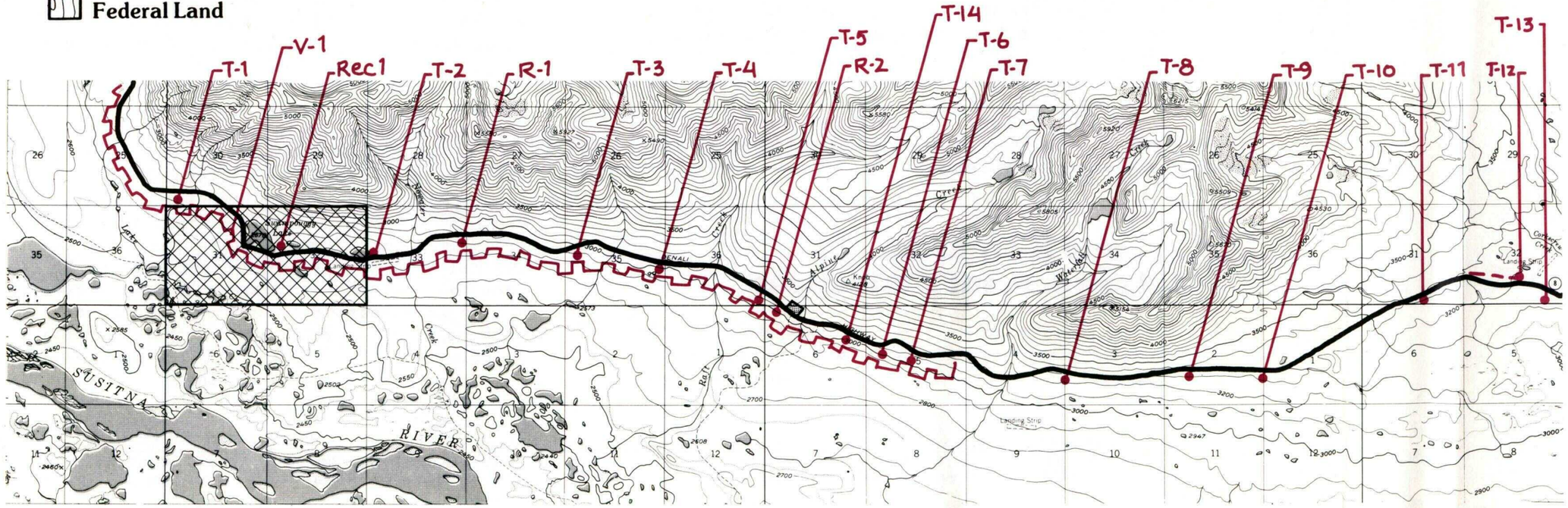
KEY

T- Turnout
V- View Management
Rec- Recreation
R- Reclamation
--- Realignment Proposals

Native Selected Land

Federal Land

NORTH 0 1 2 mi.



Development is insignificant in unit 5. Several mailboxes on the road indicate the presence of cabins, but they are not visible. The most obvious indications of human activity are several material sites adjacent to the road. They have varying impacts on the visual experience.

Land Ownership & Management Responsibility

Almost all the land in this unit is managed by the Bureau of Land Management (BLM). Two sections of land around Swampbuggy Lake are Native selected and there is one small parcel of private land near the road. The State DOTPF maintains a 300 foot right-of-way throughout the unit in addition to several material sites outside the right-of-way.

Visual Resource Management Objectives

Three goals should guide the management of the scenic resources in this unit: retention, appropriate right-of-way management, and enhancement.

> **Retention:** To retain the high quality of the scenic resources in this unit by managing the land along the corridor as a wild and scenic road.

> **Appropriate Right-of-Way Management:** To manage the land within the right-of-way in a manner that recognizes its importance in maintaining the road's scenic quality and to improve those areas which have suffered from poor management.

> **Enhancement:** To open and improve views through the sensitive management of roadside vegetation and to enhance the recreational use of the area by opening up some areas to public use.

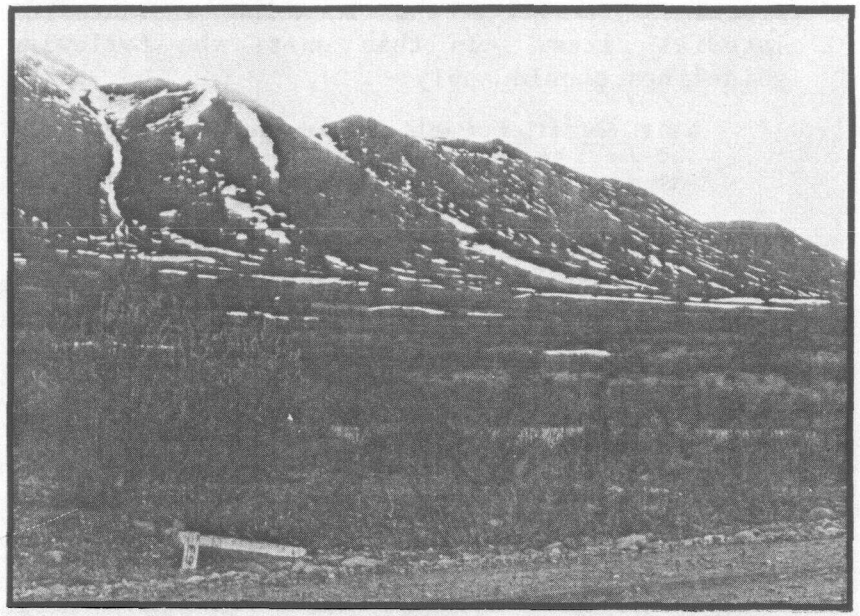
Management Recommendations

Right-of-Way Management

Since the primary management goal for Unit 5 is to promote the wild and scenic qualities of the road, DOTPF's right-of-way management practices, which affect those lands most immediately visible from the road, can significantly add or detract from the overall scenic quality. Below treeline in this unit some roadside brush clearing is necessary to improve road visibility, minimize wildlife-auto collisions, provide for snow removal and road maintenance, and also open views. But along several long stretches of road trees and brush have been removed, cut or knocked over in a swath extending 20 to 25 feet from the road edge. In these areas the road has a ravaged appearance: In some places only bare soil remains. In other places there is only cut stubble with the slash left piled in the trees. Not only is the slash unsightly, it also is a potential fire hazard.

This cutting and trimming can be accomplished so that it does not detract from the scenic quality of the driving experience. To accomplish this, DOTPF maintenance crews should adopt the following practices:

- Minimize the vegetation cut in the right-of-way, leaving as much as possible to keep the natural road appearance.



Without vegetation to screen development on this open terrain, wide greenbelts are important to retain scenic views and the wild road character. Also note the milepost in need of replacement.

Greenbelts

As a management strip beyond the right-of-way, a greenbelt provides an additional means to protect the wild and scenic qualities of the Denali Road. As land manager for most of this unit, it is recommended that BLM establish these greenbelts in their land management plan. To account for the change in screening capacity as the road climbs above tree line, two greenbelt categories are recommended in three separate combinations:

(1) Assessment Units 28-32—A 500 foot greenbelt is proposed for both sides of the road. Steep slopes near the road on the north side and flat forested land to the south permit a medium width greenbelt to maintain the natural character of this road segment.

(2) Assessment Unit 33—A 500 foot greenbelt is proposed for the north side of the road and a 1 mile greenbelt is proposed for the south side. The road climbs above treeline in this unit, and the landscape opens, requiring a wider management area. The topography is still close to the road on the north side.

(3) Assessment Unit 34: A 1-mile greenbelt is recommended for both sides of the road. The flat, unvegetated terrain necessitates a wide greenbelt in this unit.

The greenbelt designation is not meant as a "no development" zone. Instead, any proposed land use and development should be secondary to the area's scenic value and be guided by practices designed to maintain scenic quality.

- Vegetation clearing should be minimized.
- Access roads through the greenbelt developments should be kept to a minimum and aligned sensitively with the topography.
- With the exception of dispersed recreational cabins, discourage settlement, mining and mineral leasing within the greenbelt.
- Material sites may be located in the greenbelt if well-screened or otherwise hidden from view.

- Vary the width of the management strip through selective cutting to create a softer edge to the corridor.

- Do not strip the corridor of all vegetation. Cut bushes and trees to variable heights so that visibility is maintained, but a feathered edge ranging from low plants to trees is created.

- Vary the timing of roadside maintenance by location. Trim short segments of the right-of-way in one year, leaving adjacent portions for a subsequent season.

- Revegetate stripped areas immediately adjacent to the road with low bushy plants.

- Remove all slash and cut material from the right-of-way and dispose of properly.

- Where it is desirable to open or maintain views—especially around turnouts—selectively clear trees and brush. Adjacent areas should be left in dense vegetation to help maintain a visually diverse driving experience that alternates from an open view to a spatial enclosure. (See V-1 on map).

Material Sites & Reclamation (R)

In this unit, material sites are located at relatively frequent intervals along the road within the right-of-way. Usually, they are located at the closest point off the road where sand or gravel is available, with little regard for visual impacts. In addition, road cuts through morainal landforms in Assessment Units 33 and 34 are being used as gravel sources. This practice leaves large "bites" out of the ends of otherwise contoured cuts that then become rough equipment staging areas. Because they have no screening from the road, they are unsightly and unusable as turnouts. Both types of extraction create open scars that contrast with the natural appearance of their surroundings. DOTPF must adopt policies and practices to guide the location and use of material sites. In this unit, the following guidelines should apply:

- All new sites should be outside the right-of-way so they can be screened by topography, berms or vegetation. DOTPF should identify appropriate sites in conjunction with BLM.

- If glacial landforms, such as small moraines, are used the material should be taken from the side away from the road.

- In open areas, locate the site on the side of the road away from the predominant views.

- Do not use the ends of road cuts for material extraction.

- Sensitively align access roads to conform to the landform and minimize clearing.

- Screen active sites with berms or vegetation.

- Unused sites should be actively reclaimed and returned to their natural condition, used for turnouts or have access closed and then allowed to revegetate naturally. (Plant regeneration is slow in this area, thus revegetation can be both costly and/or slow).

Only two sites are noted as priorities for reclamation, although others exist and are noted on the Assessment Units. A roadway management program developed by the DOTPF road maintenance crew foreperson and a landscape architect should define detailed reuse or reclamation approaches for material sites along the road.

R-1 This existing gravel pit should be screened now and, once the gravel source is depleted, recontoured to a more natural shape and allowed to revegetate.

R-2 Reclaim and revegetate the sand pit below the road and screen the existing culverts.

Recreation (Rec)

There are few developed public recreation facilities such as campgrounds or picnic areas along the Denali Road near the Susitna River. With the magnificent panoramic views available in this unit, this is a priority area to identify a site that will meet the need for more than just a roadside turnout.

Rec-1 Swampbuggy Lake, immediately adjacent to the road at the foot of the Clearwater Mountains, is a small lake with high recreation potential. Already DOTPF has identified a small site between the road and the lake as an appropriate turnout. Above the lake to the east and 1/4 mile off the road is a 2+ acre gravel extraction site which provides an excellent opportunity to develop an overnight campground. Situated north of the road on a slight plateau, the site has a lovely panorama of the Susitna Valley and the Talkeetna Mountains. An overnight campground could be developed in the gravel pit with trails leading to the lake or up into the Clearwater Mountains. The day use site would be appropriate next to the road, where DOTPF presently plans to develop a turnoff. Boating or canoeing on the lake is a potential use and a small launch could be located part way up the access road to the campsite.

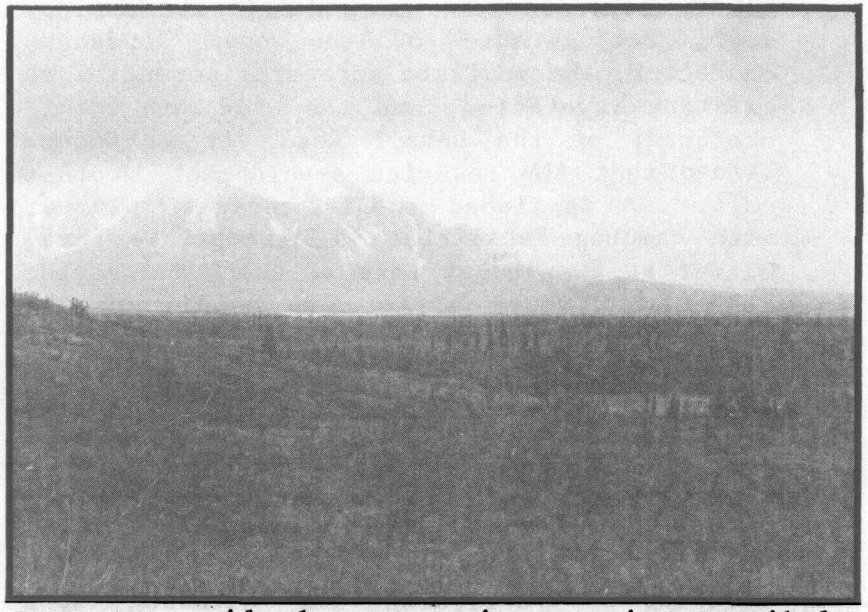
The land around Swampbuggy Lake is a Native selection. If this is not patented to the Natives, this site should be reserved and developed for public recreation by BLM. If it is patented, the Native corporation can be encouraged to develop the area for a private recreation development.

Land Use & Development (LU)

The proximity of Unit 5 to the Susitna River crossing and its associated recreation and development potentials makes this unit a likely location for some additional development. But because of the open landscape character, the moderate screening potential of existing vegetation, and the wild and scenic character of the Denali Road, it is recommended that BLM restrict development in this unit. A developed public recreation area, with camping facilities is appropriate here, either at Swampbuggy Lake or another roadside lake which would avail more people of the opportunity to enjoy the special amenities of the Susitna River Valley. In addition, some well-screened and dispersed recreation cabins would be acceptable south of the road and below tree line. Some cabins are already located here and it would be possible to site others with minimal disruption of the area's high scenic quality if design guidelines relating to screening and clearing were followed. Recreational homesites would be highly desirable given the panoramic mountain and valley views. Other development including permanent settlement, mining and mineral leasing is discourage, especially south of the road, because of the broad open views.

Turnouts (T)

Numerous turnouts and potential turnouts are located in Unit 5, many of which are old gravel sites reclaimed for a pullout. Old gravel pits can provide excellent opportunities to meet travelers rest needs since the cleared, gravel base is good for automobile use and requires a minimum of additional site work. Selectivity should be exercised in developing these sites. Those with safe access/egress, adequate space to accommodate several cars, minimal development or maintenance costs and good views or other



Turnouts provide the opportunity to enjoy unspoiled, panoramic views like this one across the open Susitna Valley to the edge of the Talkeetna Mountain Range.

interesting natural features, should be retained. Other sites should be recontoured or graded to contours more in keeping with the natural surroundings and allowed to revegetate.

Recommended turnouts in Unit 5 include the following:

T-1 Recommended to be retained as a turnout, this gravel widening offers distinctive views of the Susitna Valley, the Talkeetnas and the Clearwater Mountains. It requires only some grading, tree thinning and signing.

T-2 This recommended turnout was also noted by the DOTPF in their plan for realigning portions of the Denali Road. Near a small lake, there is enough space here to locate the site away from the road, partially screened behind existing roadside vegetation. View orientation is toward the lake and the Clearwater Mountains. Access/egress is safe. There is a gravel widening across the road where access should be closed and the site allowed to revegetate.

T-3 This site consists of an old materials site slightly below the road. Only some grading is required to open the turnout, and it is actually large enough to be developed as a rest area. This site has good views of the Susitna Valley. DOTPF included this site in their plan for the Denali.

T-4 This recommended turnout is at the crest of a hill with excellent valley views and a good expression of local landform. No vegetation maintenance is required at this site. Both visibility and access are good.

T-5 Located on a small knoll, this recommended turnout offers views of the broad Susitna Valley.

T-6 This existing gravel widening is a desirable turnout because of its good valley views. There is little vegetation in the foreground to block views and there is no problem for safe vehicular access. DOTPF also recommends this site.

T-7 This recommended turnout is actually two gravel widenings at the crest of a hill located on two sides of a bend in the road about one tenth of a mile apart. Some grading is needed, but size, access, and views are good.

T-8 An old gravel pit slightly below the road surface, this site has the potential to be

reclaimed either as a turnout or a rest area. There is room on site for both toilets and litter barrels. Short trails could be developed to adjacent knolls to take advantage of views to the Susitna Valley. The site needs some levelling and shaping. Automobile access from the road is safe.

T-9 This recommended turnout is at the crest of a hill where an existing gravel widening is located. This site, too, has good views of the valley.

T-10 A turnout is recommended here where a portion of the hill has been partially levelled and can be reclaimed as a turnout. The location is excellent with a composite view encompassing the glacial valley, distant mountains and nearby landforms. Surface grading is required, along with additional gravel fill. Some vegetation would help soften the edges.

T-11 This gravel pad with views of the valley and the mountains across has turnout potential.

T-12 This small gravel pad will serve as a turnout with views of the Clearwater Mountains and the esker in Unit 6.

T-13 Located in Unit 5 at the end of the esker, this is an existing rest area that consists of only an open gravel area. It has no screening or landscaping and the present litter barrels are located at random on the site. The edges of the site should be vegetated to create a more irregular, natural shape. Also, the litter barrels should be replaced by barrels in a more unobstrusive color and sited in a more screened location. A short trail could be developed from this site up one of the adjacent knolls for a view of the esker.

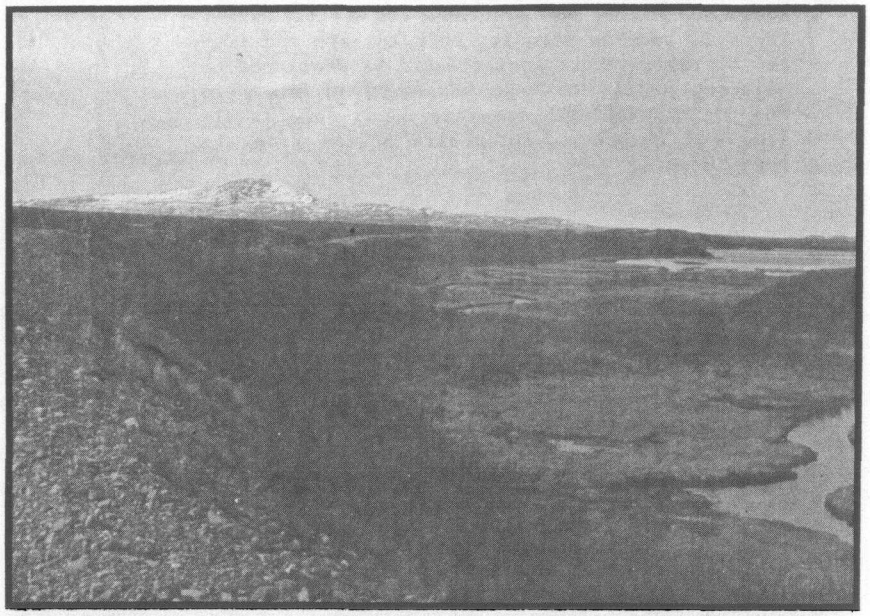
T-14 This is a DOTPF recommended turnout where a gravel pad already exists. The site has good views, but higher priority sites exist nearby.

Roadway Signing.

Throughout most of this unit, the highway signs and mileposts are falling into disrepair or are incorrectly located. All these signs should be replaced and the mileposts recalibrated (in one section, the milepost was off by 1/2 mile). The milepost marking should wait until the proposed alignments are completed.

DOTPF could design a special milepost using wood posts, a special logo, or new color—for the Denali Wild and Scenic Road. In fact, each road in Alaska could have its own milepost design, or color, which would help orient the traveler and also serve as an element of roadside interest.

Clearwater & Osar Creeks



The sinuous form of the esker bordered by Osar Creek gives this unit its unique character. Roadside interpretive information is necessary to explain the geological feature to an untrained eye.

General Description

In 13.8 mile long Management Unit 6, the Denali Road crosses a broad glaciated valley, bordered by the Clearwater Mountains on the west and Crazy Notch on the east. On either side of the road the terrain is flat to gently rolling and covered by high brush vegetation. To the north and west, the views are enclosed by the peaks of the Clearwater Mountains and the Alaska Range. The steep mountain ranges are in stark contrast to the flat foreground, and thus are dominant visual elements throughout this unit. To the south, the flat plain extends for miles to distant foothills. Because of the general lack of visual interest in this direction, most of the viewer's orientation focuses on the northern, mountain-enclosed scenery. In addition to the mountains, interesting waterforms highlight this unit. Clearwater and Osar Creeks, as well as small glacially formed lakes, are scattered along portions of the road. Their meandering paths and sinuous shapes add visual interest to the foreground views. The lakes are also good sites for fishing, bird watching and beaver observation.

The road in this unit is built on the top of two long eskers, one of the several unique glacial landforms characteristic of the valley. From the vantage point of the esker above the valley floor, there are interesting views of the distinctive, glacially-shaped terrain.

6 Clearwater & Osar Creeks

Assessment Units D35 – D40

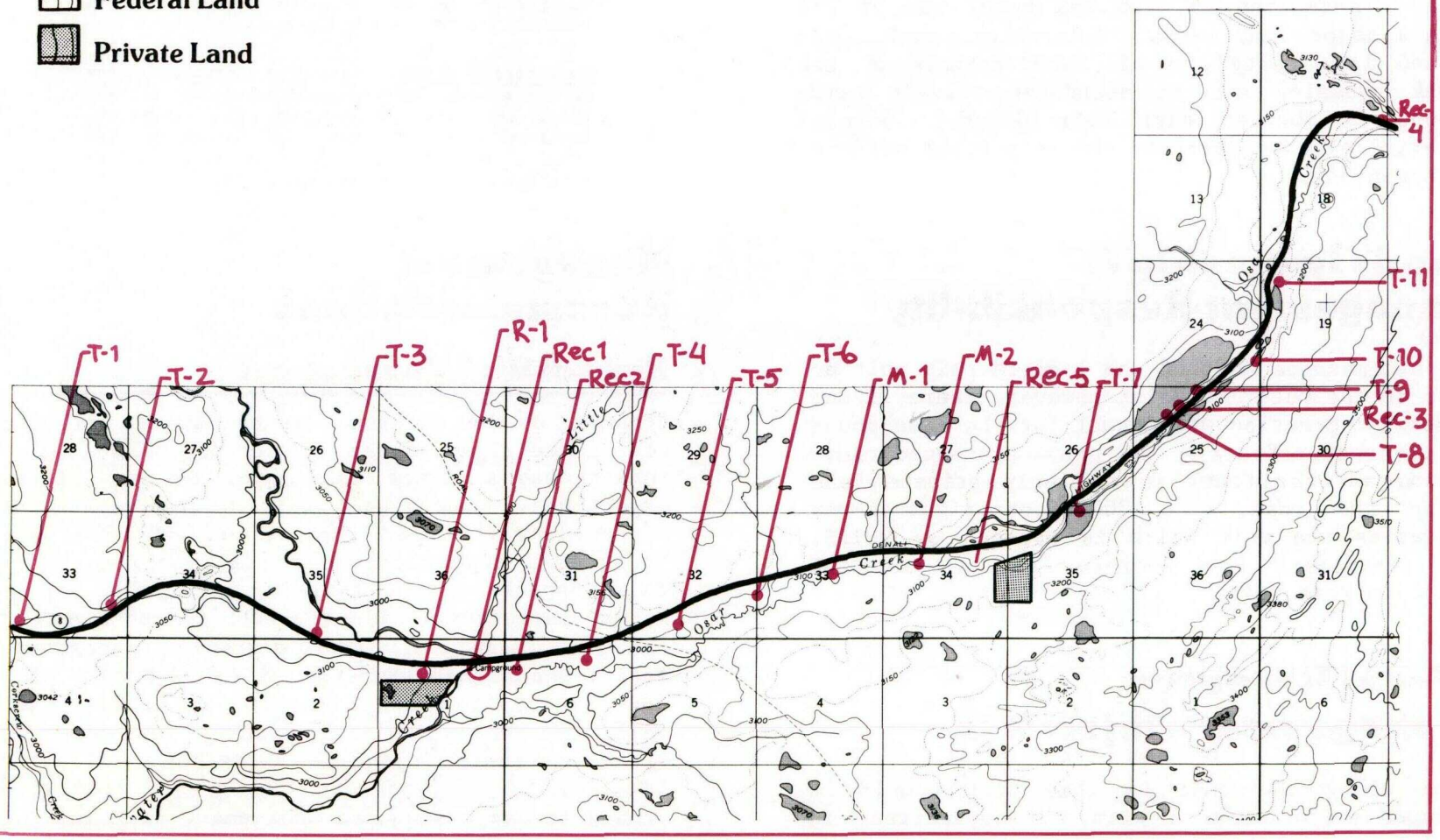
KEY

T- Turnout
R- Reclamation
Rec- Recreation
M- Impact Mitigation

Federal Land

Private Land

NORTH 0 1 2 mi.



The scenery in this unit is much less dramatic than other areas along the Denali and the landform characteristics are much more subtle. The visual absorption capability is low because of the absence of vegetation screening potential and the openness of the terrain. The land is also marshy in many areas which places a constraint on the area's development potential.

At present, there is little development in this unit. Recreation is, and has been, one of the area's major land uses. Clearwater Creek campground is situated on all four corners of the creek crossing and an abandoned private campground is located near Osar Creek. Several material sites constitute the only other evidence of human use.

Land Ownership & Management Responsibility

The BLM manages most of the land in this unit as part of the public domain; however, there is one federal recreation withdrawal for the campground at Clearwater Creek. The privately-owned campground at Osar Creek is the only private land along the road. A 300 foot right-of-way traverses the unit which is managed by DOTPF. The department also oversees several material sites in this unit.

Visual Resource Management Objectives

Land along the road in this unit should be managed in accordance with the objectives of: retention, appropriate roadside management, and sensitive land use.

> **Retention:** To retain the visual quality of the area which, though the landforms are subtle rather than dramatic, is important to the overall wild and scenic quality of the Denali Road.
>
> **Appropriate Roadside Management:** To manage both the right-of-way and the adjacent viewshed in a manner that is sensitive to the fragile scenic quality of the open landscape and attempts to maintain its natural, undisturbed quality.
>
> **Sensitive Land Use:** To foster recreational use of the area by improving and enhancing existing facilities and encouraging the sensitive development of new ones; and to ensure that other development in the unit respects the sensitivity of its scenic resources.

Management Recommendations

Right-of-Way Management

Because of the complete visibility of all land within the right-of-way, its condition and maintenance has a significant impact on the driving experience. Throughout Unit 6 the vegetation surrounding the road consists of high and low brush that grow close to the edge of the road. There appears to be little or no active right-of-way management. Plant growth is contained at the road edge and its low-growing characteristics means that there is no interference with road visibility. As a result, the road blends well with the natural surroundings and there is little intrusion upon the landscape. Allowing low brush to encroach upon the graded road edge should become a standard management practice for

DOTPF's road maintenance crews along this portion of the Denali.

Greenbelts

The openness of the landscape means that the critical scenic management area is much wider than the right-of-way. Because most of the land in the unit is publicly owned, a greenbelt can be established and managed in conjunction with the right-of-way to provide the needed scenic resource protection. A 1-mile wide greenbelt is recommended for the full length of the unit because of the area's low visual absorption capability.

The greenbelt designation should not imply a total prohibition on use or development; instead, the following guidelines would apply to all proposed uses:

- Minimize vegetation clearing or disruption (the right-of-way should be retained in natural vegetation to the extent possible and all disturbance minimized. In general, any new material sites should be located outside this area.)
- Encourage recreational uses that do not require facilities development outside development nodes. Concentrate development at Clearwater Creek, on the eskers, and near the glacial lakes where the landforms and soils are conducive to use.
- Discourage settlement, mining and, mineral leasing within the greenbelt.
- Minimize the number of access roads through the greenbelt and align them so they are sensitive to topography and landform.
- Locate material sites in the greenbelt only if well-screened or otherwise hidden from view.
- Prepare a visual impact assessment for any major development proposed to be located within the greenbelt.

Land Use & Development

Although this unit has lower intrinsic visual quality than most areas along the Denali Road, it is nevertheless an important unit in terms of the transitional role it plays between riverine and montane areas. Moreover, its openness and the visibility of the entire valley make it sensitive to visible development. Therefore, any new land use or development should be guided by standards designed to protect scenic quality.

Settlement is generally discouraged in this area due to its low visual absorption capability. In particular, it is recommended that BLM not open this area to settlement through one of its disposal programs. However, as the scenic resource values are lower here than other portions of the Denali, opening this area is preferable to others with higher scenic values. In any case, development should follow guidelines designed to protect visual quality, at the very least using distance and topography to screen development from view.

While allowed, mining leasing outside the greenbelt should also be subject to the following scenic management guidelines:

- Minimize land clearing
- Locate access roads to conform to local landforms and topography
- Site all structures so as to minimize their visibility from the road

Recreation (Rec)

With its many lakes and creeks and opportunities for fishing, camping or hiking, this unit is a suitable area for recreation use. These uses should be located where the combination of terrain and natural features provide screening as well as a desirable recreation experience. Dispersed use is appropriate throughout the unit, but facilities development should be concentrated in selected locations. Those areas identified for additional use include Clearwater Creek, several locations on the eskers near the small lakes, and the lakes to the west of Crazy Notch. (For a general discussion of recreation development guidelines, see the Findings and Recommendations for the Denali Wild and Scenic Road.)

The following are recommendations for specific sites in this unit:

Rec.1 The Clearwater Creek Campground straddles the four corners of the creek crossing. Screened from the surrounding area by the hilly topography, it is an excellent site for active recreational use. Currently popular as a pull-off and rest area, the site has good fishing and hiking opportunities. The campground design, however, is in need of improvement. Each of the four corners is an open gravel parking lot immediately next to the road with no screening or privacy. Neither are the campsites defined. The one vault toilet serving the facility is placed next to the creek. All in all, the campground presents an unattractive appearance.

The development on all four corners of the creek inhibits an orientation to the water since there is always a campsite for a view backdrop. Therefore, two corners should be retained for use, probably the two to the west, and the other two should be reclaimed and revegetated. The overnight use area should be pulled back from the river—either by expanding and redesigning the site or locating it up the hill at Rec. 2. The toilet should be relocated at the base of the hill where it can be better screened from view. The creek side sites are preferable for day use because the area is open and privacy limited. The entrances to the rest area and bridge ends should be planted with low plants or brush to better define the entrance and soften the present harsh appearance. The bridge would blend more harmoniously with the surrounding landscape if it were painted in brown, dark green or rust.

Rec. 2 Up the hill to the east of Clearwater Creek is an old material site which could be developed as the overnight camping area or as an overflow area for Clearwater Creek. It is set off the road in a screened location and has excellent views from its elevated vantage point. Access is convenient and safe. The gravel pad provides a good foundation for site development; but it requires some leveling, site design and landscaping. Although 1/10 mile from the creek, a trail could be easily provided that would link the two. The DOTPF also recommends developing this site as a turnout.

Rec.3 This existing boating/fishing access site on a small lake below an esker could be developed for regular use. The short road to the lake is steep and narrow, and if use continues, the road should be graded, the entrance enlarged, and signs placed to note the entry as it is around a corner that lacks clear visibility.

Rec.4 This old material site outside the entrance to Crazy Notch is recommended for development as a rest area or small, undeveloped camping area (2-3 sites). Distant views of the Talkeetnas and the foothills of the Clearwater Mountains and several kettle lakes are the sites amenities. Several short trails could be developed across some of the morainal landforms. Site development would require reclamation and contouring of the gravel pit and some site expansion to the north. (This may be a site recommended by DOTPF).

Rec.5 The one private landholding in this unit is located in an area highly sensitive to development. The Jim Moore Campground is an open gravel rectangle the size of a football field, lacking landscaping or screening. Its location on an open slope makes it visible along the road for several miles in either direction. Boarded-up buildings and general site disarray indicate the facility is abandoned. The owner is encouraged to remove the old buildings and clutter. It would be desirable to reclaim the site; but if use is to continue, the campground would benefit from site design and landscaping to soften the existing hard edges and give some privacy to the campground.

This is a poor site for development because of the open terrain and absence of vegetation. Future development should attempt to avoid such locations.

Road grading across turnout entrances creates a ridge of loose rock that makes access difficult, evident at this pull off which is recommended to contain an interpretive display about the esker. The litter barrel placed in the center of the view is also distracting.

Turnouts (T)

There are numerous roadside turnouts in this unit, many of them created as a result of materials extraction within the right-of-way. Once an area is cleared and the material source exhausted, sites have generally been left to function as turnouts. While turnouts are necessary to meet travelers' needs, this practice has raised several concerns in this unit relating to: (1) The number of turnouts and (2) turnout access.

(1) Retention or reclamation of turnouts. In Unit 6 there are gravel widenings as frequently as every 1/4 mile, and generally occur at 1/2-3/4 mile intervals. Most of these sites are old road maintenance sites where the remaining pads form the foundation for the turnout. The retention of all these areas is not necessary, and, in fact, their sheer number tends to increase the road's visual impact. Those sites that are most suitable as turnouts—because of their adequate size, view potential, location with respect to adjacent turnouts, safe entry/exit, and ease of maintenance—should be identified by the DOTPF as part of their road management operations. Other

sites should be graded so their contours conform to their natural surroundings, or have access closed and then be allowed to revegetate naturally or through replanting. These gravel sites are too numerous to identify individually, although many are noted on the assessment unit sheets on file at DNR. As part of defining an overall maintenance program for the road, the DOTPF should identify sites appropriate for retention and sites for reclamation and then manage them accordingly.

(2) Safe and easy access to roadside turnouts is extremely important for driving comfort and public safety. Present grading practices on the Denali Road create rough or impassable entrances to numerous turnouts that do exist. Graders run their blades along the edge of the road creating a furrow and ridge of gravel across the entire turnout entrance. The gravel is soft and loose and the ridges are sometimes 12 inches high, prohibiting use. It is impossible to leave the road smoothly and, in some particularly bad areas, there is the danger of getting mired in the gravel. Thus cars stop completely outside the turnouts, creating hazardous driving conditions. This problem can be corrected by more sensitive and careful road grading. Graders should contour and smooth the entry/exit and surface of the turnouts identified for retention. This should become a standard management practice for turnouts along the road.

T-1 This site is an existing gravel widening that should be retained because of its interesting views of the esker. Very little site improvement is needed except for contouring and grading the entrance.

T-2 This segment of the road is aligned along the top of an esker for approximately 1.6 miles and its elevated position in the landscape provides good views of the Clearwater Mountains and the nearby glacial terrain. Because it is a good vantage point for viewing the esker, this is a good site for an interpretive sign describing the esker and the processes which formed it. BLM recommended this as one of its 18 interpretive sites in the 1976 Denali Highway Information Plan. DOTPF included this as one of its recommended turnouts. The site is an existing turnout, with a bright orange litter barrel located in the center. The size is ample to accomodate 6-10 cars. No major site improvements are needed. The litter barrel is unsightly and out of scale with the open landscape and should be replaced by a buried trash receptacle or several shorter barrels located at the edge, not the center, of the turnout.

The road enters and exits the esker through steep gravel cuts which enclose the road and create a pleasant sense of arrival or departure to this unique area.

T-3 This existing widening should be retained as a turnout. It has views of the Clearwater Mountains and a vista of Carob Chip Mountain. Only minimal grading is needed to improve the site.

T-4 This turnout is recommended to take advantage of the panoramic views to the south of the rolling glacial terrain and distant mountains. Very few improvements are required except clearing some low brush and site grading.

T-5 This DOTPF recommended turnout is located on a small knoll and has good views. While it is a good site for a turnout, others nearby should take higher priority.

T-6 Views of distant mountains and shallow valleys as well as safe and convenient road access make this a desirable site for turnout development. Some clearing and grading are required.

T-7 This recommended turnout has pleasant distant views and is near several lakes which offer the potential for some recreational use. Minimal

site development or maintenance is required to make the turnout usable.

T-8-10 These three existing turnouts on the esker only require grading. They each are expressive of their esker location and also offer views of lakes and distant mountains. T-9 is a particularly large site with open and expressive views. This is a second priority site for a sign interpreting the esker.

T-11 Currently, there are two existing turnouts, at this location, one on either side of the road, providing access to lakes adjacent to the esker.

The small site on the north side should be closed and allowed to revegetate, while the larger site near the lake should be developed for use. Filling a small ravine near the road, vegetative screening, and relocating the unsightly litter barrel would make this an attractive turnout. It appears that the DOTPF also recommends this turnout.

Material Sites & Reclamation (R)

Materials sites are located at regular intervals throughout this unit. They are often located immediately off the road because of easy access with little regard for their visual impact from the road. Active sites should be managed to mitigate their negative impacts while greater care should be taken in selecting future sites.

- All new sites should be located outside the right-of-way and screened by topography, berms or vegetation. Where possible, they should also be located outside the greenbelt. When glacial landforms are used as a source--such as small morainal features--the material should be taken from the side away from the view. In open landscapes, new sites should be located on the side of the road away from the major views. Sensitive material extraction also requires careful location and alignment of access roads to conform with surrounding landforms.
- When no longer in use, the sites should be assessed for their value as turnouts or rest areas. If they are suitable and the need exists for the turnout, they should be developed for that use. Otherwise, they should be recontoured and/or have access closed and allowed to revegetate naturally.
- Whenever possible, active sites visible from the road should be screened with vegetation or a berm. Although others are noted on the assessment unit maps, one site in particular requires immediate reclamation:

R-1 When no longer in use, this site should have high priority for reclamation and revegetation.

Impact Mitigation (M)

Because it is an area crossed with numerous glacial streams, culverts are often required for water drainage. Some of these are in need of maintenance.

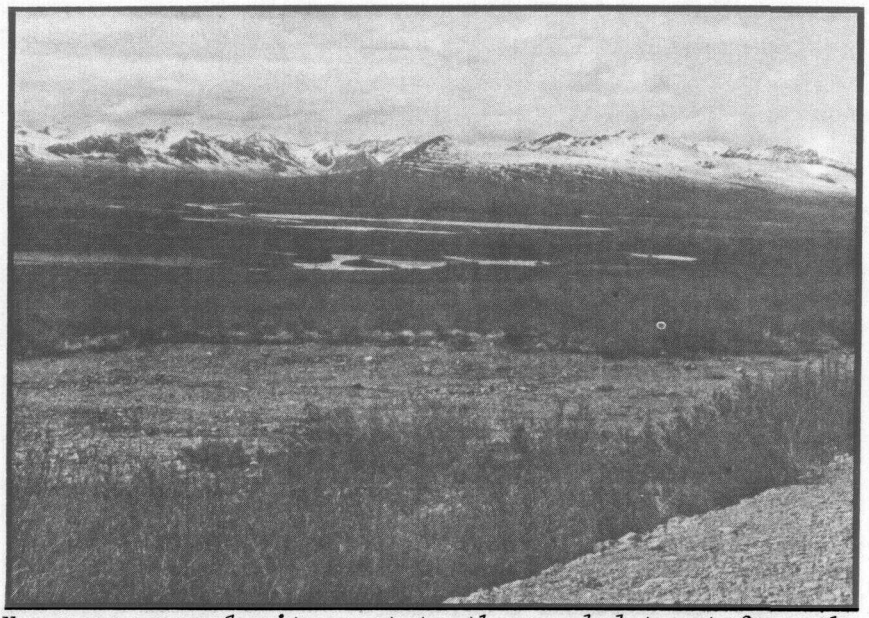
M-1 This eroding culvert serves a small tributary of Osar Creek and is causing road settling and erosion problems. To eliminate the problem, the culvert should be adequately sized and redesigned and the road repaired.

M-2 This visually obtrusive culvert should be screened with vegetation and/or painted an earthen tone to minimize the color contrast with the landscape.

Roadway Signing

The road signs and mileposts in this unit are in varying states of disrepair and the mileposts are incorrectly placed. The mileposts should be correctly calibrated and other roadway signs replaced.

Maclaren River to Maclaren Pass



Numerous gravel pits next to the road detract from the panoramic views across the Maclaren River Valley to the Clearwater Mountains. Some of these sites can be reclaimed as turnouts. Others, such as this one, should be revegetated.

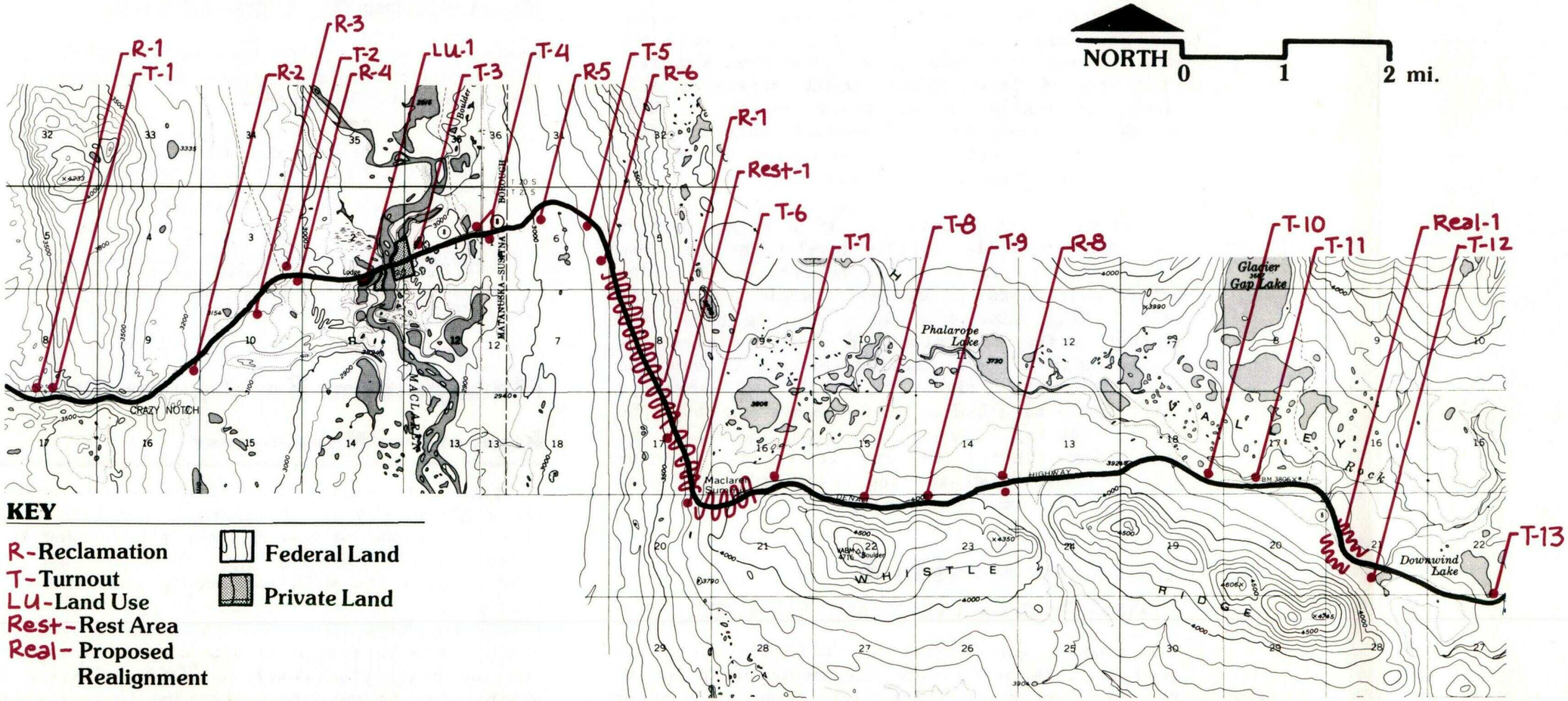
General Description

The road in Management Unit 7 passes through Crazy Notch and then travels for 18.9 miles across the Maclaren River Valley, climbs the valley wall to Maclaren Summit, and then skirts the base of Whistle Ridge through the pass. Incomparable landform variety and incredible scenery characterize the unit. Generally open, flat terrain surrounds the road, extending to the base of the distant mountains. Landcover in the area varies from low brush,to tundra, to barren slopes. Together, the flat foreground terrain and low lying vegetation open the distant panoramas. At the same time this means the unit's visual absorption capability is very low.

Throughout Unit 7 there are numerous opportunities to experience a wide variety of distinctive glacial features, major mountain ranges and spectacular peaks. Foreground glacial features have a more subtle character, but are expressive of the geological forces that formed them. Crazy Notch is a natural gap in a lateral moraine and is one of the highlights of the drive. Kettle lakes, sinkholes, pingoes and moraines are other notable features immediately adjacent to the road. The variety of these elements makes the area an unusually good location for interpreting the effects of massive glaciation on the land.

7 Maclaren River to Maclaren Pass

Assessment Units D41 – D50



Along the drive, dramatic mountain ranges dominate northerly views. The Clearwater Mountains, the Alaska Range and the Amphitheater Mountains follow each other in succession on the horizon. The almost perpetually snow covered peaks of the Alaska Range provide some of the more spectacular views in the unit at the head of the Maclaren River Valley.The panorama includes Mt. Moffitt, Mt. Shand and Aurora Peak. On clear days one may be treated to glimpses of Mt. Hayes and Mt. Hess. Large glaciers, too, are visible. From the base of the Maclaren Glacier flows the Maclaren River, which dominates the broad, glacially carved river valley. This meandering river is an important corridor for recreation as well as transportation to mining areas in the Clearwater Mountains.

In spite of its beauty, it is a rugged barren area and there is little development in this unit. At the Maclaren River crossing a lodge caters to fishers, miners and travelers along the road. This same site is a staging area for mining in the mountains and some equipment is stored near a small helicopter pad across the river from the lodge. A small, well-screened airstrip is situated on top of a moraine near the river. Not far from the lodge and nestled in the undulating glacial terrain is a small recreational cabin. Outside the river crossing area, there is no permanent development.

Land Ownership & Management Responsibility

BLM manages essentially all the land along the road in this unit, with the major exception of the Maclaren River crossing. Three corners of the river are private holdings and the northwest corner is a recreation withdrawal. The DOTPF manages one material site just to the east of Crazy Notch along with a 300 foot right-of-way throughout the unit.

Visual Resource Management Objectives

Management of the high quality scenic resources in this unit should be guided by two objectives; retention and enhancement.

> Retention: To retain the pristine scenic quality and spectacular vistas of the glacial terrain and distinctive mountain ranges in this unit by minimizing visible landscape disturbance.
>
> Enhancement: To enhance the opportunity for visitors to gain a better understanding of glacial processes through the provision of well-placed interpretive pullouts.

Management Recommendations

Right-of-Way Management

In the open terrain that characterizes Unit 7, the right-of-way is an important and highly visible foreground to more distant views. How it is managed will determine the extent to which the road retains its wild and scenic qualities. At the present time, native, low-growing brushy plants encroach close upon the edge of the road, giving it a very natural appearance. Because of the low vegetative cover, roadside clearing for visibility, is not necessary; and in fact, there

is little evidence of active right-of-way management. In fact, only a small amount of disturbance can have severe repercussions since plant regeneration is extremely slow in these areas of low brush or alpine tundra, and earth scars are difficult to heal. (A good example of this problem is noted on the map at Real-1, where clearing for curve realignment has led to ponding and scarification of the tundra). The following right-of-way management practices are recommended:

- Continue to allow low brush vegetation to encroach upon the road edge, which will help blend the road with its natural, wild surroundings and minimize all disturbance or cutting of the roadside vegetation.

Greenbelts

Effective scenic resource management in this unit cannot rely on right-of-way management alone because of the open and expansive terrain. Most all activities outside the immediate R.O.W. will also have a significant impact on the scenic quality. In this unit, therefore, it is highly appropriate to use the greenbelt as a management tool in conjunction with proper right-of-way management. As the major land owner in the unit, BLM can establish a greenbelt as part of their plan for the Denali Block lands along with visual management guidelines.

Because of the openess of the landscape and the very high scenic values in this unit, a narrow greenbelt would be inadequate to provide reasonable protection of the resource. Thus, a viewshed greenbelt is recommended for the entire unit. This means that all lands visible from the road would be included within the designated greenbelt and subject to guidelines designed to protect scenic resource values. Unlike the more typical application of a greenbelt this is not intended as a complete "hands-off" area. Rather, all land uses proposed for the viewshed should be prefaced by a visual impact study and submitted to BLM. The purpose of this disclosure would be twofold, both to identify the impact and also to determine alternative methods or development approaches that would ensure protection of the unit's high scenic quality. In general, the following standards should be applied in the viewshed:

- Minimize landcover disturbance
- Minimize development in the viewshed
- Any development of facilities for mining or mineral leasing should be located in such a way that lessens their visibility. In general, the number of access roads off the Denali Road should also be kept to a minimum.
- Some additional development within the immediate viewshed could occur at the Maclaren River crossing where development presently exists and is screened by glacial landforms.

Material Sites & Reclamation (R)

The material extraction necessary for road maintenance along this segment of the Denali often takes place immediately next to the road within the right-of-way because the glacial moraines are a readily available source of sand and gravel. It is apparent by their location that little consideration was given to the visual impact of this activity and most of the sites are a highly negative feature along the drive.

Three aspects of material extraction are of concern here: (1) Siting future gravel sources, (2) Managing existing active sites, and (3) Reclamation of old sites.

All new sites should be located to minimize their visibility from the road. These sites should be outside the right-of-way, and therefore, DOTPF should work with the BLM to identify a site or series of sites that will adequately meet road maintenance needs. Gravel extracted from morainal landforms which parallel the road should be taken from the side opposite the road. As a rule, sites should also be located on the side of the road away from the dominant view. In all cases, the site should be in a location that can be screened from view by means of berms or brush vegetation. Care should be given to aligning access roads so they conform to the local landforms and are also sited to minimize their visual impact.

Existing active sites adjacent to the road should be screened with berms and brush vegetation where possible. Access to the site should be camouflaged. The mitigation approach should be guided by the intended future use of the site—either as a turnout/rest area or reclaimed—once it is no longer needed. This should dictate the type of efforts and cost for appropriate interim action.

Surplussed or unused sites should either be developed as a roadside turnout or reclaimed through recontouring or closing access and allowing the area to revegetate.

The following site specific recommendations do not cover all the sites requiring attention. Some of the judgements on sites requiring screening or reclamation will have to be made as part of a yearly maintenance plan.

R-1 This gravel pit on the west side of Crazy Notch needs some grading and vegetation to improve its appearance from the road. The site could be reclaimed as a turnout, but is not a high priority in this area. Thus returning the site to more natural conditions is preferable.

R-2 This larger material site is located off the road in a reasonably inconspicuous and well-screened location. A ramshackle orange litter barrel is located at the corner of the access road. This would be a good site for recontouring and reclamation as a pull off. A new litter barrel, painted dark green or brown should be sited in the turnout and the access should be posted.

R-3 This gravel site is also recommended for reclamation as a turnout. A turnout here could take advantage of good southern views of the broad glacial valley and distant ridges. It is well-screened behind dense roadside brush and a drive through access loop could be constructed for minimal cost. The site itself would need some grading and the entrance/exit should be signed. This would make an attractive turnout.

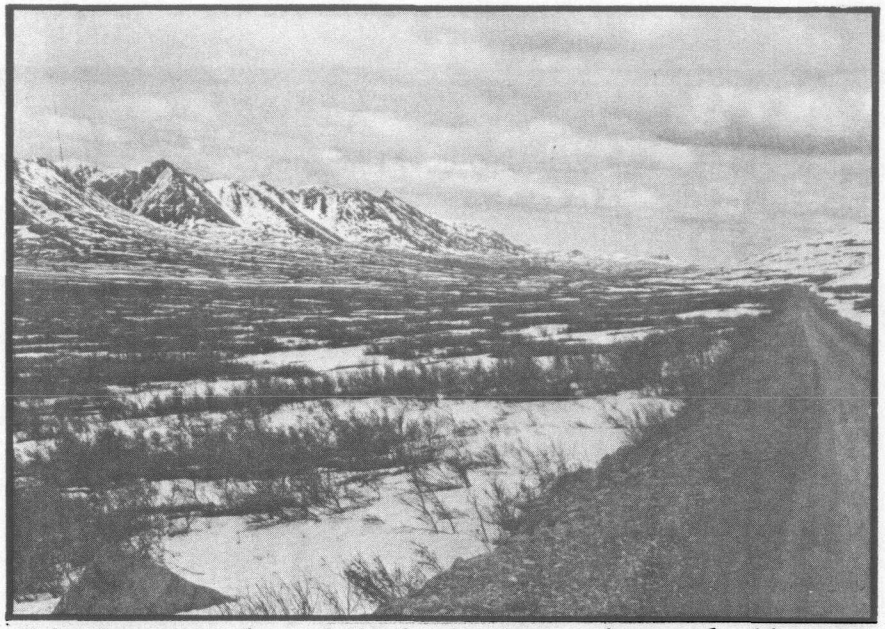
R-4 An old gravel extraction site is located slightly below the road surface and is partially reclaimed. It should be graded and filled so that it is level with the road. The cut bank should be contoured to a more natural angle to soften the edge.

R-5 This rather large gravel site is immediately next to the road and cluttered with junk. It is a flat site and would be easy to retain as a turnout, but offers no views or other amenities. If it is still in active use, some berming and brush screening would help minimize its impact; however, if it is no longer in use, the greater part of the site should be revegetated leaving a small area for a pull-off or turnaround. The junk that presently clutters the site should be removed.

R-6 The gravel pit here is located above the road and is a highly visible scar. Because it has nice panoramic views of the valley and safe access, it should be reclaimed as a turnout. If still in use, the site edges should be bermed for screening.

R-7 The entire roadside area in Assessment Unit 46 as it climbs up the hill to Maclaren Summit is scarred by gravel pits and other poor right-of-way management practices. This area should receive priority for reclamation attention by recontouring and revegetating as it is an important link between the Maclaren valley and pass areas.

R-8 Another large material site, this one covers both sides of the road. The south side consists of large piles of gravel that are in stark contrast to the low tundra vegetation. The site on the north side of the road could be recontoured as a needed turnout providing a good view across the pass area. The active site will be difficult to screen, but berming may mitigate some of the impact.



Skirting one edge of Maclaren Pass, the road alignment is sensitive to the broad, glacially carved landscape and views to the mountains.

Turnouts (T) & Rest Areas (Rest)

In this unit, which is noted for its spectacular scenery, there are few places to safely pull off the road and enjoy the view. As a rule, the turnouts that do exist are poorly maintained and many of these are gravel pads of former material sites that have been graded to be more or less level. Thus the location was not dictated by the location of select views or safety, but because it provided a convenient gravel source. Furthermore, access to the turnouts is made difficult by current road grading practices which leave deep gravel furrows that block the entire entrance. For those turnouts with litter barrels, the orange barrels are usually placed in the center, interrupting the view. Bullet holes riddle most of them. A series of appropriate turnouts should be identified. The turnouts destined for retention should be properly designed and maintained, while the others should be cleaned up and reclaimed by returning them to more natural contours and revegetating where appropriate. One criteria for siting a turnout is the presence of good views or other significant natural features. The Denali Highway Information Plan recommends a total of six turnouts in this management unit, all for the purpose of interpreting the area's unique geologic features. Of these six, three are recommended as being appropriate for turnout development. Each of these is discussed in more detail in the site specific discussions.

Sites appropriate for turnout development should meet the following criteria:

- Presence of impressive views or other interesting natural or human feature, or
- Area requiring a turnout due to distance from next closest turnout
- Site has safe access/egress
- Development of the site will be cost effective
- Turnout will be easy to maintain
- Space is adequate to accommodate 2 to 3 cars

Turnout maintenance is also important along the Denali. For those turnouts that are to be retained, the entrances should be smoothly graded as part of the regular road maintenance program. Also, litter receptacles should be properly designed and located near the turnout entrance so as to minimize their visual intrusion on the landscape. Decrepit barrels should be replaced.

The following sites are recommended as turnouts in Unit 7:

T - 1 Crazy Notch Interpretive Turnout. This potential turnout is located just inside the west end of Crazy Notch. It is a good location for an interpretive sign and turnout because the traveller is still in the notch, yet a site here will not detract from the opportunity to experience the Notch in its undisturbed, natural condition. At the same time, the traveler is close enough to the feature so interpretive information can relate to the immediately visible landscape. The Denali Highway Information Plan also recommends this site to interpret this unusual feature. Some slight clearing and grading are needed to improve the site, as well as signing.

T - 2 Maclaren Glacier View. BLM proposes this site as a turnout to take advantage of excellent views of the Maclaren Glacier. This site was not evaluated in enough detail to comment on the recommendation.

T - 3 Sinkhole Turnout. This existing gravel widening is an excellent site to develop a turnout with a sign interpreting the nearby sinkhole and kettle lakes. The turnout is immediately next to a sinkhole and it is possible to develop trails on the surrounding moraines for additional views of the kettle lakes and the Maclaren River. This is an excellent location and requires only grading and signing to develop it. This site was recommended for the same purpose in the Denali Highway Information Plan.

T - 4 Pingo Turnout. Next to the road here is one half of an exposed pingo formed when moisture upwelling through the permafrost froze and created a frostboil. Now a small pond has formed in front of the pingo and is good waterfowl habitat. The site is appropriate for interpreting these features which are characteristic of the Maclaren River Valley landscape. The Denali Plan includes this site, and proposes filling a portion of the surrounding marsh to create a parking area. Instead of disturbing the marsh, a pull off with parking should be developed at an existing widening on the moraine .1 mile to the west, with a marked walkway back to the pingo and the interpretive information.

T - 5 This small existing turnout has moderately good views of the valley from the base of the hill. It requires grading and some contouring to enhance it as a turnout, and the litter barrel should be replaced and relocated more inconspicuously.

T - 6 This existing pull out provides an excellent overlook of the Maclaren Valley from its vantage point just below Maclaren Summit. The site needs some grading to make access easier, and the litter barrel should be replaced and relocated in a semi-screened spot.

T - 7 This viewpoint at Maclaren Summit offers a magnificent panorama of the Clearwater Mountains, the Alaska Range, Amphitheater Mountains and Maclaren River and Pass. Particularly impressive are the peaks of the Alaska Range—Mt. Moffitt, Aurora Peak and Mt. Hayes. Because of its outstanding views of the Alaska Range, the Denali Plan proposes this as an interpretive site on mountain building processes in the Alaska Range. However, because the road is raised above the alpine tundra, site development would require extensive fill and constitutes a significant visual disruption of the expansive pass area. For this reason, a major turnout is not recommended here at this time. A small widening could be constructed at less expense.

T - 8 This small existing turnout requires some enlarging, grading and smoothing but it has excellent views of Mt. Hayes and Mt. Moffitt as well as other peaks in the Alaska Range. Access and egress is also safe at slow speeds.

T - 9 The DOTPF proposes a turnout at this location. Because a turnout does not exist and would require landfill while other sites exist nearby, development of this site is not recommended.

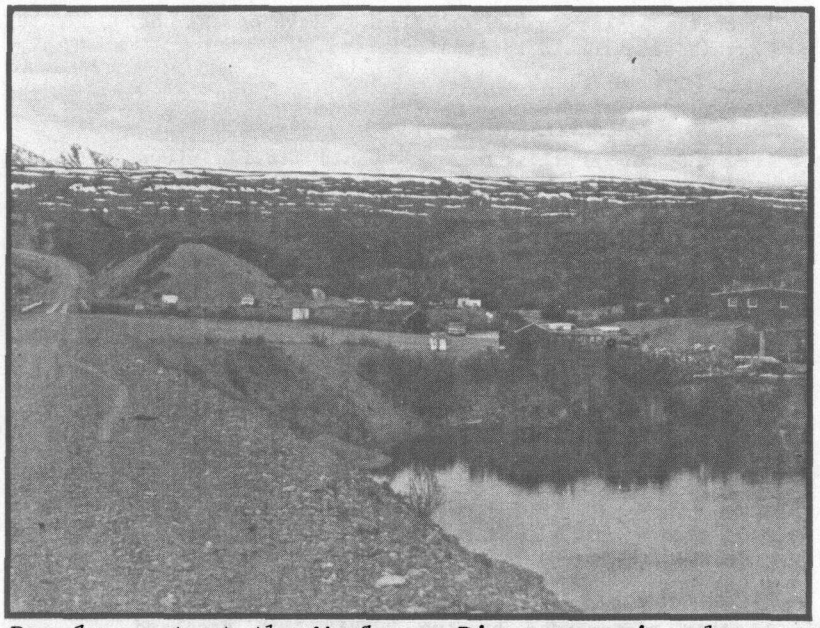
T - 10 This site has an excellent view of Glacier Gap across the Maclaren Pass and it could be developed as an adequate turnout with minimal grading. Access is also safe. The DOTPF also recommended a turnout at this location in their Denali upgrading plan. Development of this site should receive priority.

T - 11 A turnout at this location would provide views to the south, including a surprise view beyond Whistle Ridge to the Wrangell Mountains. The size is adequate for a turnout and minimal grading would be required.

T - 12 Located on the south side of the road near a small lake, this proposed turnout is oriented towards Whistle Ridge, Maclaren Pass and Glacier Gap. The site is large and would have safe and clearly visible access. The DOTPF also recommends a turnout at this location which should receive priority for development.

T - 13 Also recommended by the DOTPF, this proposed turnout overlooking Downwind Lake has good development possibilities and reasonably good access. T-12 is preferred over this site.

Rest - 1 A rest area/interpretive site is also recommended in this unit. This existing pullout just below Maclaren Summit offers a full panorama of the Clearwater/Amphitheater Mountains character type with the glaciated river valley below and mountain ranges dominating the horizon. A broad range of landform, waterform and landcover types are clearly visible. This location has ample room to provide a rest area with picnic and toilet facilities. Trails can be developed up the hill to the Maclaren Summit as well as along the ridge on the west side of the road for views of the valley and nearby kettle lakes. This is another site proposed in the Denali Information Plan as an interpretive site for the Maclaren River and Valley. It should receive high priority for development. While extensive cutting or filling is not required, site design and development for a major rest area will be necessary.



Development at the Maclaren River crossing does not pose major visual problems because of its location in the glacial landforms.

Land Use & Development (LU)

This highly scenic, extremely open area is also sensitive to development intrusion. Therefore, in order to retain the area's wild and scenic values, development should generally be discouraged in Unit 7. It is recommended that BLM incorporate these recommendations in their plan for the Denali Block. While properly sited access corridors to mining and mineral leasing could be considered, settlement along this fragile portion of the Denali Road should not be. Any development actions that do take place should be evaluated for their impact on the areas scenic quality and follow specific guidelines designed to protect the quality of the scenic resources.

The one exception to these recommendations is the existing lodge and other uses at the Maclaren River crossing. Because of its location, these uses are only visible from the immediate area. The services provided here are needed along the road and thus continued use of the area as a commercial/recreational service node is appropriate. Some expansion in the immediate vicinity, if subject to design guidelines, would also be in keeping with maintaining the road's wild quality while ensuring travelers' needs are met.

LU-1 Maclaren River Lodge. Located close to the road in an area of no vegetative screening capacity, the site's appearance would benefit from cleaning up the clutter of automobiles and other paraphenalia that are scattered around. A trailer across the road on the recreation withdrawal would be somewhat improved with screening. Construction of a permanent structure in keeping with the road's wild and rustic theme is desired if the use is permanent.

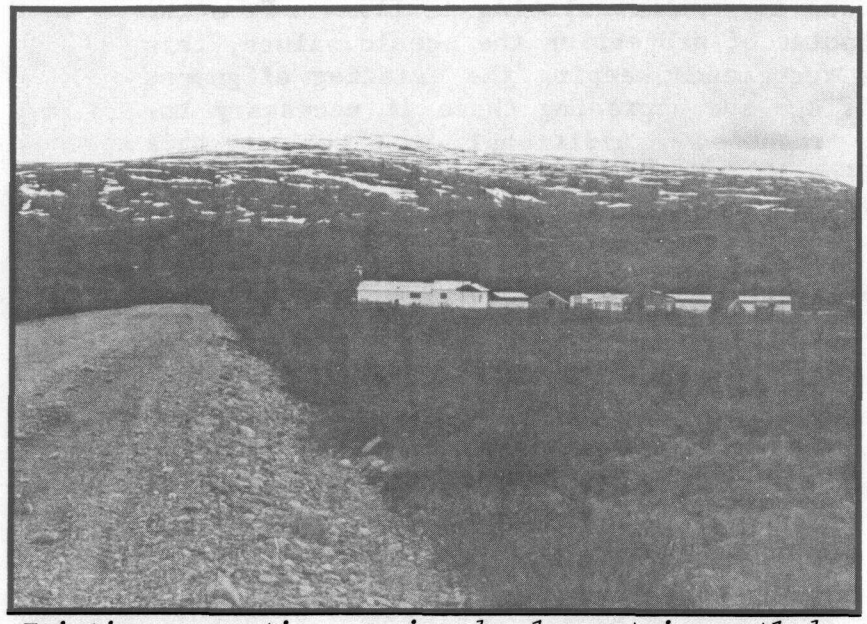
Road Realignments (Real)

The DOTPF proposes two realignments in this unit. The first is the apparent reconstruction of the Maclaren River bridge slightly to the north of the current bridge. This would require cutting in steep banks along the north side of the road and a major construction effort. The current bridge and road alignment seem more than

adequate to handle existing traffic. From the standpoint of protecting the scenic values, this study recommends keeping the existing alignment and bridge and upgrading these if necessary for other reasons. Additional research on this question is in order. The other realignment is located in the east portion of Maclaren Pass.

Real-1 A minor curve realignment is proposed here which will not have a major impact on changing the experience of driving through this open landscape. From a driving standpoint it does not appear to be a necessary upgrade. However, in preparation for this action, roadside clean-up has already created unsightly scars. Now that the damage is done, care should be taken to reclaim the old alignment and allow it to revegetate once the realignment is complete. In alpine tundra this will be a lengthy process.

Tangle Lakes



Existing recreation service development is nestled among the glacial landforms surrounding Tangle Lakes which screen the uses from distant views. This is an appropriate area for additional development as a recreation use node.

General Description

Management Unit 8 includes lands on either side of the Tangle Lakes area located twenty miles west of Paxson. This 19.7 mile long unit is characterized by open views, low brush vegetation, and interesting glacial topography. Natural features which accentuate the visual experience include the Amphitheater Mountains, Tangle Lakes, Landmark Gap, Flattop Mountain, numerous small lakes, and glacially created landforms. Some of the more outstanding views from the road encompass the Alaska Range, the Wrangell Mountains, the Gulkana and Gakona glaciers, the Clearwater Mountains, the Tangle River, and Octopus Lake.

Scenic values along this portion of the Denali Wild and Scenic Road are high but not exceptional when compared to other portions of the road. The open character of the landscape and low vegetative cover make this a very sensitive scenic area with a low visual absorption. East of the Tangle River road the surface is paved. The paved road winds through undulating topography which enhances the driving experience because of the frequent changes in point-of-view. Along this section of the road numerous developed turnouts offer excellent viewing opportunities for the traveler's enjoyment.

The western unpaved portion of this unit has a straighter road alignment, lacking the visual highlights created by curves, hills, or a

8 Tangle Lakes

Assessment Units D51-D61

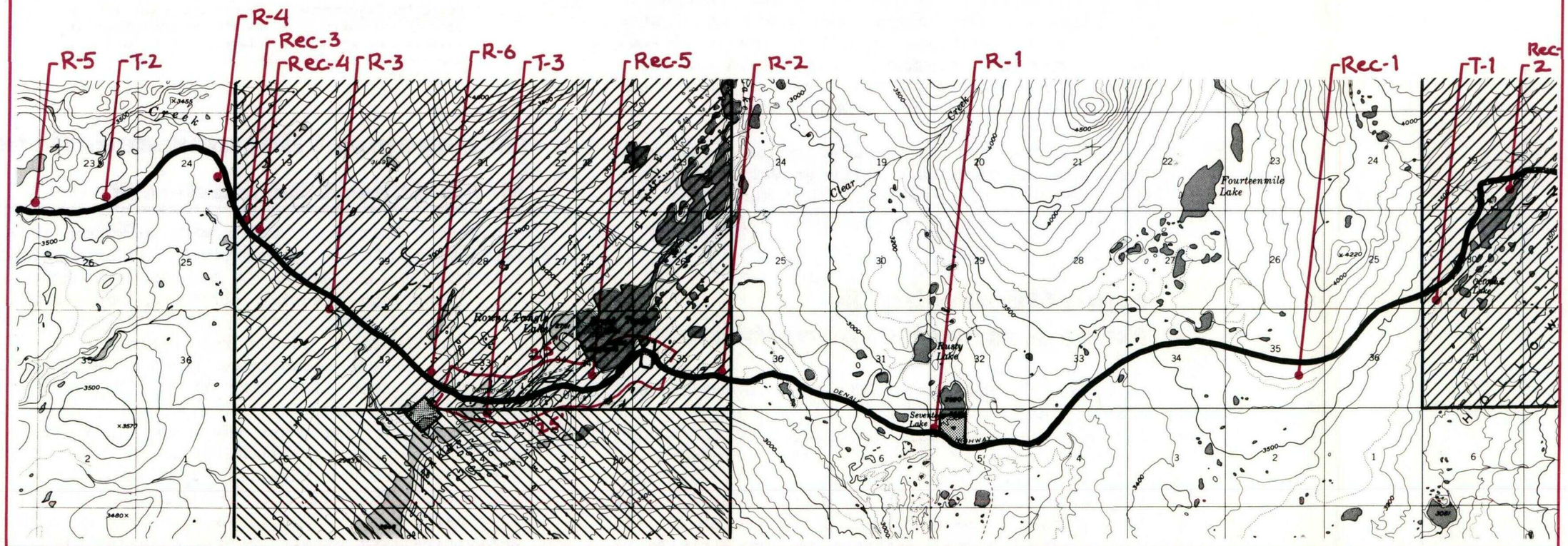
KEY

R- Reclamation
T- Turnout
Rec- Recreation
25' Greenbelt

Federal Land
Private Land

State Owned Land
State Selected Land

NORTH 0 1 2 mi.



changing point of view. In addition, the poor road maintenance on this road section forces drivers to focus their attention on maneuvering around potholes, not on scenery. Turnouts are required so travelers can appreciate the view; yet the number of turnouts are inadequate to meet present needs.

The Tangle Lakes area is a popular recreation destination, drawing people from all over the state for fishing, canoeing, kayaking, and camping. While most of the unit is in its wild and natural state, there are a number of establishments that cater to recreation needs. Focused on the lakes are two lodges with their associated cafes and gas stations (one is currently closed) and a large BLM campground. Nestled in the rolling glacial topography, these uses are only visible from the immediately adjacent area.

Gravel extraction is another major land use. There are approximately forty gravel sites along this nineteen mile segment, concentrated around Ten Mile Lake and the Landmark Gap Trailhead.

Land Ownership & Management Responsibility

Most land in Management Unit 8 is in public ownership. Approximately one-half is managed by the BLM and the other half is managed by the state, but the pattern of state and federal land ownership is fairly mixed. The State DOTPF also manages a 300 foot right-of-way immediately adjacent to the road. The unit includes a few small privately owned parcels located in the vicinity of Tangle Lakes.

Visual Resource Management Objectives

Management goals for scenic resources in Unit 8 are related to three general themes: retention, impact mitigation, and sensitive development.

Retention: To retain the natural features and scenic resources which enhance the recreation and driving experience within this unit.

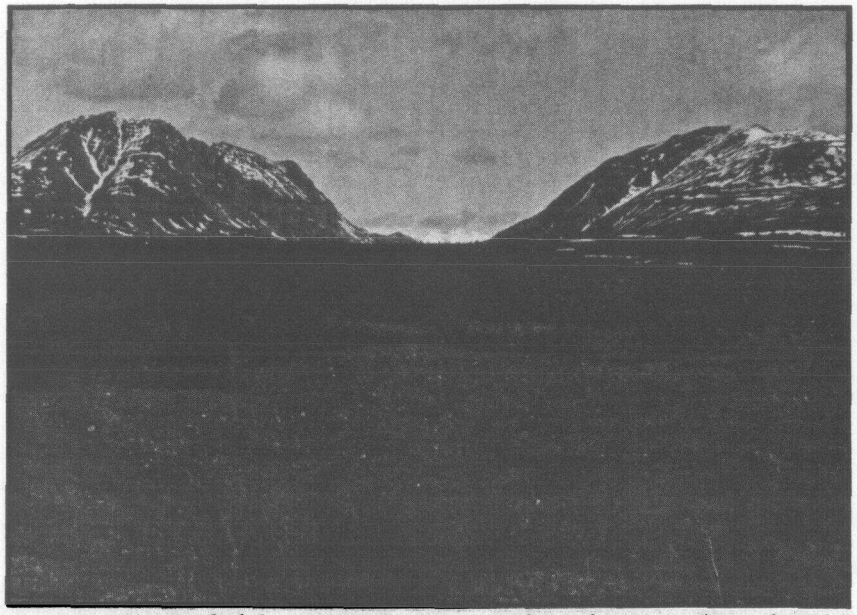
Impact Mitigation : To reduce negative visual impacts associated with haphazard gravel extraction adjacent to the road.

Sensitive Development: To encourage the development of recreational facilities in appropriate locations to provide additional opportunities to experience and appreciate the landscape and area resources.

Management Recommendations

Material Sites & Reclamation (R)

Management Unit 8 is laden with numerous gravel extraction sites, insensitively located within full view of the road. A few of the sites are very large and visually dominant, but most are rather small and could be easily improved with basic reclamation procedures discussed in the Findings and Recommendations for the Denali Wild and Scenic Road (See page D9). For existing sites, management actions should focus on screening the use from the road, using berms, site contouring, or a combination of these three actions. All new material sites should be situated away from the road and outside the greenbelt using natural landforms to screen extraction activities from view. Several existing sites require special management attention.



Frequent roadside gravel extraction is a major detraction from spectacular views. This site, which was also identified by BLM, can be recontoured as a turnout with a good view of Landmark Gap.

R-1 Two large and visually dominant material sites are located on either side of the road. The site on the south side is highly visible and disruptive and should be given priority for reclamation activity. If this site is still in use, the remaining portion of the bisected moraine should be removed. When extraction activities are complete, the site should be closed to vehicular access to encourage revegetation.

R-2 This small, inactive materials site has a nearly level, driveable surface and wonderful views of peaks in the Alaska Range as well as the dramatic east face of the Amphitheater Mountains. An inexpensive turnout could be created here requiring only a small amount of grading to make it more accessable to vehicular use.

R-3 Located in an area where additional turnouts are needed, this site has a nearly level gravel surface which could be developed as a turnout. The entrance and exit would be visible from both directions for safe access. The location offers nice views of Landmark Gap, Rock Creek, and distant Tangle Lakes. Conversion of this site into a scenic turnout would require little expense since a small amount of grading is the only improvement necessary.

R-4 This medium-sized materials site currently provides the only off-road parking in the vicinity. Although views from this site are limited, it should be retained as an opportunity for travelers to pull off the road. The surface is driveable in its present condition. Space should be retained for several vehicles and the remainder of the site should be graded to more natural contours, blocked to vehicular access, and encouraged to revegetate.

R-5 This small materials site is located entirely below the level of the road and could be completely hidden from view by placing a five foot berm or by planting tall native brush immediately adjacent to the road. An old camper shell cluttering the inside of the depression should be removed.

R-6 To the west of Tangle Lakes where the landscape opens to highly photogenic views of Landmark Gap is another old gravel pit. Since the site does not appear to be active, it is a priority candidate for reclamation as a scenic turnout. The plan also recommended this site as a viewpoint and interpretative stop. McGinnis Peak and Mt. Moffit are visible through the mountain cut which has served as a caribou migration route and a favorite Indian hunting area.

Recreation Development (Rec)

Since Management Unit 8 is popular for camping, boating, hiking, picnicing, fishing and ORV use, existing facilities reach capacity at peak use times during the year. Because of the variety of recreation use opportunities, accessibility, the

pattern of existing development, and the ability of the landscape to absorb additional use, this unit is recommended as a recreational use node. Some expansion of commercial or related services can be accommodated in the general area between the Tangle Lakes Lodge and about 1/2 mile beyond the Tangle River Inn, while a limited amount of additional trails and other recreational facilities could be provided in the surrounding area. Some scattered recreation cabins would also be compatible with the character of the area if they were limited in number and carefully sited away from the road. Although this unit is recommended for development, all land uses should be located and constructed in a manner that maintains the area's scenic and recreation values.

The following facilities are recommended for construction or improvement:

Rec-1 **Intepretive Overlook.** This large paved pull-out is located at milepost 13.3 at an elevation of 3,750 feet and offers a surprise view of Mt. Sanford and Mt. Drum in the Wrangell Mountains. The site is high on a hill overlooking a broad, lake-dotted valley covered in alpine tundra. The BLM Denali Highway Information Plan recommended this site as an outstanding interpretive viewpoint for the volcanically formed Wrangell Mountains. Their plan included the addition of interpretive signs, a short trail, an entrance sign on the road, and two premonitory signs. These additions would be appropriate to enhance travelers' use of this exceptional viewpoint.

Rec-2 **Ten Mile Lake Day Use Recreation.** Set midway between Paxson and the Tangle Lakes, Ten Mile Lake offers a variety of recreational opportunities, such as fishing, picnicing, boating, and hiking. There are several large gravel areas next to the road above the lake which could be inexpensively graded to provide parking. Because it is located in a broad valley any development at the lake would be highly visible from the road. However, some off-road development could take place at an old Fish and Game cabin site which is in a screened location at the north end of the lake. Recommended facilities to be added at this site include picnic tables, a foot trail around the lake, and a non-motorized boat launch near the cabin. Due to the open terrain and low-lying alpine tundra, this is recommended as a day-use area only.

Rec-3 **Rock Creek Crossing.** This area is presently used for fishing, camping, and parking for Landmark Gap Trail access, but no formal facilities have been provided to accommodate this use. Consequently, the creek banks are eroded and the site appears unattractive. A graded parking area large enough to accommodate five to seven vehicles should be developed off the road, leaving adequate screening. In order to minimize visibility from the road and provide a sense of privacy to those using the area, only one access road should be provided. Litter barrels should be placed in unobtrusive locations. Due to its proximity to the Landmark Gap Trailhead, this site can also serve as the designated trailhead parking area.

Rec-4 **Landmark Gap Trailhead.** This site was identified prior to the field inventory as a popular area for off-road vehicle use. Field investigation noted that while off-road vehicle use has damaged the trail surface, the tracks are not very visible from the Denali Road. The staging area is located in a materials site, which is scarred with ORV tracks and campfire remains. The site should be graded and additional screening provided near the road to help ensure that continued use does not adversely impact the view from the road. A more appropriate site for trailhead parking is the Rock Creek crossing discussed in Rec-3.

Rec-5 **Tangle Lakes Boat Launch.** The BLM launch and parking area on the north side of the road is very visible and should be screened with high brush vegetation near the roadside out-house and below the driveway.

Turnouts (T)

Additional turnouts are necessary along the western portion of Management Unit 8 as scenic pullouts and rest stops. Specific sites, most of which are located in the western part of the unit, are recommended here. Several others are covered in the discussion on Material Sites and Reclamation, including R-2, R-3, R-4 and R-6.

T-1 Octopus Lake Overlook. Octopus Lake is a unique water feature which attracts attention and leads travelers to stop for a view at an unsafe location in the road. A small gravel widening for one or two cars should be constructed to make a safe viewing pullout. Also, the addition of a small "Octopus Lake" sign would help visitors appreciate this novelty.

T-2 Valley Panorama Overlook. This site offers very nice views, including a panorama of a broad lake-filled valley, the Amphitheater Mountains, and the foothills of the Talkeetna Mountains. It has a sufficient amount of developable, nearly level land, but it is presently undeveloped. Turnout construction here would require grading and surfacing.

T-3 Existing Turnout. Vehicular access to a small gravel turnout overlooking the Tangle Lakes on the south side of the road is presently blocked by large stones left behind by careless grading practices. A minimal amount of grading would open this turnout to provide needed roadside parking for two cars.

Greenbelts (G)

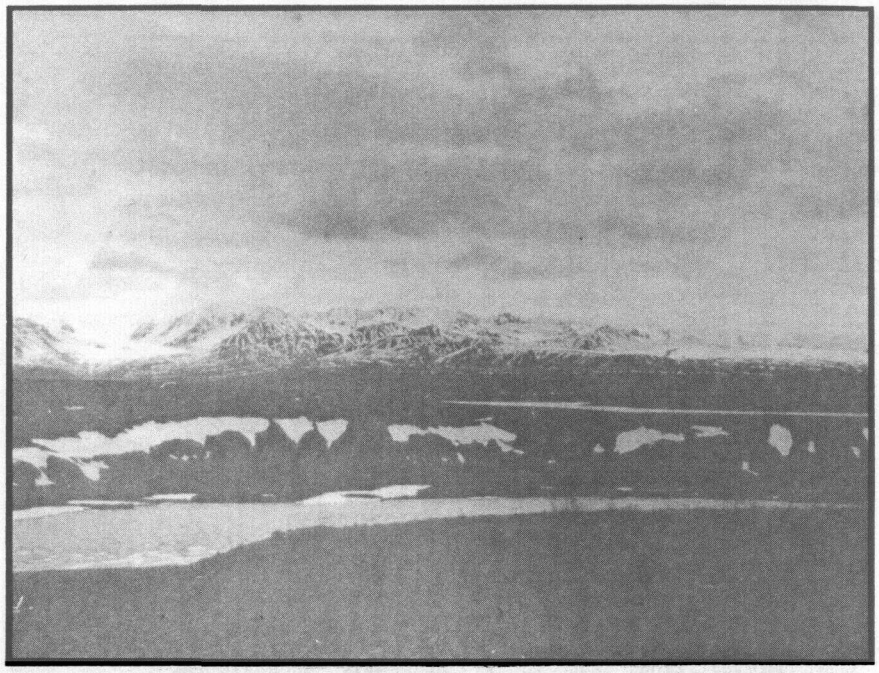
In Management Unit 8 where the terrain is open and visual absorption capability is low, greenbelts can be an effective land management tool for minimizing visual disruption of foreground lands and locating developments and landscape modifications a specified distance from the viewer. A 1,000 foot greenbelt is recommended for state and federal land along both sides of the road beyond the right-of-way, with the exception of the Tangle Lakes area.

Within this greenbelt, land use and development other than for recreation should be discouraged. Recreational uses can be sited within the greenbelt; however, they should be sensitive to the area's high scenic values and limit visible disturbance of vegetation and landforms. The alignment of access roads through the greenbelt should follow landform contours as much as possible. It is recommended that visual impact studies be prepared for land developments outside of the green-belt area and within the viewshed.

In the Tangle Lakes area, extending from 1/4 mile west of Tangle Lakes Lodge to 1/4 mile east of Tangle River Inn, a 25 foot "sensitive development strip" is recommended. This portion of the unit has been identified as a recreation use node, and future recreational developments are encouraged to locate within his area. Due to the enclosed nature of the topography, a narrow setback is sufficient to soften visual impacts and provide a buffer from road noise and dust.

The design and siting of any land use within view of the road should still be sensitive to the area's delicate scenic resource values and follow appropriate management guidelines. Because topography dictates that development must be located close to the road, care should be taken to retain as much natural land cover as possible. Developments should have no more than one access road, and there should be a separation between the road edge and adjacent land uses. Natural vegetation should be retained within the right-of-way except for minimal access clearing. Development and structures constructed in this area should utilize materials and designs which are compatible with surrounding land cover and landforms.

East End – Denali Road



Panoramic views to the Alaska Range give this unit its distinction. This area also serves as a transition from the lowlands along the Richardson Highway to the tundra landscape of the Clearwater/Amphitheater Mountains.

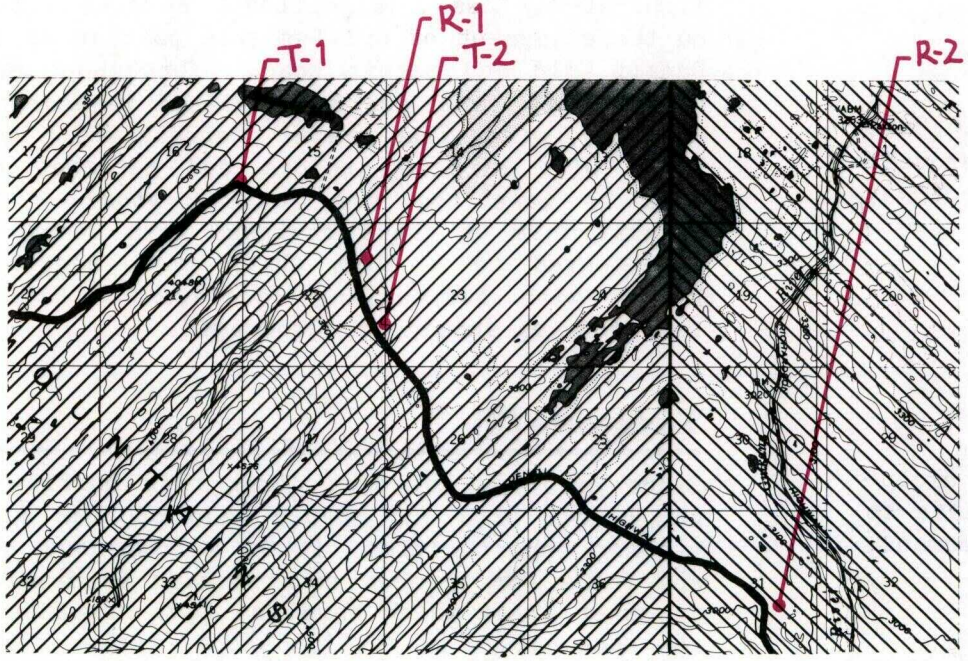
General Description

Management Unit 9 begins slightly east of 10 Mile Lake and extends 9.4 miles to just outside of Paxson. Commencing in the 10 Mile Lake basin, the road crests a hill to enter the Summit Lake basin, from where there are views east into the Gulkana River Valley. The unit offers one of the most varied and diverse driving experiences along the Denali Wild and Scenic Road. Views include a spectacular panorama of Alaska Range peaks and glaciers, Summit Lake, the Wrangell Mountains, and the foothills of the Amphitheater Mountains. The paved road winds gracefully through undulating glacial topography, giving the viewer awareness of three different valleys and their accompanying mountains.

Land use and development is not significant in this unit, indeed, its "wild" and pristine condition is a major component of the scenic resource. The only exceptions are a few material sites and an unpleasant bench of gravel which drains the right-of-way throughout much of the unit.

9 East End-Denali Road

Assessment Units D62 – D65



NORTH 0 1 2 mi.

KEY

T- Turnout
R- Reclamation

State Owned Land

State Selected Land

Scenic quality ratings for this unit are high and the primary viewer orientation is to the north. Due to open, expansive vistas and low growing vegetative land cover, the visual absorption capability of this unit is low.

Land Ownership & Management Responsibility

All land adjacent to the road in Management Unit 9 is state selected and tentatively approved. DOTPF administers a 300 foot right-of-way throughout this unit.

Visual Resource Management Objectives

Management objectives for the particularly exceptional scenic resources within Unit 9 relate to three general themes: retention, enhancement, and impact mitigation.

Retention: To retain those characteristics of the driving experience in this unit which contribute to its particularly striking visual resource values.

Enhancement: To enhance the driving experience by fostering a greater understanding and appreciation of the natural features which constitute the units' scenic and recreation resources.

Impact Mitigation: To take appropriate measures to reduce the negative impacts of distracting landscape alterations.

Management Recommendations

Right-of-Way Management

While distant mountain views command much of the traveler's attention, the condition of the right-of-way has a significant adverse impact on the enjoyment of driving this portion of the Denali Wild and Scenic Road. Throughout most of the unit, road surface drainage is accommodated by, wide, flat gravel channels which contrast with existing colors and textures and tend to make the road appear wider. The angular form of these drainage ways should be recontoured to a form which more naturally blends with surrounding landforms. Natural revegetation should be encouraged.

Turnouts (T)

Since existing turnouts along this portion of the Denali Wild and Scenic Road provide ample viewing opportunities, it is recommended that any funds for turnout construction be diverted to other areas which have too few. Because of the open nature of the landscape, litter receptacles should be buried or designed to be more unobtrusive, such as a cluster of short, screened tubs. One scenic overlook in Unit 9 is notable for a memorable panorama; it is discussed below.

T - 1 Scenic Turnout: This site is located at an elevation of 3,700 feet and overlooks the Summit Lake basin below. The panoramic view encompassing the Alaska Range with the Gulkana and Gakona glaciers, numerous glacial lakes, and the southern Wrangells is one of the most

spectacular viewing opportunities along the Denali Wild and Scenic Road. This site is particularly important to eastbound travelers because the view comes as a surprise as travelers crest the hill above the turnout. As a result they are "compelled" to stop and savor the view. The site is presently a rough gravel pullout approximately two acres in size. Visibility is a problem because the overlook is located on the outside edge of a curve.

Due to the spectacular nature of the viewing experience available at this site, it is recommended that this be a high priority for interpretive signing. Appropriate information would be the identification of landscape features such as peaks, glaciers, and lakes. Interpretive signs should be designed and located so as not to conflict with the view. Safety should be improved with small signs advising travelers of the turnout's entrances. The overlook should be graded to make the driving surface more accessible to motorists.

T - 2 BLM Plan Rest Area Proposal. This site is presently a paved turnout located near the eastern end of the unit, just a few miles from Paxson. It was identified in the 1976 Denali Highway Information Plan as the site for a proposed visitor center. The site is well suited for the activities and facilities proposed (picnic area, interpretive display, and short trail to view Summit Lake) because there is plenty of developable land available and safe entry and exit visibility. This site has good views, though not as comprehensive as those from T-1. The primary purpose of BLM's proposed visitor center is to provide traveler information and orientation which this study recommends be provided by the information turnout at the Richardson Highway junction in Management Unit 10. T-2 would be a nice site to develop if sufficient funds should become available, but it would not be a high priority in the context of this study.

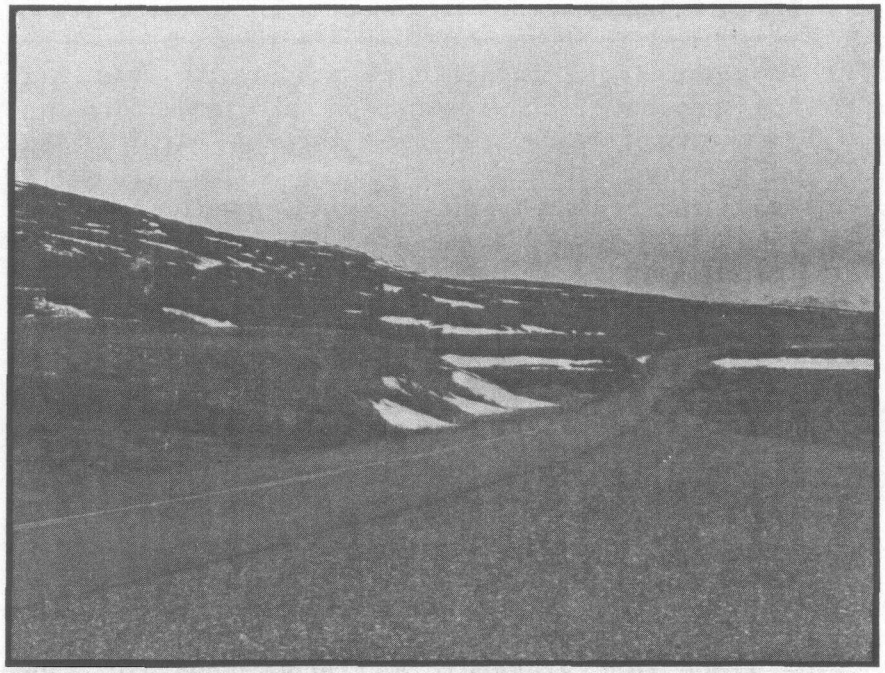
Greenbelts

The varied and magnificent scenery of Unit 9 is not protected by vegetation or land form and must therefore be retained through careful land management. Greenbelts should be established to help ensure that the fragile scenic resource values in this area are not compromised by insensitive land use and development. Because travelers are oriented to northern views, it is recommended that a greenbelt be established and implemented on all those lands within the viewshed on the northern side of the road. Scenic resources protection should take precedence on these lands, and no potentially conflicting land use should be allowed to occur within view of the road unless screened from view. Proposed development or landscape alterations should be evaluated for their scenic resource implications.

A 1,000 foot greenbelt is recommended for those lands on the south side of the road in this unit to minimize visual impacts through distance. New land use or development should take place beyond the greenbelt. Within the greenbelt, vegetation and natural landscape features should be left undisturbed.

Land Use & Development

Development or land uses which might detract from the wild and scenic character of this unit should not be discouraged. Visual resource protection should be the priority value for land management. Management Unit 10 (Paxson Junction) and Management Unit 8 (Tangle Lakes) are more appropriate locations for any development because they have lower scenic values, more private land, and are already influenced by



Material sites, located on the road edge, like R-1 shown here, detract from the road's scenic quality. These sites should be recontoured to blend in with their natural surroundings.

existing development. Any land development activities which do take place in Unit 9 should be extremely sensitive to the high quality scenic resources. All landscape alterations should respond to the recommended greenbelt considerations noted above and should take advantage of available topography as well as distance to soften visual impacts and minimize visibility. Because most of the outstanding views are on the north, those land uses which cannot be located in some less scenic area should be sited on the south side of the road.

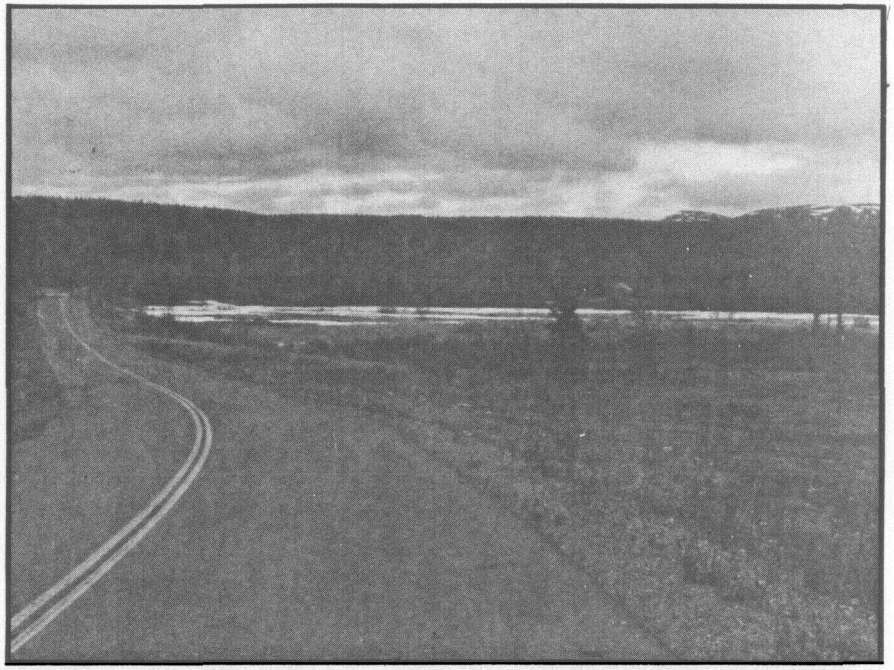
Material Sites & Reclamation (R)

The visual impacts of gravel extraction activity are relatively low in this management unit; only two specific sites are noted here:

R - 1 Two highly visible, large materials sites are located on either side of the road. The site to the north is more visually dominant due to the viewer's orientation. These sites are in stark contrast to surrounding landform and landcover. Visibility could be significantly reduced by planting tall brush beside the road adjacent to the sites. If they are still in use, gravel extraction practices should attempt to return these materials sites to more natural contours which could then be revegetated when the sites are no longer in use. Following the completion of extraction activity, access should be blocked to allow natural revegetation.

R - 2 This material site appears to be inactive and could quite easily be recontoured to reduce visual impacts and allow vegetation to grow. Natural succession should be encouraged by blocking access. Some high brush should be planted beside the road to help screen the site from view.

Paxson Junction



The site recommended for the Denali/Richardson junction turnout is located just to the west of the Gulkana River crossing where there is available space, safe access and egress, and proximity to river recreation.

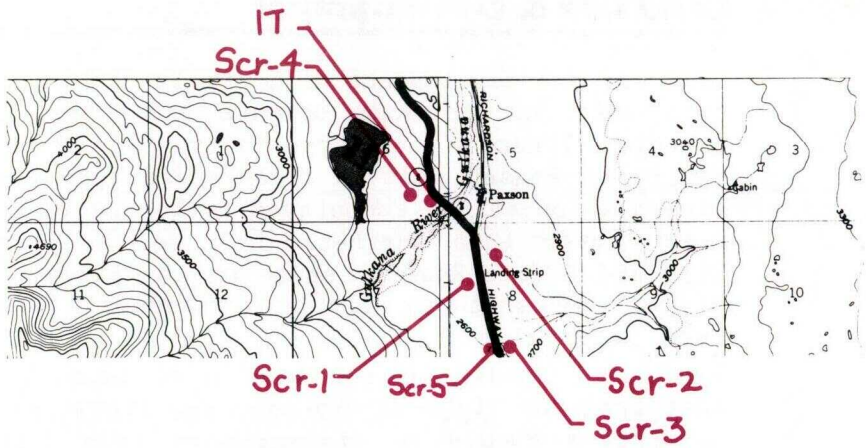
General Description

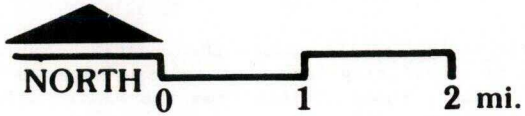
Management Unit 10 consists of short segments of the Denali Road and Richardson Highway around their junction at the small community of Paxson. Nearby natural landscape features include Mud Lake, Paxson Mountain, and the Gulkana River. At the western end of the unit the predominant vegetation is tall brush which changes to spruce forest as the road drops down into Paxson. Although scenic resource values are moderate in this unit, there are some nice views of the Alaska Range, surrounding ridges, and Paxson Lake.

Human activity is the primary focus of visual attention in this unit; some of the more dominant human elements are Paxson Lodge, the pipeline, an airfield, a radio tower, and assorted residential structures. Land use is concentrated at the junction or radiates south from Paxson on the Richardson Highway.

10 Paxson Junction

Assessment Units D66-R1





KEY

IT- Information Turnout

Scr- Screening

Federal Land

Land Ownership & Management Responsibility

Land ownership patterns within Unit 10 are complex. Most state lands are in material sites, airfield leases, and temporary use permits. Additionally, there is some BLM land and considerable private land adjacent to the road. The state DOTPF manages a 300 foot right-of-way on both roads.

Visual Resource Management Objectives

Objectives for the management of scenic resources within this unit relate to the themes of sensitive land use and development, retention, impact mitigation, and entry.

Sensitive Land Use and Development: To encourage roadside land uses to take advantage of the

landscape's ability to visually absorb development impacts and to use appropriate design tools and techniques to make the additions attractive to the area.

Retention-To retain those characteristics which contribute to existing scenic resource values.

Impact Mitigation-To reduce the negative visual impacts of existing land uses and developments—particularly those visible from the Denali Wild and Scenic Road.

Entry-To create an appropriate entry experience that is expressive of the overall theme of the Denali Wild and Scenic Road.

Management Recommendations

Right-of-Way Management

Due to the complex patterns of ownership in this unit and the various roadside land uses, right-of-way management is a primary tool for implementing the above four objectives. Existing right-of-way management practices allow vegetation to grow close to the road; these practices should be continued. Management crews should take advantage of taller vegetation to help screen those areas where roadside activities such as gravel extraction and the airfield significantly detract from the visual experience.

Right-of-way management practices for the Denali Wild and Scenic Road should be sensitive to the overall theme of the road and its reduced traffic volume and speeds. Vegetation should be allowed to grow as closely as possible to the road edge to make this an appropriate entry for a "wild and scenic road."

Land Use & Development

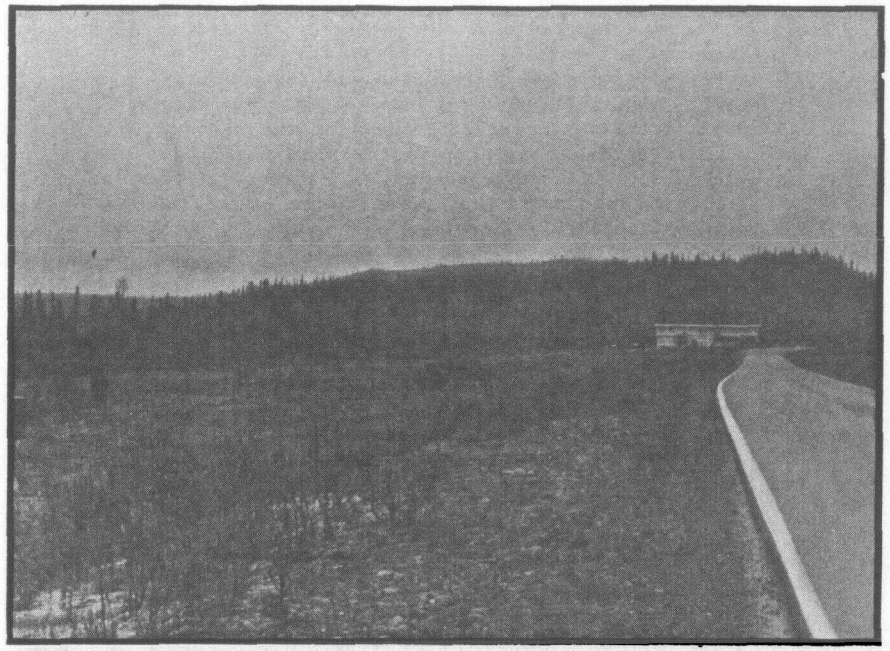
Land use and development will likely continue in this unit due to some private ownership, the junction location, and proximity to the community of Paxson. It is recommended that roadside development be encouraged to locate in this unit rather than further north on the Denali Wild and Scenic Road or south on the Richardson Highway since these adjacent management units have particularly high scenic values. Future land uses should be set back a minimum of 25 feet from the right-of-way edge and little or no vegetation should be disturbed to help reduce impact of the activity. This 25 foot visual resource management strip should be officially incorporated in public land management. Land use and development on public land should set an example for private landowners who would hopefully follow these standards in their own development.

Information Turnouts (IT)

At major highway junctions information turnouts are needed to provide direction to travellers.

1T-1 Roadway information should be provided at Paxson junction to assist travelers planning to drive the Denali Wild and Scenic Road as well as those heading either north or south on the Richardson Highway. An information turnout is recommended at a site on the Denali Road approximately 1/4

mile from the junction. The site is on the south side of the road, near the west bank of the Gulkana River. This is one of the most scenic sites near the junction,providing a nice view down the wide gravel bed of the Gulkana River. An information turnout could be inexpensively developed at this site as a nearly level gravel extraction site already exists there. Entry visibility is safe, and this location is within view from the junction. Development of this site would consist of parking space for two to three cars and a kiosk with information relating to road conditions, available services, and recreational opportunities along the Denali Wild and Scenic Road. Signs should also be placed on both highways to direct travelers to the information turnout. A sign should be located 500 feet from the junction for both north and south bound travelers on the Richardson, and 500 feet on either side of the turnout to notify Denali Road travelers.



Low brush planted along the edge of the road would help screen the stubbled expanse of the airfield and define the arrival at Paxson Lodge and the junction.

Screening (Scr)

Roadside vegetation can be a useful tool to enhance the foreground views as well as to screen the visibility of unsightly adjacent land uses.

Scr-1 The airfield at Paxson is immediately adjacent to the Richardson Highway for over one half mile south of the junction. This airfield is visually dominant throughout most of the unit and strongly contrasts with surrounding lines, colors, and texture. Visibility of the airfield could be significantly reduced by encouraging tall brush to grow in the right-of-way immediately adjacent to the road edge. Some old barrels which visually clutter the airfield should be removed or screened from view.

Scr-2 A large "garage" building and its extensive gravel parking area are openly visible. Access to this site should be limited to one driveway and the remainder of the road edge should be planted in tall brush to help screen it from view. If possible, brush should also be planted around the edges of the area.

Scr-3 Small material sites on either side of the road on the eastern end of the unit could be effectively screened with tall brush adjacent to the road and around the edges of the sites. These sites should also be closed to vehicular access and encouraged to revegetate.

Scr-4 A dumpsite located near the proposed information turnout at the Gulkana River crossing should be screened from view of the road and turnout with tall brush planted along its edges. Berming would increase the effectiveness of the screen, especially in the winter months when the brush would not be dense enough to affect visibility.An alternative screened site would be preferable to this location.

Scr-5 Also located at the southeastern end of the unit, this pipeline access road is no longer in use and reclamation efforts have apparently been made, primarily through the establishment of grasses. At the moment, this vegetation has a high visual impact because it is in marked contrast to the surrounding natural landcover. If the road is no longer needed, reclamation efforts should concentrate on establishing brush and trees in the area so that it blends in with the surroundings.

Central Richardson Highway

Central Richardson Highway

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General Description

The central Richardson Highway, between the junctions with the Denali and Edgerton highways is a portion of Alaska's first highway, connecting Fairbanks and Valdez. Like many of Alaska's highways, the Richardson now follows what used to be a trail and sled road during the gold rush days. Captain W. R. Abercrombie of the U.S. Army explored the first route, followed by construction of a telegraph line around 1900. Soon afterwards, Major Wilds P. Richardson, for whom the highway is now named, established a sled road linking Valdez, an ice-free port, to Fairbanks, then a major gold rush settlement.

About 55 years later, the Richardson was completed as a paved highway. It is an important commercial and industrial link as well as a homesite and and recreational access road. The Richardson Highway was one of the major road corridors used during the construction of the Trans-Alaska Pipeline which now parallels it.

Issues & Concerns

- **Paxson Lake:** Paxson Lake is a highly scenic and attractive recreation area which receives a substantial amount of use for fishing, boating and camping. It is a major put-in site for Gulkana River float trips. The existing facilities are limited and are oftentimes over used. Some have unsafe entrances off the highway. In addition, day use areas and scenic viewpoints with safe access are extremely limited. (See Management Unit 11).

- **Sourdough Creek :** Sourdough Creek is a heavily used area for grayling fishing and is also the take-out point for the Gulkana River float trip from Paxson Lake. The state campground located at Sourdough Creek contains only 15 campsites and is often used beyond its capacity. (See Management Units 14 and 15.)

- **Sourdough Creek Land Sale:** A proposed state land sale is located on the east side of the central Richardson Highway near the Sourdough creek crossing. The impacts on views from the road that would result from this development need to be assessed. (See Management Unit 14.)

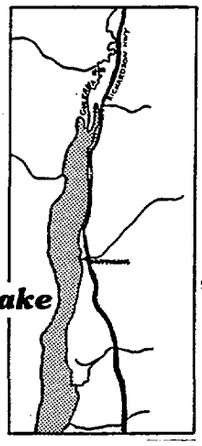
- **Gulkana River Crossing:** Recreational and industrial uses have impacted the river banks at the Gulkana River crossing. Recreational use at this location is high, but recreational facilities are limited to the small Gulkana village campground site. Scenic viewpoints and day use facilities are also inadequate. The exising campground is visible from the highway and exposed to the noise and other impacts of traffic. (See Management Unit 16.)

- **Hogan Hill :** Hogan Hill is well-known for its expansive views across the Gulkana Basin to the Talkeetna Mountains, the Chugach Mountains and the Alaska Range. Safe opportunites for stopping to enjoy the view, have a picnic or take a photograph are presently nonexistent. (See Mangement Unit 13.)

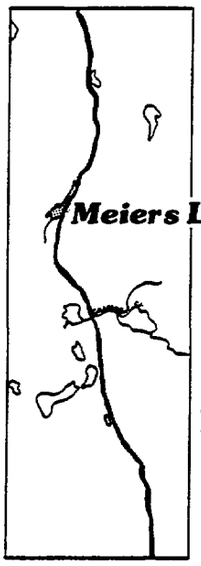
- **Proposed Highway Realignments:** DOTPF has developed preliminary plans for realigning and upgrading portions of the Richardson Highway between Gakona Junction and Paxson to straighten curves and reduce grades. (See Management Units

Management Units - Richardson Hwy.

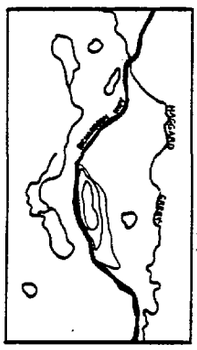
10 Paxson Junction



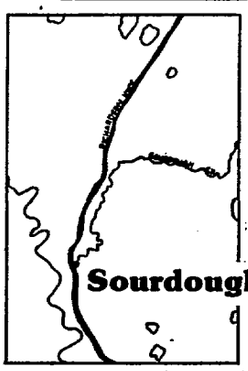
11 Paxson Lake



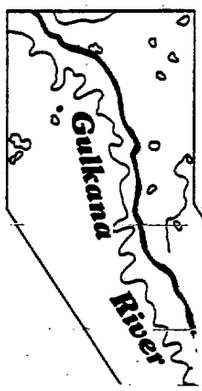
12 Meiers Lake



13 Hogan Hill

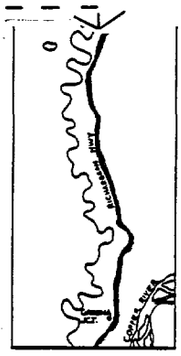


14 Sourdough

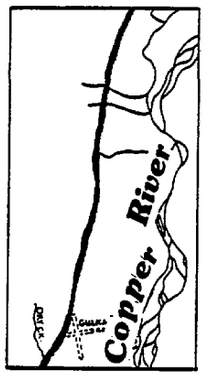


15 North Junction

continued

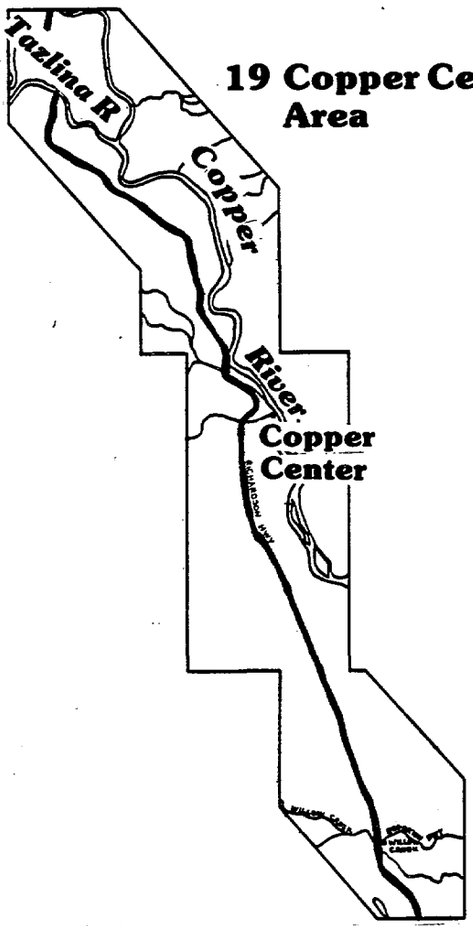


16 Gulkana River Bear Creek

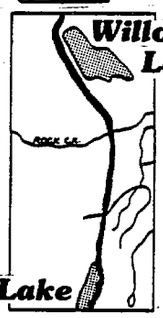


17 Bear Creek to Dry Creek

18 South Glenn-Richardson Jct.



19 Copper Center Area



20 Willow Lake

11 through 15 and the general discussion on road realignments.)

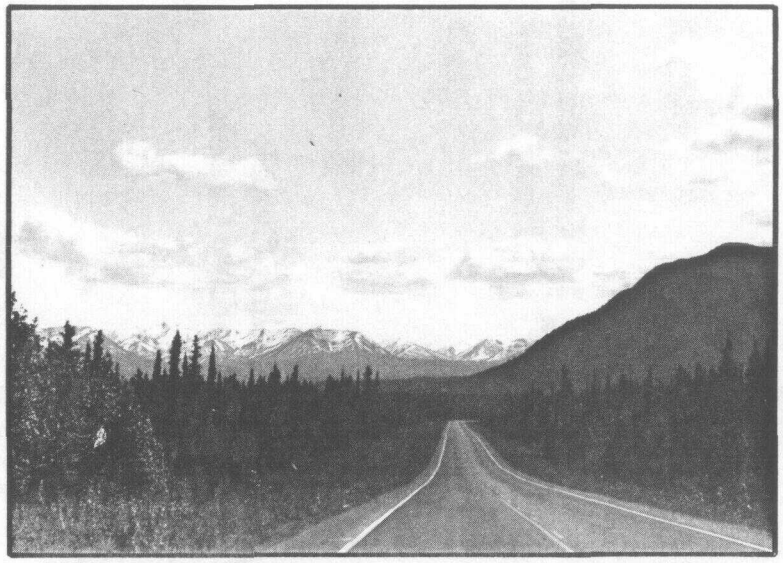
- **Copper Center By-pass:** The historic Native settlement of Copper Center will be by-passed by a rerouting of the Richardson Highway to the west of the existing alignment. Travelers will no longer have the opportunity to directly experience the historic points of interest within Copper Center. (See Management Unit 19.)

- **Roadway Information:** Travelers need access to an information system that covers road conditions, availability of commercial, recreational and emergency services and an orientation to the landscape. (See Management Units 10, 15, 18 and 21.)

Findings & Recommendations

Summary of Scenic Resource Values

Along the central Richardson Highway, between Paxson and the Edgerton Road cutoff, scenic resource values are extremely variable. The highest quality, most memorable views are concentrated around the northern and southern portions of the highway. At the north end, Paxson Lake, Meier's Lake and Hogan Hill provide the traveler with dramatic views of both the immediate and distant landscape. Toward the southern end of this route, expansive views across the Copper River basin and Willow Lake to the Wrangell Mountains provide memorable visual experiences.



A wide, high-speed thoroughfare takes the motorist through an area characterized by distant views of the Wrangell Mountains across the forested Copper River Valley at the southern end of the central Richardson Highway.

The remainder of the central Richardson Highway follows the broad valleys of the Copper and Gulkana rivers through a densely forested corridor offering only occasional distant views to the Wrangell and Chugach Mountains and Alaska Range. Although the highway is relatively close to the Copper and Gulkana rivers, views of the rivers are infrequent.

Throughout the central Richardson Highway, there are varying degrees of visual interest and experiential diversity provided by a combination of factors. First, there is the way the road

moves through the landscape. Its winding nature through the lowlands and along the edges of steep terraces is reflective of the sinuous nature of the Copper and Gulkana rivers. Moreover, the changing patterns of open bogs, semi-open stands of black spruce, pure and mixed stands of birch, spruce, poplar and aspen give variety and interest to the vegetaion visible from the road.

Second, are the more dramatic but less frequent views of distinctive landscape features and panoramic vistas. The river crossings at the Tazlina, Klutina, and Gulkana rivers are important visual and recreational nodes. Additionally, the periodic expansive views of the more distant mountains--particularly the Wrangells to the east and the Alaska Range to the north--are memorable when visible.

Third, is the visual interest created by the variety of land uses and development scattered throughout the corridor. Both historic and present day land development, from roadhouses and cabins to the Trans Alaska Pipeline, are often memorable features of the central Richardson Highway.

Scenic resource values are dependent on the presence and interaction of each of these three factors and management actions must respond to them appropriately, preserving those characteristics and experiences which are desirable and exploring ways to enhance these experiences for the benefit of visitors and residents alike.

Management Theme

No single theme is adequate to describe the central Richardson Highway. It is both scenic and in a sense wild. It is historic and at the same item modern. It functions as a local access road as well as a highway linking this area to other parts of Alaska and beyond. No single use predominates and the land uses reflect a diversity of natural and cultural resources. Consequently, the management of scenic resources along this highway corridor should consider two general themes: multiple resources and multiple uses.

In addition to scenic resources, there exist numerous other natural and cultural resources along the central Richardson Highway corridor. These include timber, productive soils, fish and wildlife, sand and gravel, fresh water, minerals, and fuels as well as local human populations and transportation and communication infrastructures. Like scenic resources these vary in quality and distribution over the landscape. There are places where they may be concentrated and places where they may be absent. Some areas are characterized by a multiplicity of resources and in others a single one tends to predominate. Scenic resource management actions can generally respond to these situations in one of two ways, prioritization or coordination.

Prioritization: In some cases people will value a particular resource in an area more than others. Use of this resource may take priority over use and development of other resources. Along the central Richardson, priority should be given to scenic resources in two areas: Paxson Lake to Hogan Hill (Management Units 11-13) and the area around Willow Lake (Management Unit 20).

Land uses and developments should take special care to retain or enhance the identified high scenic resource values in these areas.

Coordination: Alternatively, numerous resources may exist and all may be valued and used in various ways. In these areas, management actions should attempt to coordinate the various uses so all user needs are met without depleting or degrading the resource base. Most of the Richardson Highway has both scenic and other equally important resource values. Therefore, development on roadside lands for residential or commercial uses should incorporate appropriate measures to avoid degrading the visual quality of the surrounding landscape. The Trans-Alaska Pipeline is an example where resource uses have been generally well coordinated. Sand and gravel was extracted in numerous sites for pipeline construction. However, most of the sites were located so they were not highly visible. Additionally measures were taken to reclaim some of them. Along the central Richardson Highway the goal should be to integrate a concern for protecting scenic resource values into decisions related to use and development of the other resources along the corridor.

The existence of multiple of resources leads to a multiple use demands. The central Richardson Highway is used as a haul road for transferring freight from entry points to distribution centers. It is used as a service road for the Trans Alaska Pipeline. It is an access road for numerous residences and small businesses located adjacent to it. It is a recreation corridor with numerous recreational attractions along and accessible from it. It is a scenic drive for people driving for pleasure and desiring to see this part of Alaska.

For each use, different roadway characteristics are required. As a haul road particular emphasis is placed upon long straight alignments and easy grades to allow fast, efficient travel. As a scenic drive curving alignments which provide a continually changing view and moderate grades which climb to viewpoints would be considered preferable. Clearly along a multiple use road some compromise and accommodation of these differing needs and values needs to occur. It is possible to design roads and manage roadway corridors so safe, efficient and relatively direct travel is possible while at the same time taking advantage of viewing opportunities and creating an interesting driving experience. The multiple use theme of the central Richardson Highway suggests that this integration of scenic resource values with other development and use considerations is appropriate.

Scenic Resource Management Goals

The following goals relate to the multiple resources and multiple use themes of the central Richardson Highway and are recommended to guide scenic resource management plans, policies and actions.

- To integrate appropriate scenic resource considerations into land use and development actions throughout the highway corridor so existing scenic values are retained or enhanced.

- To make scenic resource management a priority consideration within those areas with particularly high scenic resource values and take appropriate action with respect to road design, right-of-way management, and development of roadside lands to be sensitive to these special resource values.

- To take action to mitigate the impacts of previous developments and management activities within the highway corridor which significantly detract from the scenic resource potential of the area.

Implementation: Land Ownership & Management Responsibilities

Scenic resource management along the central Richardson Highway involves five major actors: the State Department of Transportation and Public Facilities (DOTPF), State Department of Natural Resources (DNR), AHTNA Regional Corporation and various village corporations, the University of Alaska, and Alyeska Pipeline Company: The greatest responsibility and opportunity for potential impact on scenic resource values rests the DOTPF which manages the road and its 300 foot right-of-way corridor (except for private lands patented prior to 1952 where the right-of-way is narrower). With respect to land adjacent to this right-of-way, DNR will be the primary land manager north of the Sourdough area once selected lands are conveyed. South of here to the Gulkana River crossing, Native corporations are the primary landowners. Beyond this point the ownership pattern becomes complex with State, University, and Native lands and numerous small private landholdings.

Department of Transportation and Public Facilities (DOTPF)

The DOTPF can respond to its role as the primary actor with respect to effective scenic resource management along the central Richardson Highway through the following actions:

- Playing the lead role in the development and implementation of plans and guidelines for scenic resource management throughout the highway corridor.

- Adopting right-of-way management practices which are particularly sensitive to scenic resource concerns.

- Integrating considerations related to visual and experiential interest into criteria used for determining road upgrading and realignment - particularly in those areas with higher scenic resource values (Paxson to Sourdough, Willow Lake to the Edgerton junction).

- Giving adequate consideration to the siting, management and reclamation of road construction and maintenance sites as well as material sites in order to minimize adverse visual impacts.

The recommendations outlined in this report should be the basis of DOTPF scenic resource management policies, plans and actions for this corridor and should be extended to the remaining portions of the Richardson Highway.

Department of Natural Resources (DNR)

Presently, DNR manages numerous relatively small parcels scattered along the road corridor south of Sourdough with large amounts of roadside lands selected north of this area. The DNR can play an effective role in scenic resource management through the following recommended actions:

- Implementing greenbelt management recommendations on its lands throughout the highway corridor.
- Including greenbelts as scenic easements on its roadside lands subject to land disposals and leases and outlining guidelines and performance standards for the use of these greenbelt areas.
- Encouraging land uses on state lands which are compatible with overall scenic resource management goals and objectives as well as with management actions proposed by DOTPF for the right-of-way.
- Retaining state lands adjacent to the road in areas of predominately private ownership (Sourdough south to Willow Lake) to help control roadside strip development and retaining some lands in a natural state as potential open space and buffers around developments.

University Lands

University of Alaska trust lands are scattered throughout the central Richardson Highway corridor. These are generally large blocks of land readily accessible from the road and well-suited for use and development. University lands managers can respond to scenic resource management considerations through the following actions:

- Adopting greenbelt recommendations as outlined in this report and require that land uses on these roadside lands conform to the guidelines and performance standards associated with these greenbelts.
- Setting an example for adjacent private landowners through sensitive land development and management.

Alyeska Pipeline Company

As seen from the central Richardson Highway, the Trans-Alaska Pipeline has a minimal negative visual impact and in many cases, is a distinctive landscape feature. This is a result of sensitive pipeline right-of-way management and because it is generally located away from the road. Alyeska has expended considerable time and money to minimize the impacts of this development. What they have learned - particularly with respect to revegetation techniques specific to Alaskan conditions - should be used by others. Such information would be especially useful for DOTPF in material site reclamation and revegetation of cut and fill banks.

There still are a number of sites visible from the highway where pipeline related use has resulted in significant negative visual impacts. These are pointed out and discussed in the management units where they occur. It is recommended that Alyeska continue to set a good example of development that is sensitive to scenic resource values and take necessary action to reduce these impacts.

Native Corporations

AHTNA Regional Corporation and the various village corporations can play instrumental roles in scenic resource management along the central Richardson Highway, primarily because they own

large blocks of developable land adjacent to the road from Sourdough south. These corporations are in a position to adopt policies for their land which respect scenic resource values. Specifically it is recommended that:

- Greenbelt recommendations as outlined here be adopted for Native corporation lands adjacent to the road and these be included in future sales or leases of the lands.
- Native corporations strive to set examples and standards of visually sensitive development - particularly for adjacent landowners.

Other Private Landowners

While at first glance, small individual property owners along the highway would seem to have little impact on scenic resources, in actuality, their impact can be significant. A single commercial development, if set in front of a panoramic view of the Wrangell Mountains, could change the appeal of the view if it is out of scale and presents a foreground dominated by extensive gravel areas, parked cars and blinking neon signs. Similarly, an attractive homestead or small roadside business could be a strong positive visual feature - particularly when carefully sited and where the landscape itself has minimal visual diversity. Private landowners can play a significant role in the following ways:

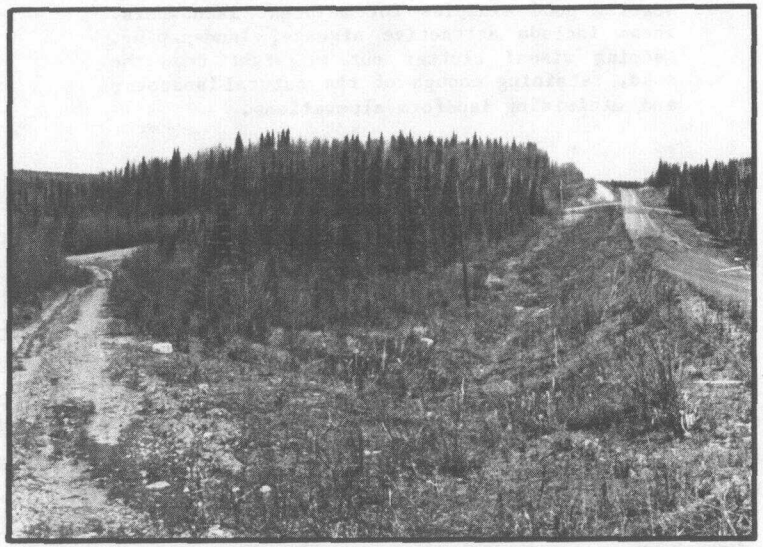
- Supporting visually sensitive right-of-way management along their property frontage and demanding that appropriate management and maintenance actions be undertaken along the entire highway.
- Adopting visually sensitive land use and developmnt practices for their property and setting good examples for adjacent landowners. These include attractive signage, landscaping, keeping visual clutter out of sight from the road, retaining enough of the natural landcover and minimizing landform alterations.

The State of Alaska, DNR, DOTPF and other public agencies can help private landowners in two important ways. First the State could establish funding for design assistance available to commercial and other developments adjacent to highways, particularly those with valuable scenic resource values. Such assistance could be used for site planning and landscaping as well as building and commercial sign design. Second, design guidelines and examples of visually sensitive roadside development practices should be prepared and communicated to local landowners. (See Edgerton Road discussion.)

The following Findings and Recommendations are a summary of the general management actions in keeping with the theme and goals for scenic resouce management for the central Richardson Highway. Because this study focused on only the central portion of this road corridor and scenic resource values as well as roadside recreational use are as important both to the north and south, it is recommended that action be taken to extend this type of study to the remainder of the Richardson Highway in order to complete the management plan for the entire road.

Proposed Realignments

Road alignment and design must take into consideratin the various requirements and needs associated with different users. A straight



Opportunities exist along the Richardson to reclaim portions of the old highway alignment as well as to minimize the new road's linearity and raw character through sensitive vegetation management.

alignment with gentle grades designed for industrial and commercial use often does not provide the variety or interest desired by recreational travelers. In this context, recent DOTPF realignment proposals for the area from Gulkana River to Paxson (May, 1982) have been evaluated in the field for their possible impacts on the scenic and recreational driving experience. Factors considered include the following:

1. Potential visual impacts of both the proposed realignment and the vacated alignment.

2. Potential opportunities for enhancing the visual and recreational driving experience by opening interesting views from the new alignment or by creating a needed scenic turnout, rest area or recreational access point in the vacated alignment.

3. Opportunities for mitigating the visual impact of the new or vacated alignment.

4. Potential for the proposed realignment to reduce the visibliity of other activities which currently have a negative visual impact.

5. The change in the quality of the viewing and driving experience as a result of the new alignment.

The results of the field study suggest that many of the proposed realignments present opportunities to enhance the scenic driving experience while others would either have a significant negative visual impact or result in little discernable change. Where the present alignment offers a richer driving experience or where the realignment would have a significant negative visual impact, recommendations are made to upgrade the existing alignment rather than to proceed with the proposed realignment. Where realignments would present opportunities to enhance the scenic driving experience or where they would result in no significant negative visual impact, it is recommended that the plans for realignment proceed, taking into consideration the specific recommendations as presented for each management unit. (See Management Units 11 through 15.)

Right-of-Way-Management

Due to the variable — predominantly private — ownership and management responsibilities of the lands adjacent to the highway, the best opportunity for providing continuity in scenic resource management throughout the central

Richardson Highway corridor is through appropriate and sensitive right-of-way management. Since the 300 foot right-of-way maintained by DOTPF is a highly visible part of virtually all views while traveling the road, it can be a strong influence on the quality of this experience.

Along a modern, multipurpose, high speed highway such as the Richardson, right-of-way management needs to respond to a number of considerations. Clearly the primary one is that of safety. In response to this, right-of-ways are systematically cleared of all tree and shrub vegetation to allow for adequate visibility of signs, potential hazards on the road such as wildlife and stalled vehicles, and adequate visibility around corners. Additionally, roadside management activities focus on clearing for snow removal, to reduce surface icing, maintain drainage, and to prevent the deterioration of the road surface as a result of invading plants. Road shoulders are maintained for emergency stopping. At times, some right-of-way clearing is done to open up or maintain distant views. Other typical right-of-way management activities relate to highway signage, maintenance of turnouts, rest areas and litter collection sites as well as storage of sand and gravel.

Along the central Richardson Highway, right-of-way management activities which have the greatest affect on scenic and recreational resource values relate to the following three categories:

1. Routine R.O.W. vegetation management
2. Turnouts and other road related facilities beyond traffic lanes
3. Material sites and road construction and maintenance activities. Turnouts and material sites are discussed under separate sections which follow.

Roadside vegetation management along the central Richardson Highway commonly consists of clearing all brush and tree vegetation back an even distance from both sides of the road. Such practices are undesirable from a scenic resource management perspective for the following reasons:

1. Even shrub and tree clearing accentuates both the linearity and width of the road on the landscape.
2. This type of clearing creates a uniform edge and a less diverse experience, both spatially and visually.
3. It can accentuate the visibility of roadside land uses, particularly material sites and commercial developments.
4. It is not sensitive to site specific opportunities and constraints which could suggest variations in the common management response that might reduce adverse visual impacts and or enhance the driving experience.

Instead, right-of-way vegetation management actions should be more site specific and responsive to scenic resource management considerations. It is recommended that DOTPF adopt new policies and operating procedures such as the following:

- Adopt the policy and practice of varying roadside management actions to respond to site specific situations and conditions rather than using the same techniques over large areas.
- Utilize a landscape architect working in the field with the maintenance station supervisor or

foreman to develop a plan of action for each year's field maintenance activities.

- Give first priority for right-of-way management actions sensitive to scenic resource considerations given to those portions of the central Richardson which have particularly high scenic and recreational resource values.
- Use the right-of-way vegetation to screen or soften the visual impacts of adjacent landscape alterations - particularly material sites, maintenance stations and material and equipment storage areas.
- Reseed bare road cuts and fills to encourage the reestablishment of vegetation.
- Take advantage of clearings beyond the right-of-way to open up desirable distant views.
- Avoid clearing and management activities all the way back to the right-of-way edge.

Specific right-of-way management recommendations may be found for each management unit. In addition, there are numerous ways to use roadside vegetation clearing as a tool to introduce visual and spatial diversity. These are outlined under the right-of-way management section for the McCarthy Wild and Historic Road.

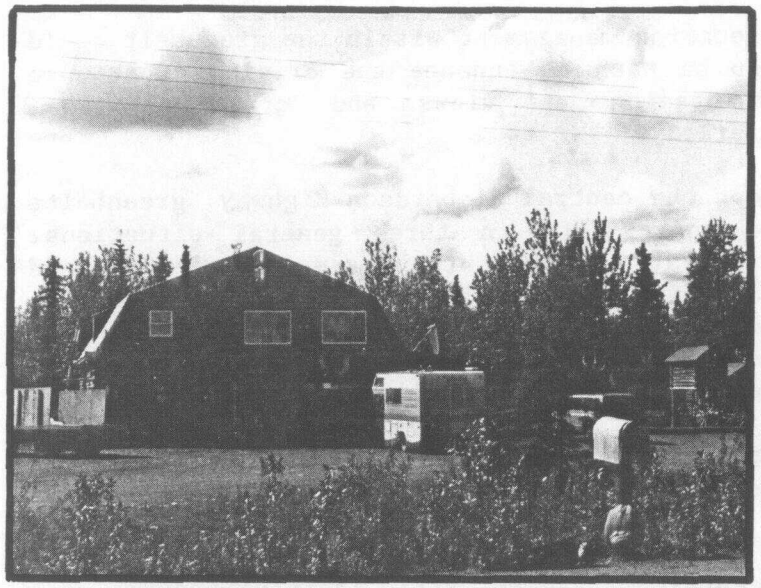
Land Use & Development

The central Richardson Highway corridor will undoubtedly continue to be a focus for roadside land use and development in this part of southcentral Alaska. As already pointed out, a primary goal for scenic resource management is to encourage land developments and uses in a fashion which are sensitive to scenic resource values - either to mitigate past actions, retain existing conditions or enhance view opportunities and experiences. Land use and development recommendations are organized around the following three areas; 1) Paxson to Sourdough, 2) Sourdough south to Willow Lake, 3) Willow Lake south to the Edgerton Road junction.

Paxson to Sourdough

This portion of the central Richardson Highway is characterized by high scenic resource values, minimal roadside development and predominately public (State selected) ownership. Within this area the following recommendations with respect to visually sensitive roadside land use and development are made:

- Encourage future development - particularly commercial activities, services, and light industry - to locate near Paxson. Some recreational and residential uses can be sited there and also around Sourdough. Development along the highway between areas should be primarily recreation related and adequately set back or screened from the road to retain the undeveloped, natural appearance of the area.
- Establish greenbelts on public lands as recommended in this report.
- Except near Paxson and Sourdough, avoid land disposals other than for dispersed recreational homesites and cabins. Take special care to ensure that any disposals adjacent to the road include greenbelt management strips and appropriate guidelines to minimize potential visual impacts.
- Encourage land developments beyond the greenbelt management strip to take advantage of areas with high visual absorption capability in order to retain the generally undeveloped character of this area.



If well sited off the road with some screening and attention to design, roadside commercial development can enhance the driving experience by adding interesting man-made features to the landscape.

Sourdough South to Willow Lake

This area is characterized by moderate scenic resource values with considerably more roadside development than areas to either the north or south. Land ownership is a complex array of small private parcels, extensive Native corporation lands and scattered parcels of state and University lands. This is where continued roadside development seems most likely to occur and where it could either be a means of enhancing scenic resource values through opening up more distant views and introducing interesting buildings and man-made features. Alternatively it could result in significant negative impacts through the introduction of extended linear commercial development with its associated large clearings for vehicle parking and flashing neon signs. The following recommendations relate to visually sensitive developments within this area:

- Encourage roadside commercial development around existing nodes (Glennallen Junction, Copper Center, Gulkana Village).
- Encourage private landowners to adopt greenbelt management recommendations and associated used guidelines.
- Encourage public landowners (state and University) to adopt greenbelt recommendations that will serve as an example for visually sensitive development adjacent to the road. State lands adjacent to the road should be retained in public ownership. In the future, this land may help meet other public needs or can serve as a block of undeveloped land to help soften the visual impacts of intensive development on surrounding private lands.
- In general, locate larger developments and resource uses requiring land clearing (airstrips, agriculture, timber harvesting) on the east side of the road because the best mountain views are in this direction. Care must be taken to ensure that the land clearing impact is not severe, particularly in areas closet to the road.
- Demonstrate ways that visual impacts of land use and development can be minimized by taking advantage of the generally high visual absorption capability found in this area.

Willow Lake South to the Edgerton Road Junction

This area is characterized by fairly high scenic resource values and a small amount of roadside

development, mostly scattered residences and some pipeline and highway related uses. Land ownership is predominately private. Future development will likely consist of additional scattered residences and recreational homesites on existing private lands with some possible roadside commercial development. The following general land use and development recommendations are made for this area:

- Give preference to scattered residential and recreational homesites and agriculture uses in this area.
- Concentrate road-related commercial activity around the junction of the Richardson Highway and Edgerton Road, preferably on the east side of the Richardson Highway.
- Encourage both public agencies and private landowners to adopt the greenbelt recommendations and use the area's generally high visual absorption capability to minimize the impact of new land uses and development.
- Consult each management unit for additional discussions of land use and development recommendations.

Greenbelts

In keeping with the overall visual resource management goals for the central Richardson Highway, the greenbelt concept could be an appropriate management tool for both sensitive land use and development and enhancing the visual driving experience. A greenbelt management strip could help to ensure that roadside developments and land uses are adequately set back and screened to buffer roadside development from highway impacts while at the same time reduce visibility of developments from the highway.

Vegetation management within the greenbelt could also be used to enhance the driving experience by opening up views and creating visual diversity.

Along the central Richardson Highway, greenbelts are appropriate in three general situations. First, in selected highly scenic locations and near distinctive landscape elements such as lakes and rivers. Here greenbelts of sufficient width to maintain the natural character are recommended. Second, in areas of dense vegetation, a relatively narrow, 25 foot greenbelt management strip is commonly recommended beyond the right-of-way. Finally, in those areas where vegetation is not as dense or topography more exposed, a 100 foot wide greenbelt management strip is recommended.

The primary limitation facing the use of greenbelts along the central Richardson Highway is that there is no mechanism to apply them to private lands outside of organized boroughs and local governments. With the significant amount of private lands adjacent to the road it means that comformance to greenbelt guidelines for these lands would be voluntary. The following recommendations relate to the implementation of greenbelts for this highway:

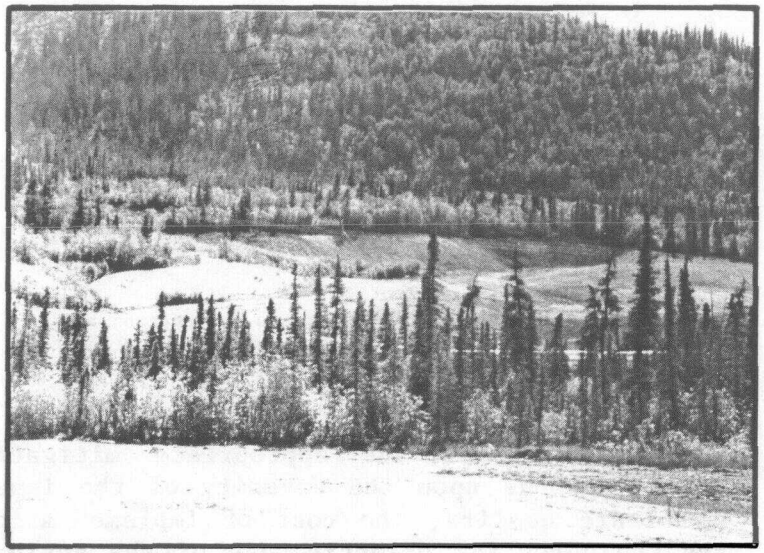
- Implement greenbelt recommendations on public lands - including University lands, and use these as examples for private lands.
- Cooridnate the DOTPF right-of-way management practices with greenbelt management practices so these two roadside management strips are used most effectively.
- Develop public information programming which gives private landowners along the road a better understanding of the greenbelt concept and how

it works as a flexible management tool. Emphasize the benefits to landowners adjacent to the road as well as the fact that within greenbelt management strips, some types of land use and alteration may be permitted or even encouraged when based upon specific goals and objectives.

Greenbelt recommendations have two parts: the width of the management strip already discussed above, and the types of actions permitted or encouraged within this area to accomplish specific goals or objectives. Along the central Richardson Highway the following are typical management guidelines suggested for greenbelts:

- Use greenbelts as a setback for permanent structures.
- Encourage retention of deciduous trees and selective clearing to provide filtered views within greenblets.
- Remove no more than 25% of the vegetation within the greenbelt management strip and avoid soil and landform disturbance.
- Encourage clearings in greenbelts where, through coordinated right-or-way and greenbelt management, distant views could be opened, particularly to the Wrangell Mountains.
- Align access roads through greenbelts following the topography or curving rather than perpendicular to the highway. Retain vegetation along road edges to minimize visual impacts.
- Use sensitively designed and located signs for commercial structures with greenbelt frontage.
- Encourage the retention of adequate existing vegetation within the greenbelt to screen large parking areas associated with roadside commercial development.

Refer to the specific greenbelt recommendations outlined within each management unit.



While glimpses of the pipeline snaking across the landscape generally add interest to the drive, old material sites can be distracting land scars and should be graded and planted so they blend in better with their surroundings.

Impact Mitigation

While the central Richardson Highway is an appropriate development corridor, some land uses have disproportionately large visual impacts. Of particular concern along the central Richardson are material sites and highway and pipeline associated clearings. The negative visual impacts of these activities can be mitigated with appropriate screening or reclamation practices and the sensitive location of any new sites.

Three types of responses are possible to deal with the impact of these activities:

1. Reclamation/Restoration
   Regrade and replant the disturbed area so it blends in with the surrounding landscape.

2. Reuse
   Identify an appropriate or desirable use for the site and take any necessary reclamation action to best meet the requirements of this use. Along the central Richardson typical reuse possibilities include turnouts, rest areas, and campgrounds.

3. Screening
   Through the use of landforms, vegetation and/or structures such as fences and walls, screen the disturbed area from the road.

The selection of the appropriate mitigation action depends upon the severity of the impact on scenic quality, the cost of implementation, and the potential effectiveness of the actions. Specific recommendations for individual sites which have significant negative impact or potential for reuse as roadside recreational facilities are outlined in the management unit discussions. Those areas of highest scenic quality should be given priority for impact mitigation actions.

New material sites required for road construction and maintenance should be located and managed according to the following guidelines:

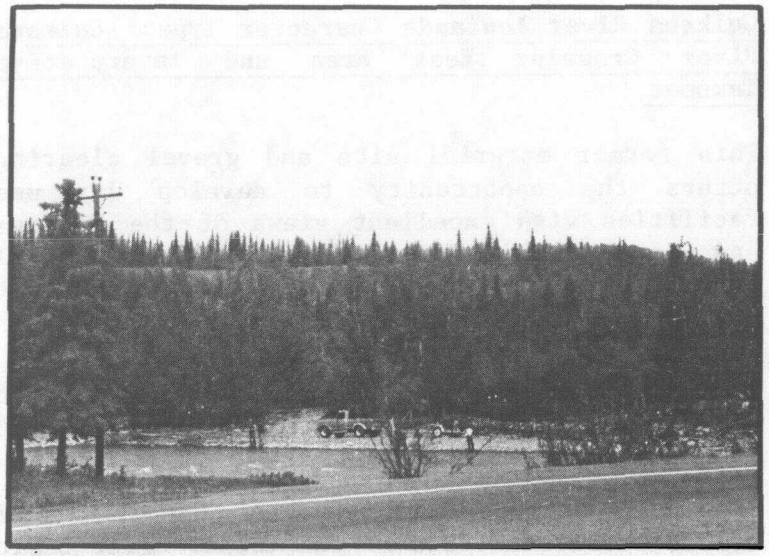
- No extraction sites should be visible from within the right-of-way or greenbelt areas.
- All sites should be screened from view from the highway.
- Utilize both vegetation and landform characteristics of adjacent land to aid in screening and minimizing visual impact.
- Prior to developing new material sites, a reclamation or reuse strategy should be adopted so appropriate actions are taken during the extraction process.

View Management

View management for scenic resources responds to two important objectives - enhancement - opening up or creating new views - and retention - maintaining good views or experiences. Of particular importance on the central Richardson Highway is the enhancement of views through selective vegetation thinning of clearing.

Presently, there are rather long stretches of the highway through which the traveler is teased with filtered glimpses of distant scenic landscape featuring such as the Wrangell Mountains or the Gulkana or Copper Rivers. Along the highway corridor, but especially between Sourdough and Willow Lake, opportunities have been identified for utilizing selective thinning and strategic clearing of primarily right-of-way vegetation to open views. For example, north of Glennallen, clearing for roadside drainage has partially opened brief lateral views to the Wrangell Mountains. This study identifies some sites for reclamation, including additional selective clearing and thinning to improve the viewing opportunities.

Specific view management recommendations can be found within the individual management units.



The central Richardson Highway is also a recreation access corridor. Information turnouts should alert travelers to the variety of amenities and opportunities along its length.

Highway Related Facilities: Turnouts, Rest Areas, & Information Turnouts

Along the central Richardson Highway, which serves both faster moving commercial and commuter traffic and slower moving recreational traffic, a variety of appropriately spaced and sited turnouts are essential to the safety and enjoyment of all travelers. This study has identified three types of highway related facilities:

- **Turnouts:** For brief stops to enjoy a view, take a photo, change drivers, etc.
- **Information Turnouts:** To respond to the traveler's need for information regarding road conditions, services, recreation opportunities, and points of interest.
- **Rest Areas - Interpretive Sites:** Day use facilities for longer stops as well as places where travelers have the opportunity to better understand the landscape through which they are traveling.

Existing and potential sites for these highway related recreational facilities were evaluated based upon a number of factors including safe entry and exit, opportunities for scenic views and other site amenities, ease of development, etc. In addition, appropriate locations for roadway information turnouts were evealuated at each highway junction (Denali, North Glenn, South Glenn and Edgerton). The location of rest area sites considered opportunities for interpretive information related to the surrounding landscape.

Roadway information turnouts recommended at highway junctions are described in Management Units 10, 15, 18 and 21. Two smaller information turnouts are also recommended at each end of the proposed Copper Center bypass to provide travelers with information related to the historic points of interest in Copper Center (see Management Unit 19).

Information related to the numerous small turnouts recommended for use as scenic viewpoints, trailheads and other recreational access and emergency stopping may be found within each management unit. The following discussion summarizes the rest area system proposed for the central Richardson Highway. One primary site is propsed for development

within each of the three landscape character types (Gulkana Uplands, Gulkana River Lowlands, Copper River Lowlands) through which the road passes. (Landscape character types are those large areas which have similar visual expressions of landform, landcover, water features, etc.)

Gulkana Uplands Character Type: Hogan Hill Rest Area and Interpretive Turnout

The proposed highway realignment on the west slope offers the opportunity to develop a rest area with outstanding panoramic views across the Gulkana River basin to the Chugach and Talkeetna Mountains as well as to the Alaska Range (see Management Unit 13).

Alternative Sites:

1. Paxson Lake: Existing wayside, with the opportunity for a roadside turnout created by the proposed highway realignment (see Management Unit 11).

2. Meiers Lake: Level area at lakeside (see Management Unit 12).

3. Hogan Hill: Alyeska Pipeline Company former material site (see Management Unit 13).

Gulkana River Lowlands Character Type: Gulkana River Crossing Rest Area and Interpretive Turnout

This former material site and gravel clearing offers the opportunity to develop day use facilities with excellent views of the Gulkana and Copper River valleys as well as recreational access to the Gulkana River (see Management Unit 16).

Copper River Lowlands Character Type: Copper River - Wrangell Mountains Viewpoint Rest Area and Interpretive Turnout

This vacated rest area south of Copper Center offers excellent views of the Copper River basin and the Wrangell Mountains and could easily be developed as a turnout (see Management Unit 19).

Alternative Sites

1. Existing rest area at the Tazlina River Crossing (see Management Unit 19).

Other Roadside Recreational Facilities

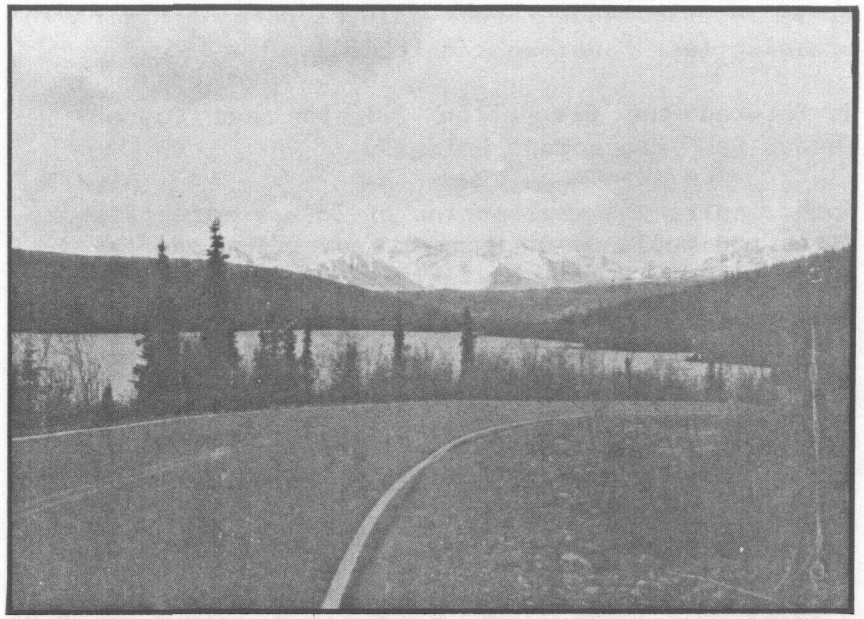
During the field work for this study, material sites were evaluated with respect to their potential for reclamation and development as campgrounds. While this was not part of a systematic recreational needs assessment of overnight facilities in the area, the following two sites appear to have potential for campground development.

1. Between Sourdough Creek and the Gulkana River crossing (see Management Unit 15).

2. Between the Glennallen Junction and Copper Center (see Management Unit 19).

Both require the reclamation of former materials sites and would be appropriate overflow camping areas with only limited facilites provided.

Paxson Lake



Paxson lake and the Alaska Range contribute to the outstanding scenic and recreational qualities of this unit. There is, however, a shortage of turnouts that take advantage of vistas such as this one.

General Description

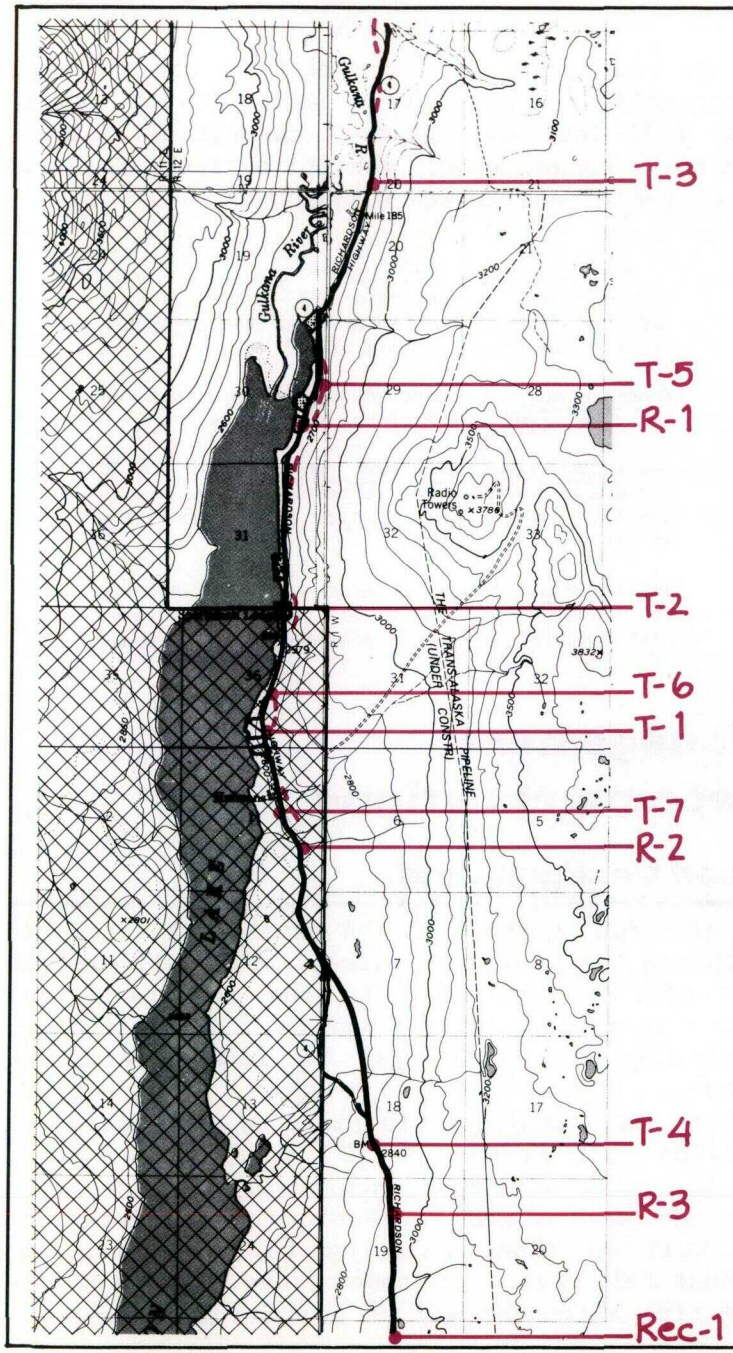
Management Unit number 11 includes ten miles of the Richardson Highway as it reaches south of Paxson and parallels Paxson Lake. Views across Paxson Lake to the low ridges beyond characterize the visual experience throughout most of the unit. Mt. Paxson and distant views of the Alaska Range highlight the drive in the northbound direction. The variety of landcover changing from foreground brush and spruce to alpine tundra on the middleground slopes, also adds to the visual interest.

Scenic resource values were rated as fairly average for the Richardson Highway while traveling south, and slightly higher for travellers in the northbound direction (due primarily to views of the Alaska Range on the northern horizon). Water features significantly enhance the driving experience in both directions; Paxson Lake is unusually large and beautiful.

Land uses in this unit are primarily lakeside residential and recreational dwellings which generally do not detract from the area's scenic quality and, indeed, often accentuate the visual interest. The visual absorption capability of land adjacent to the road is fairly high, so additional residential development is appropri-

11 Paxson Lake

Assessment Units R2 – R6



NORTH 0 1 2 mi.

KEY

T- Turnout
R-Reclamation
Rec-Recreation
--- Realignment Proposals

Native Selected Land

Federal Land

Private Land

ate if sensitively designed and constructed. The only unattractive and visually dominant land uses in Unit 11 are the gravel extraction sites adjacent to the road and the construction scars associated with the Trans-Alaska Pipeline.

Road design and right-of-way management in this unit has been reasonably sensitive to the landscape. Most of the road blends well with surrounding topography, resulting in an enjoyable drive which winds gracefully along Paxson Lake. The road alignment in the eastern two miles of the unit is straight and less interesting. Proposed realignments will straighten existing curves and thereby reduce the visual interest and the quality of the recreational driving experience on the west end of the road.

Land Ownership & Management Responsibility

The primary land owner in Unit 11 is the federal government with the BLM serving as land manager. The Trans-Alaska Pipeline is visible throughout most of the unit, and the oil and gas right-of-way associated with it is managed by the Alyeska Pipeline Company. The state DOTPF manages a 300 foot right-of-way as well as several material sites in this unit. Private land parcels are located primarily on the west side of the road above Paxson Lake.

Visual Resource Management Objectives

Management objectives for this unit reflect the need to protect and enhance visual resource values and foster the enjoyment of recreational opportunities associated with Paxson Lake. They fall into four general categories: maintenance, enhancement, sensitive land use and development, and impact mitigation.

Maintenance: To maintain and protect scenic resource quality as it relates to the enjoyable driving experience of this unit.

Enhancement: To create additional opportunities for viewing and recreational activities.

Sensitive Land Use and Development: To encourage appropriate recreational and residential development which respects the scenic resource values.

Impact Mitigation: To make conscious efforts to reduce the negative visual impacts associated with material sites and pipeline construction.

Management Recommendations

Road Realignments

Several realignments of the existing roadbed are proposed to straighten curves, which will reduce the road's sensitivity to the topography and allow increased driving speeds. A straighter, road alignment will also be less interesting from a visual and recreational perspective. While some realignments may be necessary to provide safe travel on this multiple-use road, it is recommended that each realignment decision include scenic and recreational considerations as well as those relating to commercial and industrial use. In some cases, widening the existing alignment may be a sufficient improve-

ment and actual realignment of the road could be reserved for those curves which are clearly unsafe or otherwise in need of such action.

In those locations where realignments do occur, they should be sensitive to scenic resource values. Views of the abandoned roadbed should be screened from the new alignments by leaving as much vegetation intact as possible. In general, pavement on the old alignment should be removed and vegetation encouraged to return.

T - 1 One of the proposed realignments would create a safer entry to the Paxson Lake Wayside. It is recommended that this realignment be constructed and that the existing alignment be retained to serve as a scenic turnout and an expanded wayside entrance. This site has excellent views of Paxson Lake and is recommended as an alternative location for the proposed Gulkana Uplands Character Type Rest Area.

T - 2 Another site which, if realignment occurs would be suitable as a turnout, is the curve just north of the old Sportsman's Lodge. Although realignment is not desireable in this location, the possibility of realignment has been evaluated and the existing alignment could provide a small turnout with interpretive potential. The object of interpretation would be the historic, abandoned Sportsman's Lodge. Because the lodge is on private land where trespassing is expressly prohibited, it may be inappropriate to direct additional attention to the structure. It is possible that some negotiation with the owner could make this opportunity available, but further investigation would be necessary. The unique and historic character of Sportsman's Lodge merits some effort to create a distinctive and memorable interpretive turnout.

Greenbelts

Greenbelts can be a tool to help maintain the scenic and recreational character of the Richardson Highway as it parallels Paxson Lake through this management unit. The visual impacts of residential and recreational development can be minimized with proper use of vegetation and distance; yet if sensitively designed, some structures can also add to the visual interest of the drive.

Because of moderately high scenic and recreational resource values, it is recommended that a 100 foot wide greenbelt be established on public lands adjacent to the highway. Within the first 25 feet it is recommended that retaining the natural road edge be the primary management goal. Selective clearing and brush removal would be allowed to open views towards the lake, but no significant alterations would be permitted. The remaining 75 feet should be an area where vegetation and landform modification is permissable, but no permanent structures constructed. Although there is no mechanism for implementing greenbelts on private lands, landowners should be informed about the advantages of adopting the greenbelt concept. Management of roadside lands under public ownership should serve as an example to private landholders.

Right-of-Way Management

The right-of-way plays a very important part in the visual driving experience through this unit. Because there are developments on private land adjacent to the road, right-of-way management is often the only visual resource management tool available to protect these values. Also, views towards Paxson Lake are often blocked, framed, or opened by vegetation within the right-of-way. On public lands, right-of-way

vegetation management can support the greenbelt concept and provide a pleasant foreground which enhances views. The right-of-way in this management unit presently has brush growing close to the road and creates a softened edge between the road and tall trees. This practice should be continued. In addition, the following guidelines should be applied:

- Avoid clearing practices which strip vegetation to the soil.
- Encourage low brush and plants to grow to the road edge and create a graduated or feathered progression to the taller trees beyond.
- Vary clearing practices along the road to add visual interest. Vary the heights of trimmed vegetation and the depth of the cut strip.
- Selectively cut and thin vegetation where views could be opened to Paxson Lake or visibility needs to be improved for road safety reasons.
- A landscape architect should be employed to work with the right-of-way maintenance supervisor to develop yearly plans which identify site specific management actions such as selective clearing, revegetation, opening views etc.
- Steep cut banks etc.

Material Sites & Reclamation (R)

There are several highly visible gravel extraction sites which disrupt the natural appearing foreground in this unit. These sites are insensitively located within full view of the road and impact scenic resources through their contrasting lines, colors, and textures. Ways to mitigate the negative impacts of existing materials sites include:

- Develop vegetated berms between the site and the road to reduce visual awareness of the site
- Contour the edges of material sites to reduce contrasting forms and promote revegetation.
- Close the sites to vehicular access to allow natural revegetation to occur

The following material sites should receive top priority in a reclamation program:

R - 1 This site is extremely visible from the road and contains derelict elements (an old boat, trailer, etc.) which contribute to its unpleasant appearance. The clutter should be removed and access should be closed. A row of tall brush beside the road would significantly reduce the traveler's visual awareness of the site. Recontouring to soften the steep slopes would improve conditions for revegetation. A proposed road realignment adjacent to this site could alter the situation, and may entirely eliminate the visual problem.

R - 2 This large materials site should be closed to access, encouraged to revegetate, and, to the extent practical, screened from the road with tall roadside brush.

R - 3 This site is in severe contrast to surrounding landform and landcover. A conscious effort should be made to screen this site by planting tall brush along its edges and beside the road. When the gravel source is exhausted, the site should be closed to access and recontoured to encourage vegetative growth and reduce the contrast with surrounding landforms and landcover.

Any new material sites in this area should be located in accordance with the following visual resource management criteria:

- Locate new material sites outside the right-of-way and designated greenbelts
- Use the existing vegetative screening capacity and topography to minimize site visibility from the road

- Provide only one access road and leave the remaining foreground vegetation intact

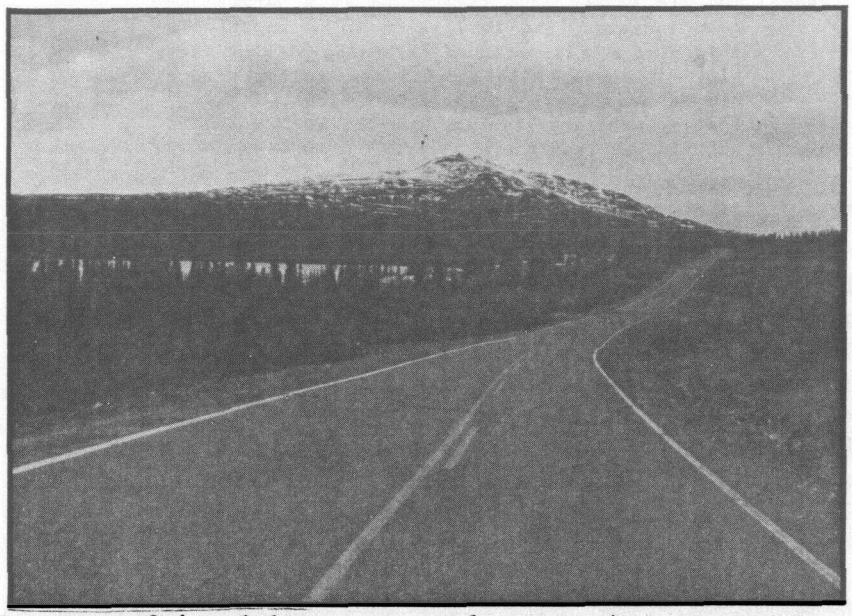
General Land Use

This area has been identified as an appropriate area for additional recreational and residential development. The following criteria should be used to guide future land use and development in this management unit:

- Locate development outside recommended greenbelt
- Screen development from view to the extent practical
- Design, locate, and construct developments in a manner which respects the scale, color, and character of the landscape and is sensitive to the scenic quality of the Richardson Highway as it passes through this area.
- Utilize existing topography to set development back from the road edge as a means of minimizing visibility and providing a buffer from road noise. The area downhill from the road as it parallels Paxson Lake would be particularly appropriate for additional recreation and residential development.
- Limit the number of access roads intersecting with the Richardson Highway.

Recreation (Rec)

Recreation is a primary land use in this area, and further development of recreational opportunities seems an appropriate future activity. The existing facilities are limited and over used, and because of the area's high visual absorption capability, existing development, and



Because of its lake access and vegetative screening capability, this unit can accommodate some additional development. Here, Huffman's Resort is set back from the road and partially screened by trees so it blends with the surrounding landscape.

inherent attractiveness, it is recommended that additional recreation and viewing opportunites be encouraged. Any recreation-related development should be sensitively designed, located, and constructed according to the same guidelines recommended under "General Land Use."

Although it is beyond the scope of this study to identify every available site for a given recreational activity, it is recommend that additional camping and picnicking facilities be provided close to the lake edge.

Rec-1 The BLM Paxson Lake campground is a very pleasant location, and it appears to be capable of absorbing a well-designed expansion without significant impact. This campground offers a number of amenities - private campsites, fishing, boating, rafting/kayaking put-in, etc. - and is not visible from the highway.

Turnouts (T)

There are many outstanding views of Paxson Lake from the road but few opportunities to safely stop to enjoy them. The few existing turnouts are not wisely located, and most need some selective vegetation removal to open up views of the lake. Two new turnouts have already been proposed under the section on road realignments (T-1 and T-2), and two more are addressed here.

T - 3 The existing paved surface of an old road alignment could easily be converted into a turnout with a nice view of Paxson Lake.

T - 4 This site is a small gravel widening with distant views of Paxson Lake, and good entry/exit visibility. This turnout should be enlarged to accommodate several cars, particularly since there is a shortage of turnouts on the eastern end of the unit.

The following existing turnouts would be much more functional with these recommended improvements:

T - 5 Maintain this turnout and enhance the viewing opportunities through careful vegetation trimming and/or removal.

T - 6 Open views of Paxson Lake by selectively clearing some vegetation.

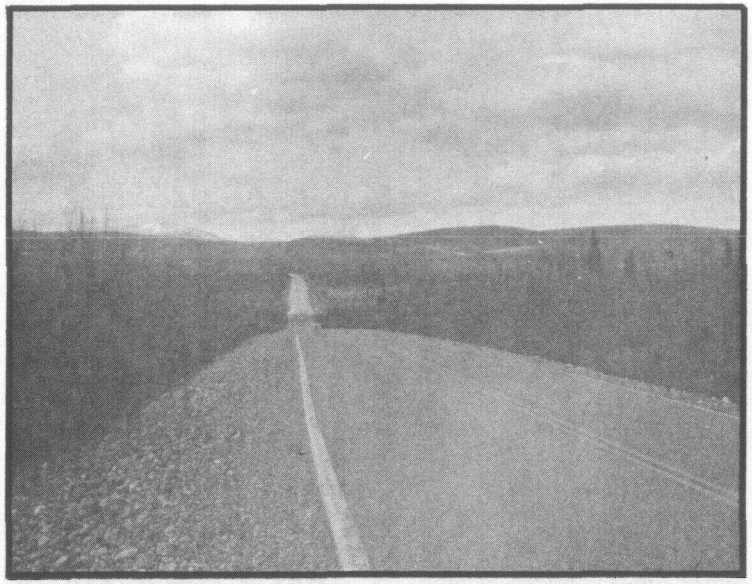
T - 7 Maintain this turnout, but improve access safety from the south by placing an entrance sign approximately 500 feet south of the site.

Meiers Lake

General Description

Management Unit 12 begins at Paxson Lake Campground and extends south for 13.3 miles. The road winds across the gently rolling terrain of the Gulkana River Uplands, covered primarily by spruce forests. Many lakes, including Meiers Lake, highlight the driving experience, and the landcover around these lakes adds another element of visual diversity. The setting is framed by rolling foothills and low peaks and ridges with Mt. Paxson located nearby. Distant views of the Wrangell and Chugach mountains enrich the southbound driving experience while the Alaska Range lines the distant horizon in the northbound direction. Visual quality ratings for this portion of the central Richardson Highway are slightly above average. Because of spruce and brush vegetation and gently sloping terrain, the visual absorption capability is high for most of the unit. However, the area surrounding Meiers Lake has lower vegetation and steeper slopes and therefore could not absorb development as readily.

The road design conforms well with the surrounding topography, and the somewhat winding road with frequent changes in point of view creates a visually interesting and enjoyable drive. The road edge is softened by good right-of-way management practices which allow vegetation to grow close to the roadbed. A key issue in this unit is the proposed upgrading to major highway standards which would straighten out most curves and increase traffic speed and volume.



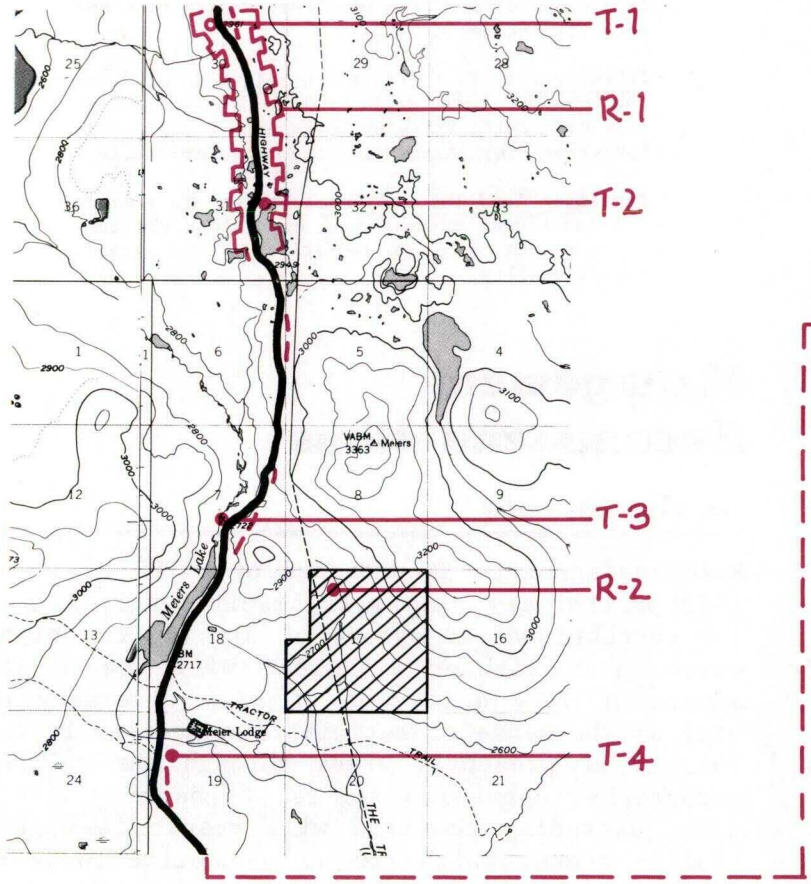
Proposed realignments to straighten and widen the road, as in this photo, would create a less visually interesting driving experience across the gently rolling terrain. Views of the pipeline, seen here, are among the highlights along the highway.

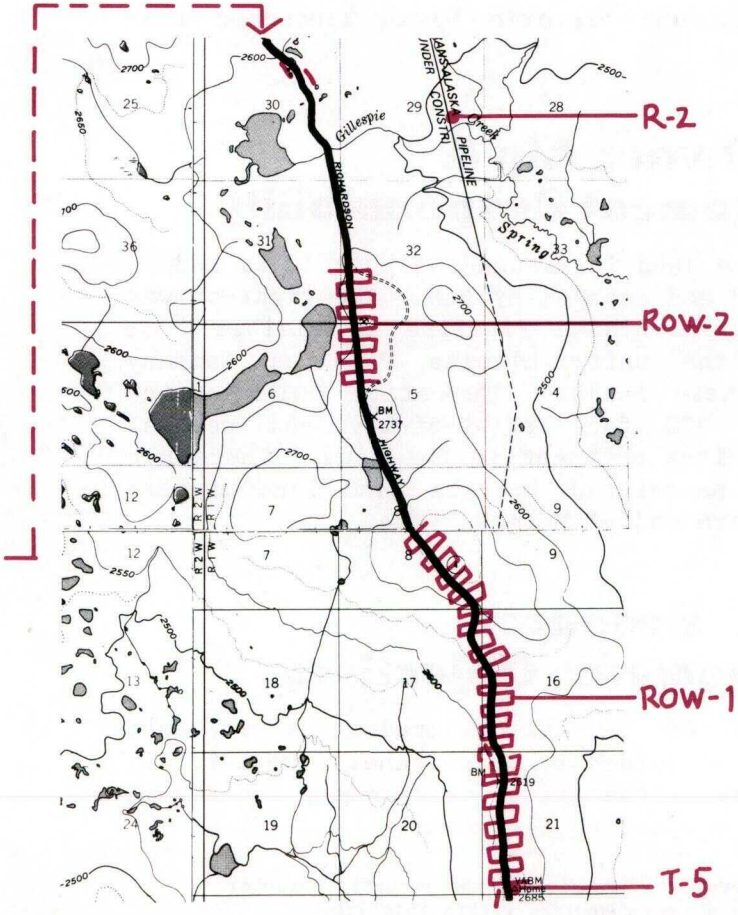
Land uses in Unit 12 are predominately industrial and recreational. The most visually dominant land use in this unit is the Trans-Alaska Pipeline and associated clearings and right-of-ways. The pipeline itself is an interesting

12 Meiers Lake

Assessment Units R7-R13

NORTH 0 1 2 mi.





KEY

T- Turnout
R- Reclamation
ROW- Right-of-Way Mgt.

State Selected Land

Federal Land

element in the landscape, but many of the old construction clearings (though "reclaimed") are in contrast with their surroundings in terms of line, color, and texture. Material sites also significantly detract from the natural scenic character of Unit 12. Recreational uses in this unit include Paxson Lake Campground, the June Lake Trailhead, and the Gillespie Lake Trailhead. Also located within Unit 12 is an old abandoned cabin across from Meiers Lake; the cabin and its associated out-buildings are interesting and historic human landscape features.

Land Ownership & Management Responsibility

Most of the land in Management Unit 12 is federally owned and managed by BLM. The right-of-way for the Trans-Alaska Pipeline is visible from much of the unit; Alyeska Pipeline Company manages these lands. The state DOTPF administers a 300 foot right-of-way and several material sites adjacent to the road. There are also two parcels of private land located near the southern end of Meiers Lake.

Visual Resource Management Objectives

Management of the visual resources in Unit 12 should be guided by these general objectives: maintenance, reclamation, enhancement and sensitive land use and development.

Maintenance: To maintain the natural character of the scenic resources within this unit.

Reclamation: To reduce the adverse visual impacts resulting from pipeline construction and material extraction.

Enhancement: To increase the enjoyment of driving through this unit by creating additional viewing opportunities while screening unpleasant landscape disruptions from the traveler's view.

Sensitive Land Use and Development: To provide for additional recreational uses along the road in a manner that is sensitive to the area's scenic quality.

Management Recommendations

Realignments

Road realignments as proposed by DOTPF in a May 1982 preliminary plan will significantly reduce the recreational enjoyment of driving the highway. A straighter alignment will reduce the amount of view and point of view diversity as well as the sense of anticipation created by the road as it presently winds through the rolling topography, opening a series of changing views. Also, upgrading the road will result in higher traffic speeds which are not conducive to landscape appreciation.

It is recommended that the proposed realignments be reevaluated taking recreational and scenic values into consideration. Perhaps widening the existing road and slightly smoothing rather than straightening curves would be adequate to meet both multiple use highway and scenic resource management objectives.

If the realignments are constructed, the follow-

ing actions should be implemented to minimize the loss of scenic and recreational values:

- Remove pavement from old road sections and encourage revegetation.
- Leave as much natural vegetation intact as possible between old and new road alignments.
- Plant tall brush and trees between old and new alignments where additional screening is necessary.
- Where appropriate, utilize the old road alignment to provide turnout opportunities (see turnout recommendations).

Right-of-Way Management (ROW)

The right-of-way in this unit is generally well managed. Low plants and brush are allowed to grow close to the road edge which minimizes the intrusion of the road upon the landscape. This practice should be continued. Other guidelines for future right-of-way management include:

- Adopt selective clearing practices for roadside vegetation to maintain safe visibility and open up views.
- Vary the height and depth of vegetation cuts along the road to produce a visually interesting right-of-way edge.
- Develop a yearly Richardson Highway right-of-way maintenance program involving the operations and maintenance supervisor in conjunction with a landscape architect.

Site specific recommendations are as follows:

ROW-1 The right-of-way in the southernmost Assessment Unit (R-13) has several sections which are significantly impacted with spill-over gravel. The gravel should be removed and the edge more naturally contoured to encourage revegetation.

ROW-2 This straight, somewhat monotonous, section of the road which is visible as it climbs the face of a long hill, could be made more attractive with the addition of tall vegetation adjacent to the road edge.

Greenbelts

Greenbelts can be an important tool to use in conjunction with right-of-way management to maintain and enhance scenic resource values.

In this unit, because of its natural and recreational character, sloping topography, and less than dense vegetation, a 100 foot greenbelt is recommended on all public lands. Within this 100 feet, the following considerations should guide management actions:

- Minimize vegetation cutting in the greenbelt.
- Allow cutting and selective vegetation clearing for view management purposes.
- Locate development and permanent structures beyond the greenbelt edge.
- Limit access roads through the greenbelt. Those which are constructed should be sensitive to the surrounding landforms and scenic resource values.

Land Use & Development

Presently this area is one of the least developed portions of the central Richardson. Because of the importance of the road's natural character to its scenic and recreational values, it is recommended that the undeveloped nature of the unit be retained. Commercial, industrial and residental development should be

discouraged from locating in this unit, and, instead located along other segments of the highway. Some additional recreational development would be appropriate, including scattered recreational homesites. However, such development should conform to guidelines which respect scenic values:

- Place development outside the right-of-way and greenbelt in a manner that minimizes visibility from the road.
- Sensitively design and construct structures to conform to the rustic character of the area.
- Retain natural vegetation as undisturbed as is practical.
- Limit access routes.
- Provide recreational development signs that are small and preferably constructed of wood.
- Limit development in areas which have low screening potential such as the Meiers Lake vicinity.

Turnouts (T)

Because the Richardson Highway is a high-speed, high-volume thoroughfare, it is particularly important that an adequate number of turnouts be provided for safe stopping. Turnouts are used for emergency stopping, resting, viewing scenery, picnicking, walking the dog, and a variety of other things. Presently there is a shortage of such sites along the highway. This study has identified three turnouts which could be inexpensively developed by retaining old road alignments if realignments are constructed, and two existing turnouts which require certain management actions.

T - 1 This high priority site would be created by a curve realignment and thereby provide nice views of Paxson Lake. There is good visibility for safe entry and exit.

T - 2 This site has lower priority than (T-1) but could provide a nice parking area for Dick Lake. There is an opportunity to construct a trail around the lake.

T - 3 This large curve could be retained to provide a nice overlook of Meier's Lake, which is one of the most scenic features of this unit. The site is a high priority for meeting additional turnout and recreational demands. A fairly long foot trail could be constructed around Meier's Lake. Garbage receptacles would be appropriate at this large potential turnout.

T - 4 This existing turnout requires signing for safer access and requires trash clean up.

T - 5 This unpaved turnout loop offers no significant views for this area, is littered, and creates more negative visual impacts than benefits. It is recommended that this site be closed to vehicular access and encouraged to revegetate.

Material Sites & Reclamation (R)

Although essential for road maintenance and construction, material sites are the most unattractive land uses in this unit. The numerous material sites are in stark contrast to the surrounding lines, colors, and textures characteristic of the area's rolling hills and dense vegetation. Because the occurrence of these sites is so frequent they are not addressed individually. The following general guidelines should be implemented by DOTPF maintenance and operations crews.

Active Material Sites:

- Provide vegetative screening along the road edge and the edges of the site itself.
- Where appropriate, construct berms along the road edge to screen the site from view. These berms should be planted to minimize their visual

contrasts. A good example of this technique exists in this unit where a berm at R-1 very effectively blocks the material sites from view.

- Park large highway equipment in those locations which offer the most screening potential from the road.

- Design material site access routes to minimize visual impacts. One road should access a material site rather than leaving the whole face cleared and exposed to view from the road.

Old Material Sites:

- Close vehicular access and encourage the sites to revegetate.

- Regrade to contours which blend well with surrounding landforms and are conducive to vegetation growth.

- Enhance the revegetation of pipeline associated clearings with active brush planting.

- If appropriate, plant tall brush adjacent to the road to help screen the old site until other reclamation activities have reduced its impacts.

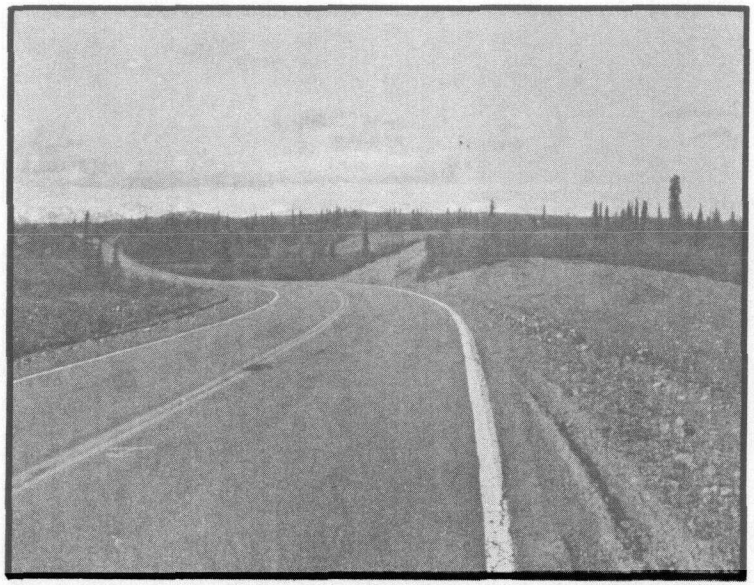
New Material Sites

- Locate new sites outside the right-of-way and. to the extent possible, outside the greenbelt.

- Utilize existing landforms and vegetation to screen new material sites and the access to these sites.

ᶠᵒᵘlarly significant areas have been
ᵒr reclamation:

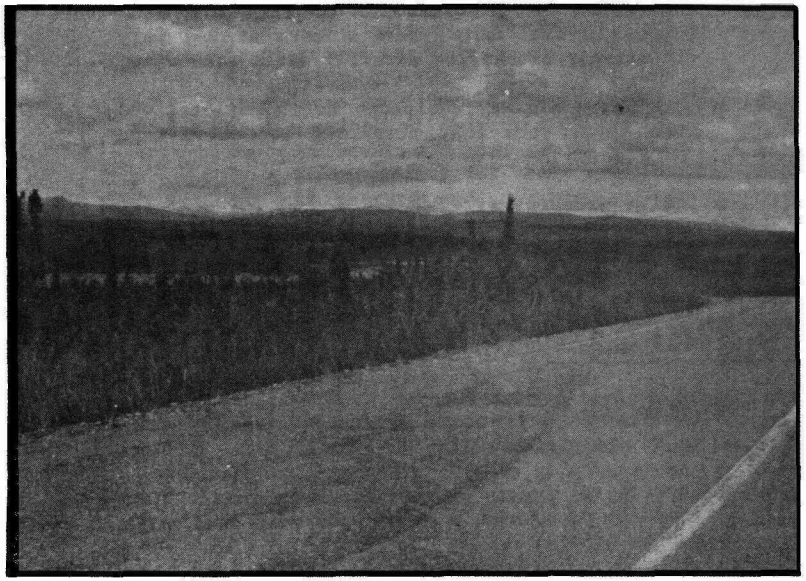
R - 1 There are numerous small gravel extraction sites located in the northernmost assessment unit. These material sites severely impact the scenic and recreational character of this portion of the road. Recommendations pertaining to active and old material sites should be applied in this area where negative impacts are particularly severe.



Numerous small gravel sites at the road edge and bare road cuts diminish the natural character of the landscape. These areas can be contoured and revegetated to blend with their surroundings and add to the appreciation of subtle landscape changes.

R - 2 Scars associated with pipeline construction clearing create strongly contrasting lines, colors, and textures on visible hillsides. Reclamation efforts have successfully decreased the contrasts somewhat, but the planted grasses do not blend well with surrounding landcovers. Brush and other native vegetation should be planted and trees should be established to help heal these scars.

Hogan Hill



The road's vantage point on Hogan Hill provides a panoramic vista of the Alaska Range, Talkeetna Mountains and Chugach Mountains across lake-dotted lowlands, making this one of the most scenic portions of the central Richardson Highway.

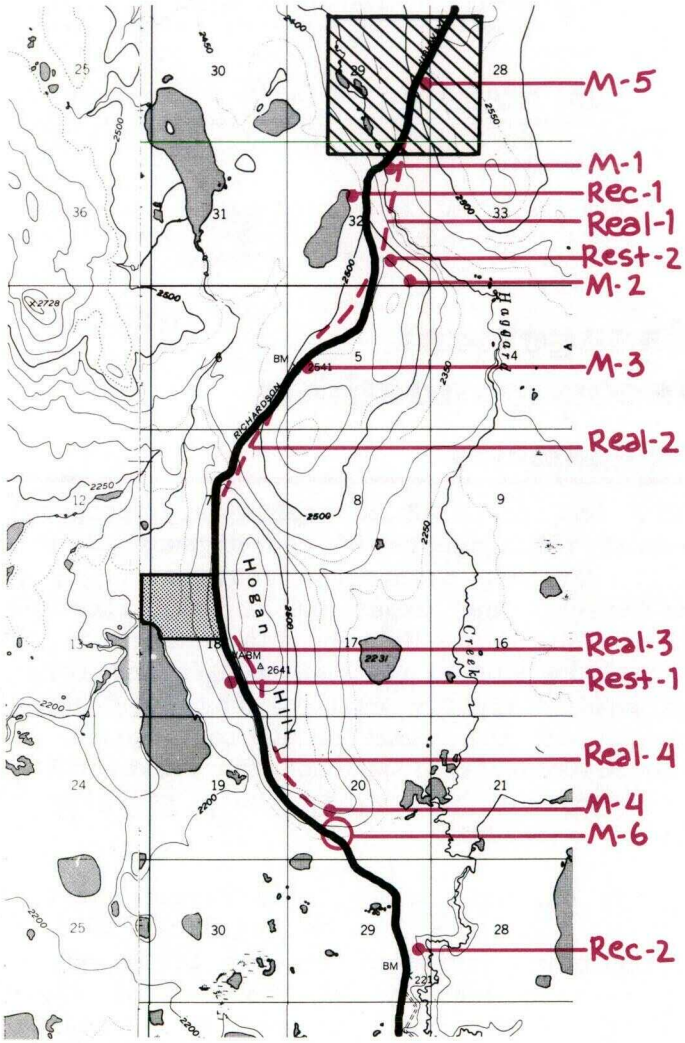
General Description

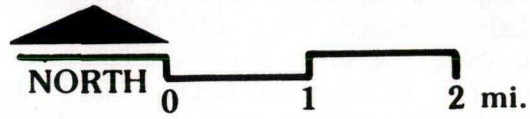
Management Unit 13 begins north of Hogan Hill near Haggard Creek and extends south for approximately nine miles along the west slope of the hill. This stretch of the central Richardson Highway has particularly high scenic resource values because it provides outstanding panoramic views across the broad Gulkana River Lowlands to the Talkeetna Mountains, the Alaska Range and the Chugach Mountains. The sharply curving highway alignment through fairly steep terrain at the edge of an embankment provides the traveler with a strong sense of the expansive landscape and a fine expression of the Gulkana River Uplands. Unfortunately, the existing alignment also provides very little opportunity for the traveler to safely stop along the road to enjoy the views, take photos, or identify specific landscape features.

DOTPF has recently developed a preliminary proposal for major realignments along Hogan Hill which would have both positive and negative visual impacts. These are addressed more specifically in the recommendations for Realignments.

13 Hogan Hill

Assessment Units R14 – R19





KEY

M- Impact Mitigation
Rec- Recreation
Real- Realignment Proposals
Rest- Rest Area

State Owned Land

Federal Land

Private Land

Throughout most of this unit, land adjacent to the highway has a moderate visual absorption capability due to the somewhat dense vegetation and varying topography characteristic of the area.

Industrial land uses and developments such as material sites, land clearings and the Trans Alaska Pipeline-have the strongest visual impact within this management unit. There are no residential or commercial structures visible from the highway.

Land Ownership & Management Responsibility

The manager of the majority of the land adjacent the highway within this unit is currently the Bureau of Land Management (BLM). However, the State has selected these lands. In addition, there is a one square mile section of state tentatively approved land located just north of Haggard Creek. DOTPF manages a 300 foot right-of-way along the highway and Alyeska manages the Trans Alaska Pipeline right-of-way which parallels and crosses the highway, never more than one half mile away. There are Native corporation owned lands and other private landholdings on the south side of Hogan Hill.

Visual Resource Management Objectives

The management recommendations presented for this unit are based the objectives of: retention, enhancement, impact mitigation and sensitive land use and development.

Retention: to retain those conditions which make this a particularly significant and memorable driving experience.

Enhancement: to enhance the traveler's opportunity for understanding and appreciation of this landscape.

Impact Mitigation: to take action to screen or reclaim those gravel sites and clearings with the most significant negative impact on the scenic experience.

Sensitive Land Use and Development: to encourage any future development to respond sensitively to the scenic qualities of the landscape.

Management Recommendations

Realignments

DOTPF has prepared a preliminary proposal for several realignments of the highway along Hogan Hill. The new alignments would strongly affect the visual and experiential qualities of the drive along Hogan Hill by flattening the curves, creating a much more even grade, and relocating the road slightly east of the existing alignment. At the same time, they would provide opportunities for improving the traveler's safety and enjoyment by creating safe stopping places along the roadside.

This is one unit where it is particularly important to consider scenic resources when making realignment decisions because it is one of the most scenic portions of the central Richardson Highway. Therefore, it may be appropriate to accept somewhat less efficient traffic movement in order to maintain this experience. More detailed outlines of the significant proposals follow.

Real-1 **Haggard Creek**

There are two alternative alignment proposals for this double curve which crosses Haggard Creek. The primary proposal would eliminate the double curve and maintain a single very broad, almost undetectable curve for approximately one mile. The second alternative would maintain the double curve but flatten it significantly. Additionally, the primary realignment proposal would ascend the moderately steep hill with a route that is almost perpendicular to its contours, potentially creating a more extreme visual impact than either the existing or second alternative alignments.

The existing alignment is preferred from a scenic resource point of view because the character of the double curve and slow ascent of the hill enhance the appreciation of the surrounding gentle topography. For both realignments, the vacated alignment will be a highly visible scar on the hillside which also includes a new creek crossing in an area that already has a significant scar from a previous alignment east of the present one. It would be critical to immediately reclaim the vacated alignment through active revegetation practices.

Real-2 **Northern Foot of Hogan Hill**

There are two realignment proposals for this winding road at the foot of Hogan Hill. The existing road has five short curves with very short tangents which provides a visually interesting approach to Hogan Hill from the north, following along the edge of a steep bank. The primary alternative would completely remove all these curves and create a much more direct and monotonous approach. It would ascend directly up and over the hill as opposed to skirting along the base of the steep cut bank. The second alternative would maintain the general location of the road but would still eliminate the curves and would potentially create a greater visual impact by cutting deeper into the hillside. The secondary proposal would not provide adequate screening vegetation between the new and the vacated alignments whereas the primary alternative could. Neither alternative would significantly affect the more distant views.

In order to retain the interesting character of the present alignment, it is recommended that the existing road configuration be maintained and upgraded as necessary through widening, clearing inside corners for visibility or other actions in preference to realignment.

Real-3 **West Slope- Hogan Hill: Potential Rest Area**

The proposed realignment, approximately one half mile long would create a wide clearing in the road as it flattens the presently shallow curve. This particular section is the location of some of the finest views from Hogan Hill. The realignment, if carefully planned, could provide the best opportunity for a much needed scenic viewpoint rest area on Hogan Hill. In order to accomplish this, it will likely be necessary to redesign the curves of the realignment so that adequate distance and vegetation remains between the existing and new alignments to create a "loop" turnout out of the vacated alignment. This should be considered a high priority for realignment, with the necessary recommended modifications. (See Rest Area/Interpretive Site (Rest-1) for further details).

Real-4 **Southwest Hogan Hill: Potential Scenic Turnout**

The proposed realignment would flatten two minor curves, creating long clearings at the roadside with little potential for vegetative screening remaining between the two alignments. Western views across the Gulkana River Lowlands to the distant mountains are spectacular and the road widenings would provide additional turnout space for scenic viewpoints. Right-of-way vegetation should be retained to the extent possible to partially screen the clearing but avoid blocking the views from the highway to the west.

Right-of-Way Management

The right-of-way within this unit, particularly on the west side of the highway, is an important visual element in this unit's scenic experience. It is the foreground for some of the finest scenery along the central Richardson Highway and should be specifically managed to retain and enhance this experience. General recommendations for right-of-way management along the Richardson Highway can be found in the road overview section. The following recommendations are specific to this unit.

Right-of-way vegetation can be managed to either screen objectionable views or to retain or enhance the distinctive views. For most of the length of this unit on the west side of the highway the vegetation should be managed to retain the broad panoramic views across the lowlands to the distant mountains. This will require keeping the vegetation trimmed below the traveler's line of sight. In other locations, it will require selectively thinning the foreground vegetation to open filtered views.

Low-laying plants and some tall trees growing close to the road edge, as well as the sinuous alignment, help to blend the road with the natural landscape.

Where the views are strongly oriented to the west, the east side right-of-way should be managed to minimize the road design impact and to maintain the natural character of the landscape. For the most part, the current management practices have allowed the vegetation to grow quite close to the road edge. This practice should be continued as it is an effective means of blending the roadway into the landscape.

At the north end of this management unit near the Haggard Creek crossing, current management practices include complete vegetation clearing

for approximately 35 feet on either side of the road to provide visibility and minimize wildlife road kill.This, combined with the additional clearing resulting from a vacated alignment at the creek crossing. disrupts the foreground of an otherwise attractive landscape. Cleared slash should be removed, and low brush vegetation or trees should be encouraged in order to improve the roadside appearance.

To reinforce the greenbelt, the right-of-way should also act as a buffer between the road and adjacent lands. All natural vegetation, other than that cleared for viewing opportunities or highway visibility, should be retained. Necessary highway related land uses or access through the right-of-way should be located where visual absorption capability is highest, such as behind dense vegetation or landform screens.

Greenbelts

In this unit, greenbelts can be used effectively to reinforce other scenic resource management practices in retaining scenic natural areas. The changes in the orientation and depth of view along different portions of the road require that a distinction be made between these different areas for the purposes of defining appropriate greenbelts.

- West side - Central portion of unit: Within the central portion of this unit views are strongly oriented to the west. Where the land slopes steeply away from the road and the vegetation is dense, the visual absorption capability is high. In these areas sensitively sited landscape alterations can sometimes occur close to the road and will still not be visible from the road because of the viewer's orientation. However, the land more distant from the road is quite visibile because of the viewer's superior orientation. With these conditions, more attention needs to be given to the more distant lands in order to retain the wild and undeveloped character of this landscape.

  On BLM and state lands, a one mile greenbelt should be established within which the following guidelines should be followed:

  - Large scale clearings should not occur.
  - Small scale landscape alterations and permanent structures must be located outside of view from the roadway.

  Any development of land outside this greenbelt, and within the seen area should be preceded by careful visual analysis to determine an appropriate location to minimize visibility from the road.

  On Native and other private lands, land owners are encouraged to utilize the opportunities provided by the landscape and viewer orientation to sensitively site development outside of view from the road.

- East side - Central portion of unit: Within the central portion of this unit, land immediately adjacent to the road on the east side is highly visible due to its steep slope and lack of tall, dense vegetation. However, land further from the road has varying degrees of visibility due to the changes in the traveler's point of view. Therefore, on lands adjacent to the roadside, a 100 foot greenbelt is recommended within which no landscape alterations should occur.

- North and south ends of unit: Along the north and south ends of this management unit, the traveler's focus is oriented in all directions; therefore, different greenbelt recommendations are appropriate. The fore and middleground of these lands are more prominent features in the view. Here, it is recommended that a 300 foot greenbelt be established on both sides of the road within which no development should occur. Development beyond this greenbelt, particularly land clearing, should be preceded by a careful visual analysis to determine the best location to minimize the visibility from the road.

Rest Area / Interpretive Sites (Rest)

Currently, there are no safe opportunities for travelers to stop at the side of the road to take advantage of the outstanding views from Hogan Hill. Development of safe and attractive roadside scenic turnouts or a rest area should be considered a priority for DOTPF in managing this corridor. Due to the location of the road on the edge of a steep embankment on Hogan Hill, there are very few existing level areas which could be developed for this purpose. However, recently proposed realignments provide the opportunity to improve this situation. The following sites have been identified as potential rest area locations.

Rest-1 West Slope-Hogan Hill (First priority if recommended road realignment occurs). As discussed under Realignments for this unit, a modified realignment here offers an excellent opportunity to develop a safe and much needed Rest Area Interpretive Site for Hogan Hill. This location would provide some of the area's finest views across the Gulkana River basin to the Talkeetnas, Chugach and Alaska Range, as well as an excellent expression of the Gulkana River Uplands character type. Following are some guidelines for the development of this site:

- Maintain the vacated alignment as a paved entry-exit.
- Maintain as much vegetation as possible within the right-of-way between the two alignments to provide screening.
- Establish a parking area on the east side of the vacated alignment.
- Develop the level areas on the west side as picnic sites.
- Provide interpretive information on the landscape character.
- Develop a foot trail through public land to the lake on the west side.
- Provide signing on the highway 1/2 mile either side of rest area entrance.

If road realignment does not take place, there will be no rest area potential at this site. However, the potential for developing a turnout will still exist. (See Turnouts).

Rest-2 Trans Alaska Pipeline Clearing (Second priority). This former material site and clearing for an underground pipeline road crossing is located approximately 1/4 mile uphill from the road, on the east side. It offers 220 degree panoramic views of the Alaska Range and Wrangell Mountains and a close view of the pipeline as it submerges underground and crosses the site. DOTPF and Alyeska might jointly develop this as an interpretive area with information describing both the landscape and the pipeline. Further site analysis will be necessary to determine the appropriate reclamation and development for this site.

Recreation Access (Rec)

While major recreation opportunities are not found in this unit, trail and creek access are

important issues. The following two trailheads should be developed.

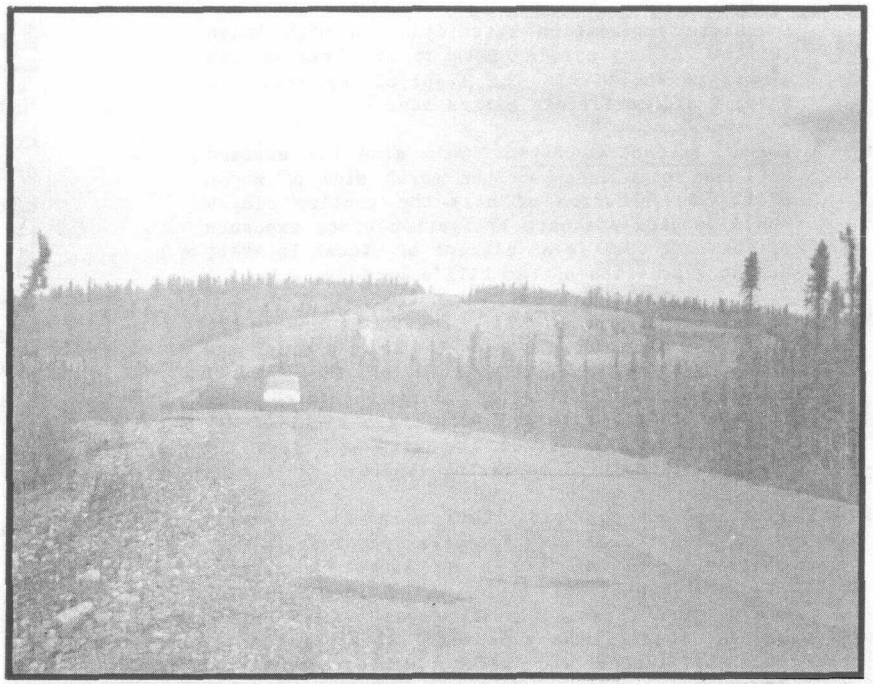
Rec-1 Haggard Creek Trailhead. A small, two car, parking area is needed for this trailhead. The area is now disturbed with clearings and a vacated alignment. The existing vacated alignment should be reclaimed as recommended under Impact Mitigation (M-1), providing a small gravel widening for trailhead parking at the south end. A trailhead information board could be located here for hiker orientation.

Rec-2 Sourdough Creek Access. There are several vacated alignments located south of Hogan Hill which create short, unpaved loop turnouts at the roadside. The southernmost of these could be developed as a parking area with a public recreational access trail (about .15 mile long) to Sourdough Creek. Selective thinning of the vegetation on the east side would open nice views to the Wrangell Mountains. Signing should be provided on the highway to indicate this access. The road surface should be graded annually to maintain access.

Impact Mitigation (M)

The most significant negative visual impacts in this management unit are created by highway and pipeline associated material sites and other clearings. The scale, contrast, road proximity, amd relatively frequent occurrence of these sites combine to create distractive features in an otherwise highly scenic area. To fulfill the unit's visual resource management objectives, the sites identified for mitigation should be given immediate attention.

M - 1 Vacated Alignment. The large open clearing that was left at Haggard Creek when the road was realigned requires regrading and active revegetation to blend this area with its natural surroundings. Only a small gravel area at the south end should be maintained for parking at the Haggard Creek Trailhead.



Pipeline construction activities for gravel extraction and road crossings created numerous landscape scars that are very visible from the road. Revegetation along the edges, leaving the exposed rock faces for visual contrast and interest, would be the best way to reclaim this site(M-6).

M - 2 Pipeline Clearings. A rather sharp color and line contrast is created by this highly visible, large clearing on the far north slope of Hogan Hill. Reclamation must include both regrading and active revegetation. The impact of this site is extremely high due to its visibility from long distances on the north. This site should receive

immediate reclamation attention. A high brush (willow, alder) screen, both at the base of the clearings and within the right-of-way near the site, would facilitate mitigation.

M - 3 Gravel Extraction Site. This site has exposed soil and rock faces on the north side of Hogan Hill. Revegetation of only the gentler slopes would provide adequate mitigation since exposure of the rock face is an element of visual interest and an expression of the hill's geology.

M - 4 Gravel Extraction Site. Extraction here has created a steep drop off on the east side of the road that is uncharacteristic of the natural topography. Construction of a vegetated berm adjacent to the site and within the right-of-way would adequately screen the view and give the site a more natural appearing landform.

M - 5 Pipeline Access Road. This site is currently being reclaimed with grasses planted in the clearing. If access is no longer necessary, planting trees and brush within the clearing would speed reclamation. If access must be maintained, seeding the area with flowering plants, such as lupine and vetch, would add visual interest.

M - 6 Pipeline Crossing. This pipeline crossing resulted in large clearings on both sides of the road at the southern foot of Hogan Hill, creating a highly visible, very out-of-scale, out-of-character open space. This is a high priority site for reclamation.

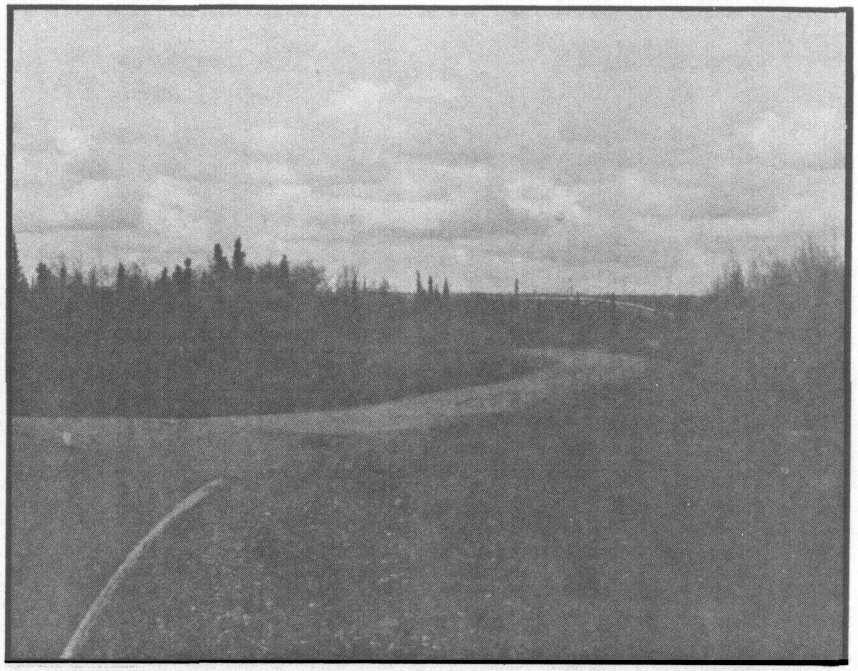
On the east side of the road, the gentler slopes of the clearing should be revegetated with scattered spruce trees and dense, high brush to return the area to its more natural landcover. The steep rock cut faces and the access road can be retained since the rock faces provide an element of visual interest, and the access road is used by local rock hounds.

On the west side of the road, the clearing should be revegetated with scattered spruce and low brush to conform to the surrounding landcover. A small information turnout (gravel widening) could be created here to explain the construction of the pipeline and point out the pipeline crossing.

Land Use & Development

Native and other private landowners should be encouraged to limit their development to homesites and recreation uses. The most appropriate location for small scale permanent structures would be on the east side of the large lake abutting these properties. This location would provide the opportunity to screen development from the road if the structures are sited with a dense backdrop of vegetation to the east. One shared access road should connect with the highway and it should parallel the hill as much as possible. This may require an easement through public lands to the south. Federal and state public land management practices should give a high priority to retaining and enhancing scenic resource values. Development of these lands should be discouraged.

Sourdough



Periodic views of the Trans-Alaska Pipeline snaking across the horizon add visual interest and a human scale element to the drive through the gentley rolling terrain along the central Richardson Highway.

General Description

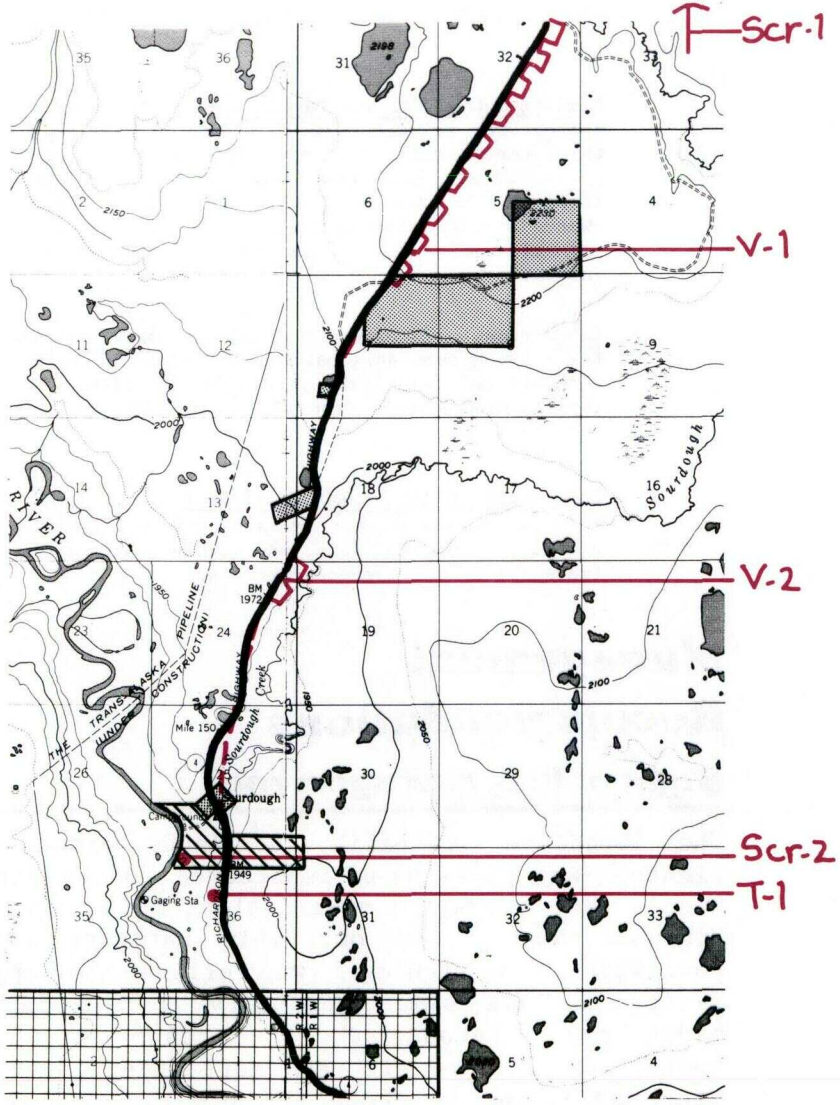
Management Unit 14 begins approximately six miles north of Sourdough and extends nine miles south to milepost 145. The road corridor is semi-enclosed by mixed upland spruce and hardwood forests so lateral views are limited. The landscape immediately adjacent to the road contains many small lakes and clearings which add diversity to the foreground viewing experience. The distant Alaska Range is often seen on the northern horizon, and while traveling south, the Chugach Mountains define the distant horizon. There are also occasional, often filtered, views of the Wrangell Mountains to the east, and one nice view of the Gulkana River.

Scenic resource values in this unit are fairly moderate except for one outstanding panorama of the Gulkana River, Alaska Range, and Trans-Alaska Pipeline which opens just as travelers enter Sourdough from the south. The visual absorption capability is fairly high due to gentle topography and dense roadside vegetation. Existing land uses do not signficantly detract from the area's scenic quality.

The road in Unit 14 follows the gently rolling landscape creating a pleasant and varied driving experience. DOTPF has plans to straighten many of the existing curves, which would diminish the road's visual interest and recreational qualities. The right of way in the northern portion of the unit has a pleasant feathered edge created by brush and tree vegetation growing close to the road. Recent clearing of roadside vegetation in the right-of-way has severely impacted the road edge south of Sourdough.

14 Sourdough

Assessment Units R20 – R24



NORTH 0 1 2 mi.

KEY

Scr- Screening
V- View Management
T- Turnout
--- Realignment Proposals

State Owned Land
Native Corp. Land
Federal Land
Private Land

Most existing land use is concentrated around Sourdough. There, a memorable manmade element is the historic Sourdough Roadhouse, which is Alaska's oldest roadhouse still operating in its original structure. The Bureau of Land Management (BLM) operates a small campground across Sourdough Creek from the roadhouse. The creek is popular for grayling fishing and the area around Sourdough Campground is an important put in take out site for float trips on the Gulkana River. The State of Alaska DNR has a sixty acre land sale planned across the road from Sourdough Campground. Residential structures are a common feature all along the Richardson Highway in Management Unit 14. In addition, the Trans-Alaska Pipeline and its associated access roads and clearings are dominant and intriguing landscape elements.

Land Ownership & Management Responsibility

The primary landowner in Unit 14 is the BLM. Interspersed with federal land are three large Native allotments and several parcels of private land adjacent to the road. Alyeska Pipeline Company manages the right—of—way and other lands associated with the pipeline which parallels the road throughout this unit. The State of Alaska has one parcel of land across from the Sourdough campground, sixty acres of which are scheduled for disposal. The state DOTPF manages a 300 foot right—of-way along the road.

Visual Resource Management Objectives

Due to the complicated land ownership patterns and the road's multiple use character, visual resource management objectives for Management Unit 14 relate to sensitive land use and development, enhancement, and appropriate right—of—way management.

Sensitive Land Use and Development: To encourage appropriate private land development that maintains sensitivity to scenic resource values, and to coordinate land management decisions and actions of the various public and private landowners and managing agencies within this area to maintain and enhance existing scenic resource values.

Enhancement: To improve existing opportunities for viewing memorable natural and human landscape elements and reduce the visibility of those features which detract from the quality of the visual experience.

Appropriate Right-of-Way Management: To manage land within the right-of-way to create a natural road edge, open up views, and screen unattractive landscape or development elements.

Management Recommendations

Right-of-Way Management

The immediate visibility of lands within the right-of-way gives them importance for effective scenic resource management. Along the Richardson Highway, where land ownership patterns are a patchwork, the right—of—way offers the opportunity to give some continuity to the driving experience. Because the Richardson is a high speed, high volume highway, more intensive roadside management is needed to provide good visibility, provide space for snow removal and other maintenance, and to minimize wildlife road kills.

Still, this can and should be done in a manner that is sensitive to the special scenic values of the road near Sourdough. Already, the right-of-way north of Sourdough is reasonably well managed. Brush and tree vegetation grow close to the roadbed, creating a natural edge. This practice of retaining natural vegetation should continue. South of Sourdough, on the other hand, recent clearings have resulted in unsightly swathes; these edges are in need of revegetation. In the future, right of way management practices should prohibit such wholesale clearing. Recommendations for appropriate management include the following:

- Retain as much natural vegetation as possible close to the road, except where needed to open views.
- Routine roadside maintenance and clearing activities should be tailored to the site specific situation in each unit, such as providing visibility around certain curves, opening up views, etc. The yearly maintenance program should be based on an assessment of these needs and existing landscape characteristics to determine the necessary maintenance strip width and type of cutting.
- Where intensive cutting has taken place (i.e., south of Sourdough), the area should be revegetated with low lying plants.
- Remove all slash from existing or new clearings.
- Minimize the number of clearings across the right-of-way for access roads.
- Locate all visually disruptive uses, such as gravel pits, outside the right-of-way.

Greenbelts

Due to mixed ownership patterns and diverse management interests, greenbelts can be an effective scenic resource management tool for public lands adjacent to the highway. State and federal land managers should adopt a 100 foot wide greenbelt beyond the road right-of-way. The DOTPF and BLM should develop and implement guidelines to coordinate management practices on right-of-way and greenbelt lands to provide enough land for the maintenance and enhancement of scenic resource values. Their actions would serve as an example to adjacent private landowners who would be encouraged to respond in a similar fashion.

Within the greenbelt the following management guidelines should be applied:

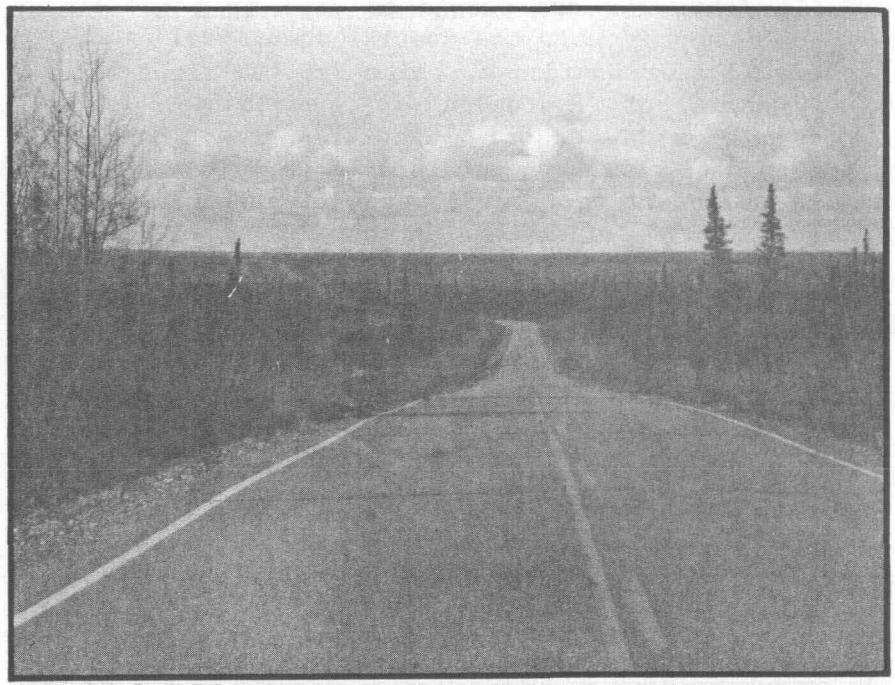
- Minimize cutting or thinning the natural vegetation except where needed to open views
- Locate permanent structures outside the greenbelt; if siting within the greenbelt is unavoidable, locate the structure so that it is screened from the road by vegetation or landforms
- Design access roads through the greenbelts to take advantage of existing landforms and vegetation to minimize the visual disturbance

Land Use & Development (LU)

Because of the mixed ownership pattern and the pattern of existing development, it is both probable and appropriate that land development will continue in this unit. Permanent and recreational residential construction will likely be the predominant forms of any new land use activity. As already mentioned, existing development does not detract from scenic values and, in many

cases, enhances the visual diversity of the drive. The following considerations should apply when developing roadside lands:

- Attempt to concentrate development around existing nodes rather than dispersing it. The area north of Sourdough is one which would be appropriate for additional development.
- Discourage development in the Sourdough area. Due to the vista point just south of Sourdough and the recreational use and historic significance of the area, further development immediately around Sourdough would be undesirable from a scenic resource and recreational perspective.
- Encourage more intensive development to locate in areas with high visual absorption capability and set these uses back from the road to minimize visibility.
- Allow some dispersed recreational cabins and residences along the remainder of the road in this unit to add variety and visual interest to the drive. The design of the structures should be compatible with the natural and historic flavor of the area. Clearings for these developments could open up views.
- Encourage the development of additional recreation related facilities to accommodate peak season demands for camping and fishing opportunities.



Proposed road realignments would straighten curves on portions of the central Richardson. However in this relatively flat terrain, long, straight road tangents also increase visual monotony.

Proposed Road Realignments

Road realignments are proposed for this portion of the Richardson Highway in order to straighten curves and upgrade the road to high speed highway standards. Because the location of the road through the landscape has such a large influence on the travelers' experience of the landscape, these realignments will significantly reduce the scenic and recreational pleasure of the drive. It is recommended that the individual realignment proposals be reevaluated to consider their impact on the scenic and recreational values in addition to industrial and other multiple use highway needs. Where realignments are found to be necessary, they should be designed and constructed with as much sensitivity to scenic resource values as possible. Vegetation between the old and new alignments should be retained to help screen the unused alignment from view. Abandoned pavement should be removed to allow vegetation to

quickly reclaim the old road bed. During realignment construction, highway crews should take the opportunity to use the road equipment to open views towards the Wrangell Mountains by selectively thinning vegetation in those areas identified under "View Management."

Recreation

The area near Sourdough, as already mentioned, is extremely popular for a variety of recreation activities including camping, fishing, photographing the roadhouse, and river float trips. During the peak summer season, the campground is inadequate to meet demands for camping and picnicking. Additional facilities should be provided, either as an expansion of the existing campground, or on nearby public or private lands.

The electric generator now used at the roadhouse causes considerable noise around the campground and thus it would be appropriate to locate any new recreation facilities at some distance from the roadhouse. It is also recommended that a sound barrier or berm be placed around the generator to help reduce the noise impact.

A proposed realignment of the Richardson Highway would bypass Sourdough. From the point of view of the scenic driving experience, it is recommended that the existing alignment be retained. However, if the new alignment is built, vegetation on the northeast bank of Sourdough Creek should be selectively thinned in order to retain views of this historic landmark. Additionally, the existing alignment should be maintained as a safe entrance to the roadhouse and campground, with signs provided on the new road alignment noting the campground and historic site.

Screening (Scr)

The Trans-Alaska Pipeline is the dominant man-made feature in this unit. Although the pipeline is a unique element of great visual interest, associated land uses such as access roads, service buildings, and clearings have significantly disrupted the natural and scenic character of the landscape. Specifically, the following two areas require mitigation actions:

Scr-1 **Pipeline Road Crossing:** This crossing and an adjacent materials site located on the south end of Hogan Hill together create a highly visible scar which is in strong contrast to surrounding landforms, colors, and land covers. This area is located in Management Unit 13, but is visible from the northern portions of this unit. This site should be actively screened and reclaimed. Detailed reclamation recommendations are included in Management Unit 13.

Scr-2 **Pipeline Access Road:** This gravel access road is visible from the Richardson Highway on the hill just south of Sourdough. The road is a blight in one of the most significant views in this unit. Visibility of the access road could be considerably reduced by planting a row of trees along its eastern edge.

Turnouts (T)

There is an overall shortage of turnouts along the central Richardson Highway. This is particularly critical on this high speed, industrial thoroughfare where one must be off the road to safely enjoy a view or take a driving break. One scenic turnout is recommended for development in this unit:

T - 1 This site offers one of the most spectacular views to the north along this portion of the Richardson Highway. The surprise view reveals

the Gulkana River, Sourdough, the Alaska Range, and the first clear views of the pipeline north of Glennallen. This site is presently undeveloped, so it would require clearing, grading, and surfacing. The view to the northwest could be enhanced with selective thinning of foreground trees and tall brush.

View Management (V)

Views from the Richardson Highway in this unit can be enhanced by sensitive vegetation management in several locations:

V - 1 Views towards the Wrangell Mountains could be opened up through selective thinning on the east side of the road.

V - 2 The opportunity exists here to open a long view east towards the Wrangells by carefully thinning and trimming some roadside vegetation.

State Land Sale

The State DNR is planning to dispose of sixty acres across the road from Sourdough Campground. This is a high recreation use area and is also visible as part of the most scenic panorama along this portion of the Richardson Highway. Because this parcel of land is visible from the road, its particularly important scenic values should be considered in the design and construction of any proposed development. Successful land purchasers are encouraged to use a landscape architect to help design the site to minimize the visual impacts of development. Any structures should be set back from the road at least 100 feet and vegetation should be left intact to help screen development. Access should be limited to one road.

North Gakona Junction

The Gulkana River lowlands are characterized by fairly dense spruce forests. Right-of-way clearing typically creates a broad, monotonous corridor which can be corrected by more sensitive management practices.

General Description

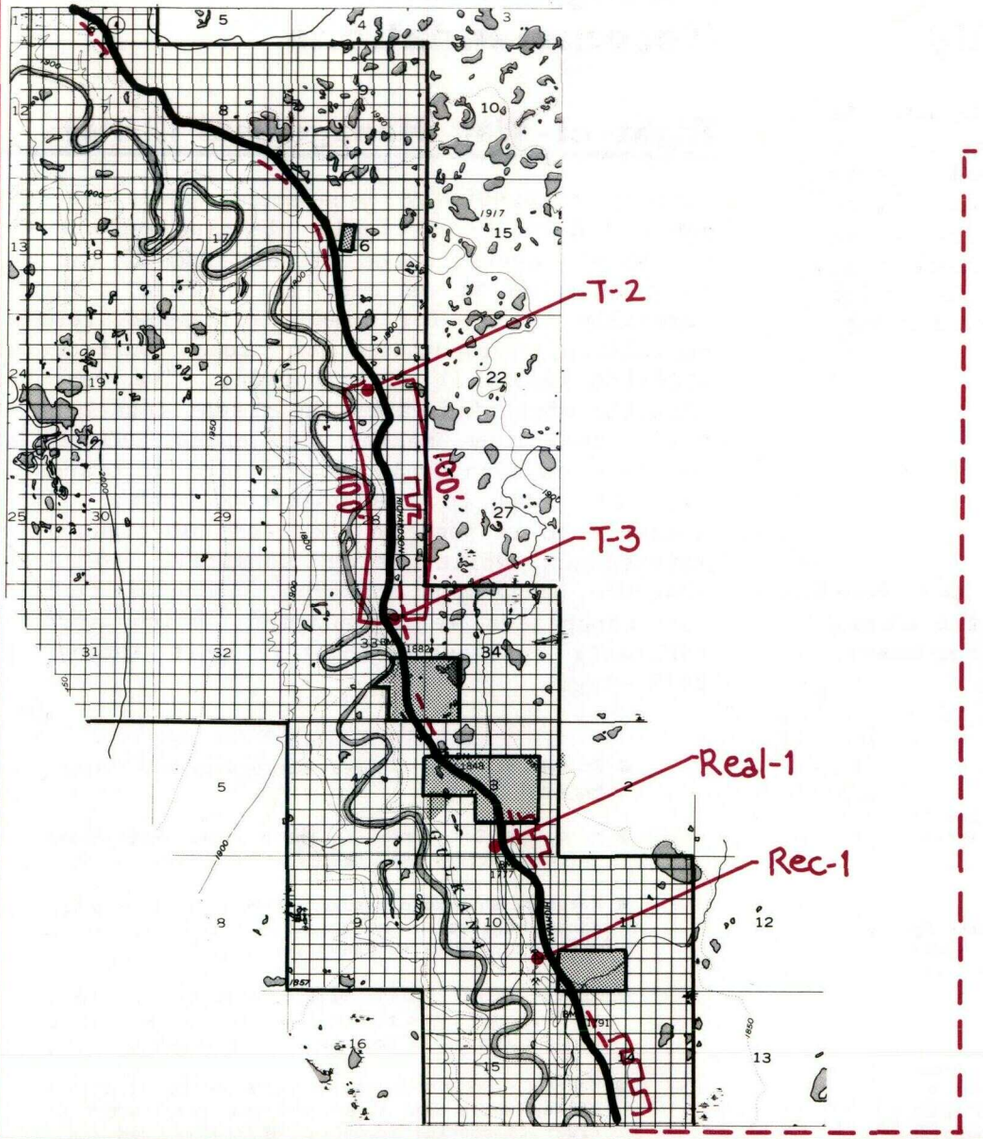
Management Unit 15 extends for 18 miles from Milepost 145 (approximately three miles south of Sourdough) to approximately 3/4 mile south of Gakona Junction. It passes through a fairly enclosed corridor of spruce-hardwood forest, paralleling the Gulkana River on its east side. The visual experience of the Gulkana River Lowlands' landscape character is not particularly distinctive. The traveler has the opportunity for several brief lateral views to the Wrangell Mountains and the Gulkana River banks; however, most of the views are filtered by foreground vegetation. The opening created by the road ahead often offers outstanding views south to Mt. Drum and Mt. Sanford, and distant views of the Alaska Range to the north. Other than these opportunities, the view corridor is quite enclosed, resulting in little visual variety for the traveler.

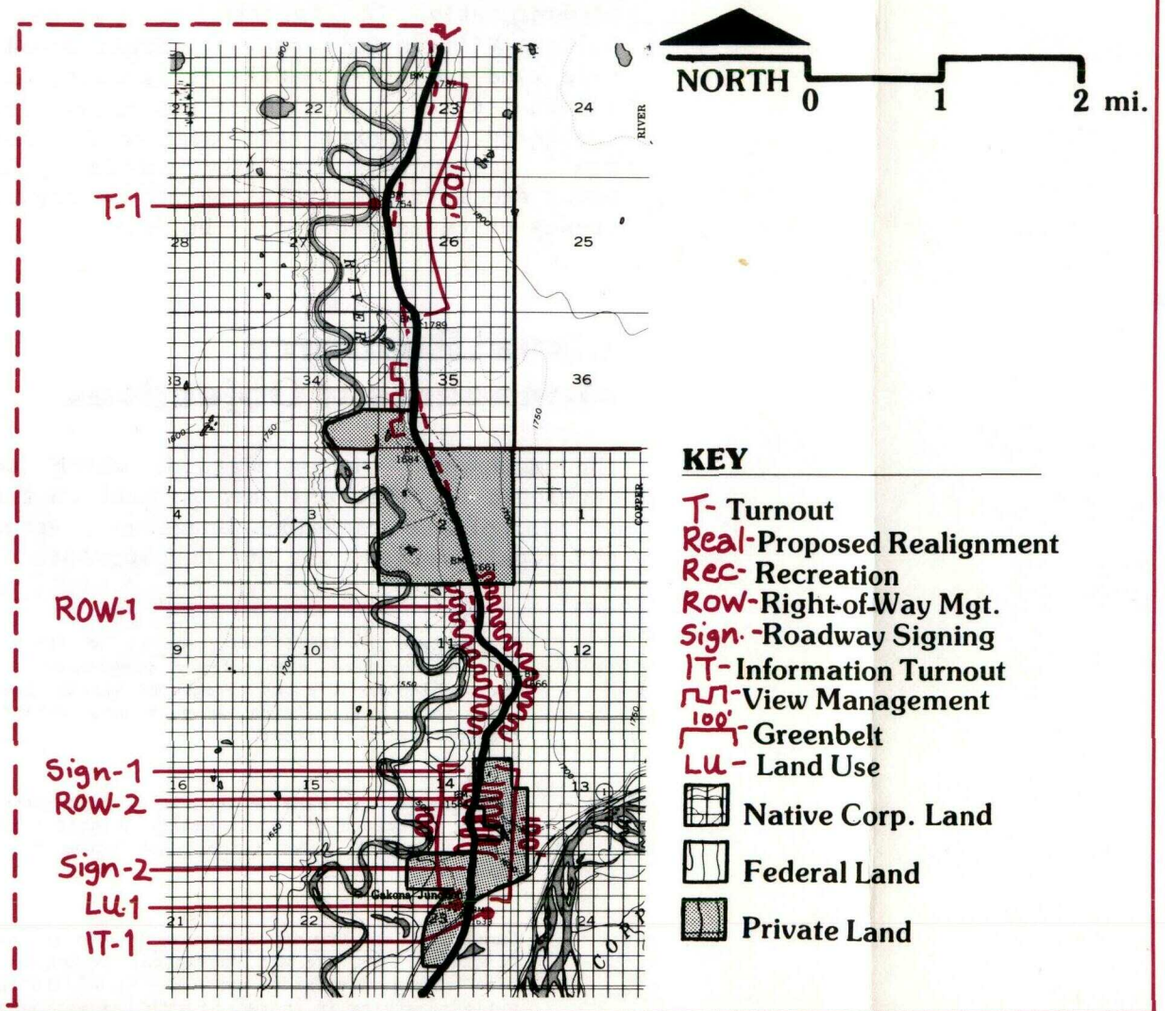
Minimal amounts of land development activities occur along this portion of the Richardson. The predominant visible landscape alteration is that associated with right-of-way management practices. The major traveler attraction along this route is focused around the Gulkana River. Several existing and potential trail heads and river access points occur throughout the corridor.

Gakona Junction, the intersection of the Richardson and east Glenn highways, is a particularly important focus for travelers because it is a major entry point into this area from the "Outside".

15 North Gakona Junction

Assessment Units R14-R19





KEY

- T- Turnout
- Real- Proposed Realignment
- Rec- Recreation
- ROW- Right-of-Way Mgt.
- Sign. - Roadway Signing
- IT- Information Turnout
- View Management
- 100' Greenbelt
- LU- Land Use
- Native Corp. Land
- Federal Land
- Private Land

Land Ownership & Management Responsibility

Land adjacent to the highway within this unit is predominantly in interim conveyance to the Gulkana Village Corporation. Small areas of private land and other Native allotments, as well as material sites, and oil and gas right-of-ways are scattered throughout the corridor. Other than trail easements, the only public lands which occur are located within the 300 foot road right-of-way which is managed by DOTPF.

Visual Resource Management Objectives

The management recommendations which have been developed for this unit are focused on the themes of appropriate roadside management, enhancement, and sensitive land use and development.

Appropriate Roadside Management: To institute more appropriate right-of-way management practices which improve the foreground visual experience while maintaining a safe and efficient transportation corridor.

Enhancement: To enhance the visual experience by taking advantage of opportunities to create additional lateral views through landscape alteration.

Sensitive Land Use and Development: To encourage sensitive land use and development which introduce visual diversity and add visual interest while remaining in character with the surrounding landscape.

Management Recommendations

Right-of-Way Management (ROW)

Current right-of-way management practices commonly consist of periodic clearing of all tree and shrub vegetation on either side of the road to a distance of as much as 35 feet. This is generally done for ease of snow removal, visibility, protection of road surfaces, and wildlife road-kill minimization. The resultant clearing often increases the visual impact of the road itself by making it appear wider and creating an unnatural looking edge or transition from the road to the adjacent lands. It is possible to respond to the needs of right-of-way maintenance while being sensitive to scenic resource management concerns. General right-of-way management recommendations which are particularly applicable to this unit include the following:

- Remove or burn cleared slash from the right-of-way.
- Encourage low shrubs in those areas where moose movement across the road is known to occur.
- Reestablish a more natural, irregular edge to the dense vegetation by allowing trees to intrude within the existing management area.
- Retain larger trees, particularly the deciduous trees, within the right-of-way and allow them to be as close as 15 feet from the road edge.
- Maintain maximum natural vegetation in the right-of-way where new alignments are constructed in order to provide screening of the vacated roadway.

- Where not more intensively managed for viewing opportunities, maintain the natural vegetation of the right-of-way lands as a visual buffer to roadside development and a natural foreground to the surrounding landscape.

In addition to these general recommendations, the following sites have been identified for specific attention:

ROW-1 Several clearings along both sides of the highway within the area designated on the management unit map have created unnatural openings which do not offer any particular visual interest nor open any views. The introductioon of dense plantings of wildflowers such as lupine and vetch and allowing brush and trees to follow, will help create more visual interest and reduce the visual impact of these clearings.

ROW-2 The road cuts conflict with the landform shapes of the surrounding landscape. The visual impact can be reduced by regrading and softening the sharp edges and planar faces and encouraging revegetation to take place. Seeding with nitrogen-fixing clover, lupine, vetch, and alder would help recondition soils for more rapid revegetation.

View Management (V)

The visual experience throughout this corridor could be readily enhanced with selective and strategic thinning and clearing along the roadside to open up views and add variety. In most cases, thinning of vegetation is preferred to clearing in order to maintain the natural forested character. Several areas have been identified through the field study where selective thinning would open views to either the Wrangell Mountains or the Gulkana River. These locations are indicated on the unit map.

In addition, realignment planning and construction should take advantage of opportunities to open views. With careful pre-planning, the sensitive siting of material sites, construction staging areas, and other clearings can provide openings to distinctive distant views while retaining the necessary vegetation to minimize any negative visual impacts.

Thinning and clearing of vegetation for private roadside development should also take advantage of this opportunity to add needed spatial variety and interest to the overall landscape. Right-of-way management practices should also take advantage of clearings on adjacent lands for more distant views.

Proposed Road Realignments (Real)

DOTPF has recommended realignments for several portions of the road within this management unit. All of the proposed realignments appear to be for the purpose of flattening curves and creating a straighter roadway. The resultant series of long tangents and broad sweeping curves will reduce the interest of the driving experience by eliminating the slightly winding nature of the road which reflects the sinuous nature of the nearby Gulkana River. Additionally, the vacated alignments would create an abundance of visually unattractive clearings.

The proposed realignments should be reevaluated and other alternatives should be considered which would improve road safety and travel efficiency. Upgrading the existing alignment through widening and resurfacing is generally preferred within

this unit from a visual resource management perspective.

Any realignments which are implemented should be accompanied by on-site pre-construction planning to facilitate the retention of sufficient right-of-way vegetation to provide screening of the vacated alignments. Some of the proposed realignments have been identified as opportunities for developing roadside turnouts for scenic viewpoints or trailhead parking. Site specific recommendations for these can be found in the Turnout discussion (T-1, T-2, T-3). Any vacated alignments which are not developed as turnouts should be immediately reclaimed so natural revegetation can begin.

Real-1 This proposed realignment would reduce the visual interest of the driving experience by eliminating the view of an old sod roof house on the west side of the road. This feature of historical and cultural interest provides a significant focus for travelers which should be retained. Existing alignments should be upgraded (widened and resurfaced) in preference to realignment.

Land Use & Development (LU)

Private development visible from the road within this unit could enhance the driving experience by adding visual variety and interest as well as opening up lateral views. Some suggestions for individual landowners and native corporations to consider in planning development include the following:

- Site structures far enough away from the road edge to minimize the impact of highway traffic on development activities.
- Vary building setbacks to maintain visual diversity.
- Utilize the visual absorption capability of dense vegetation to provide a buffer from the highway.
- Concentrate commercial and industrial development near the north Glenn-Richardson junction for greater access and visibility.

LU-1 The DOTPF landscape architect who is developing the right-of-way management plan should work cooperatively with the Glenn-Rich Hotel-Cafe-Gas landowner to determine appropriate right-of-way plantings for the area bordering this commercial establishment. This would serve to both enhance the development and to soften the visual impact of the structures and oversized clearing.

Greenbelts

In keeping with the overall visual resource management objectives for this unit, the greenbelt concept could be an appropriate management tool for both sensitive development and enhancement of the driving experience. A greenbelt could help to insure that roadside land developments are adequately set back and enough of the natural landcover is retained to maintain the scale and character of the surrounding landscape.

Since no implementation mechanism exists for greenbelts in this area (due to private and Native land ownership), it would be largely up to individuals to voluntarily adopt this policy. The greatest potential for implementation lies with the Native corporation which manages large blocks of land within the unit. The corporation could designate greenbelts on their lands adjacent to the road and establish appropriate development guidelines. The following recommen-

dations are made regarding greenbelts in this area:

Width: In areas with high visual absorption capability, a 25 foot greenbelt beyond the right-of-way edge should be adopted.

In areas with moderate or low visual absorption capability, a 100 foot greenbelt is recommended. Only those areas which require a 100 foot greenbelt are indicated on the unit map. A 25 foot greenbelt is sufficient for the remainder of the unit.

- Retain a minimum of 25% of the natural vegetation within the greenbelt management area.
- Encourage the retention of deciduous trees and the clearing of spruce where appropriate to open up filtered views.
- Allow complete clearing of vegetation which would open up distant views of landscape features such as Mt. Drum, Mt. Sanford, or the Gulkana River Valley. Strive to maintain an uneven or natural appearing edge to clearings.
- Encourage greenbelt management which is compatible with right-of-way management objectives.

Information Turnouts (IT)

Since this management unit includes the junction of two major highways the east Glenn Highway, or Tok Cutoff, and the Richardson - it is important that a roadway information turnout be developed here.

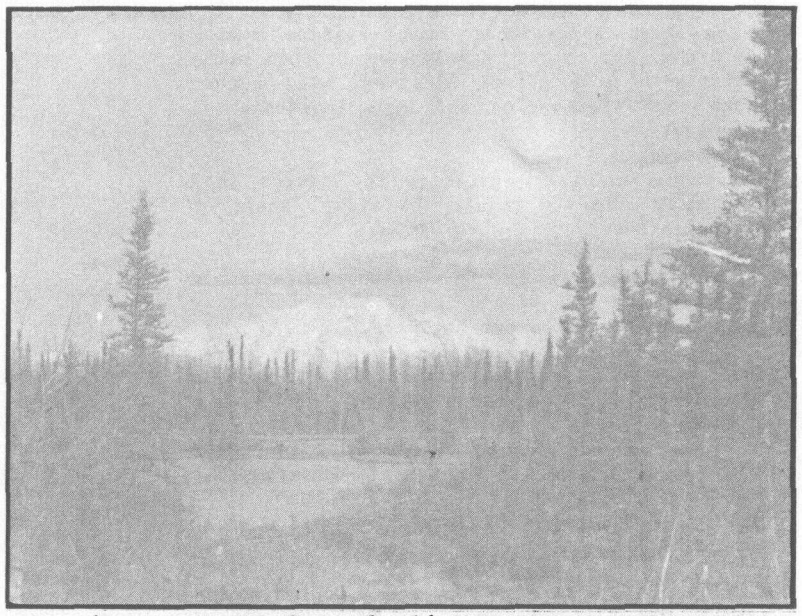
IT-1 An analysis of the junction site indicates that the most appropriate location for such a turnout would be on the southeast corner of the intersection within the highway right-of-way. This site would provide the highest visibility and greatest convenience for travelers coming from either direction. Development at this site, currently a wide gravel clearing, will necessitate some reclamation and site improvements, including:

- Encourage natural vegetation to intrude from the south edge to reduce the visual scale of the clearing.
- Using native vegetation, develop and maintain a landscaped area within the triangle formed by the turnout and the two highways.
- Retain the existing entrances/exits from the Richardson and Glenn Highways.
- Provide an information board or kiosk with information relevant to travel opportunities and road conditions both north and south on the Richardson Highway and east and west on the Glenn Highway.
- Provide signs 1/4 mile from the junction in all three directions to announce the presence of this turnout.

Turnouts (T) & Recreation (Rec)

The traveler's appreciation of this landscape could be enhanced by developing a series of turnouts which provide opportunities for photographing, hiking, picnicking and other recreational activities. Although there are no existing scenic turnouts within this unit, the following turnouts have been recommended:

T - 1 Gulkana River Viewpoint: The proposed realignment would vacate a 1/4 mile loop road with views of the Gulkana River from the top of the hill. View management through selective thinning within the right-of-way would be necessary to maximize the scenic view potential. The vacated alignment should be retained as a paved turnout. Maximum



By using a vacated road alignment as a turnout, an excellent view of Mt. Drum can become the setting for a peaceful roadside picnic area.

vegetation should be retained in the right-of-way between the old and new alignments to provide screening from the highway.

T-2 Trailhead: Flattening the curve here would create a widening in the road which could be maintained and designated as a parking area for the existing trailhead. Notice of the trail location can be improved by placing a graphic trail symbol 1/8 mile on either side of the turnout.

T-3 Lake Viewpoint: The proposed realignment would leave vacant a 1/4 mile loop around the west side of a small lake offering views across the lake to the Wrangells and west to the Gulkana River banks. This site has potential for development as a small picnic area with 2 to 3 tables and well-screened trash receptacles. Development will require retaining the paving on the vacated alignment and vegetation within the right-of-way between the two alignments. The vegetation will screen from view the new alignment without infringing on views toward the Wrangells.

REC-1 Potential Camping Area and Trailhead: Sourdough Campground, located approximately eleven miles north of this site, is a heavily used small campground (15 camp sites). The development of this apparently vacated material site as an overflow camping area could help to absorb some of the area's heavy demand. The site is completely screened from the highway and would thus require some informational signing at the roadside. There is an existing trail at the site which leads to the Gulkana River along a small creek. Development of this site should include some regrading and planting vegetation within the clearing to relieve its open, expansive character. Toilets and trash receptacles should be provided.

Roadway Signing.

The visibility of highway related information signs is critical, particularly near major road junctions. In order to maintain their visibility and at the same time minimize the cluttered effect of a long series of signs, only those which are essential to the specific junction should be posted near it. Additionally, the size of informational signs should be appropriately scaled to accommodate the road width and traffic speed. Specific recommendations for signage improvement north of Gulkana Junction include the following:

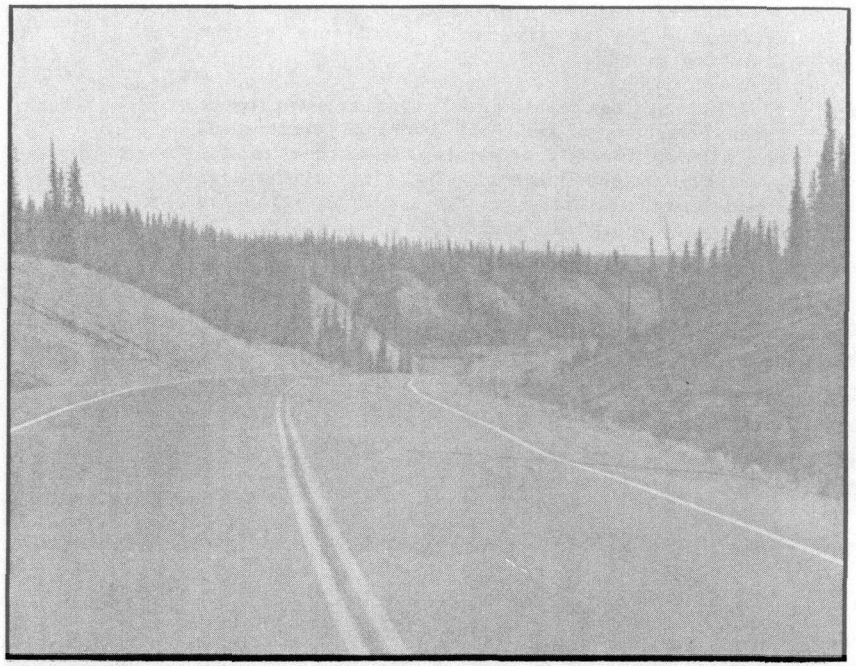
Sign-1 Relocate "Fine for Littering" sign away from the junction and other speed related signs to break up the cluttered effect, both visually and infor-

mationally and to give more prominence to the littering message.

Sign-2 The "Mileage to Destination" sign appears to be excessively large for this two-lane section of the highway where traffic is slowed due to the proximity to the junction. The size of the sign could be reduced and the sign could be relocated with a vegetation backdrop to minimize its unnecessary visual dominance on the landscape.

In addition, many trailheads which are located at the roadside are inadequately signed for easy location or safe entry and exit. The location of all public trails should be designated with signs on the roadside 1/8-1/10 mile on either side of the trailhead.

Gulkana River - Bear Creek



The Gulkana River crossing offers memorable expansive views of the river lowlands and the Wrangell Mountains beyond.

General Description

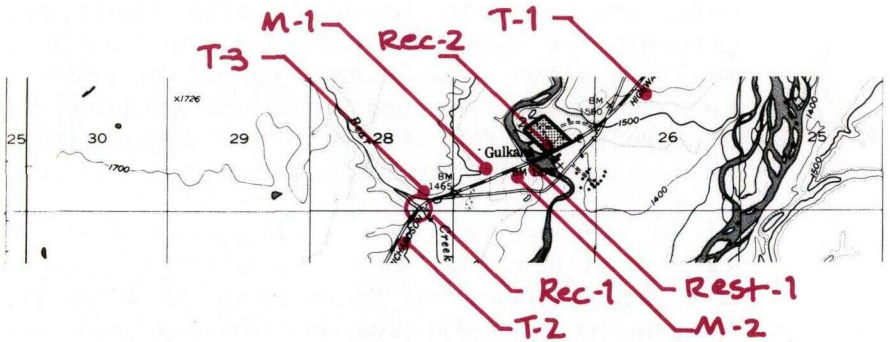
Management Unit 16 begins about one mile north of Gulkana Village, crosses the Gulkana River and extends south 1/2 mile beyond the Bear Creek crossing. This area offers highly scenic views, which are particularly impressive at the peak of changing seasons. The traveler's views are oriented across the lowlands of the Gulkana and Copper Rivers to the Wrangell and Chugach Mountains, as well as up and down the Gulkana River and Bear Creek.

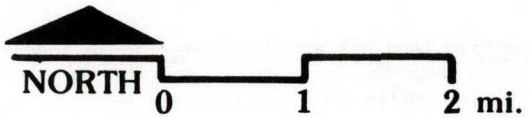
There is a large amount of land use activity concentrated within this unit. Recreational activities are popular at both the Gulkana River and Bear Creek. Gulkana Village, a small native settlement, is situated about 1/4 mile from the highway on the northeast bank of the Gulkana River. Industrial uses, such as gravel extraction, can be found along the river bottomlands.

The area's scenic and recreational resources should be considered a high priority for retention through visual resource management. The primary concerns are related to the intensity and impact of recreational use along the Gulkana River and Bear Creek as well as the developments and uses at Gulkana Village.

16 Gulkana River - Bear Creek

Assessment Units R36 – R37





KEY

T- Turnout
Rec- Recreation
M- Impact Mitigation
Rest- Rest Area

Federal Land

Private Land

Land Ownership & Management Responsibility

Most of the land adjacent to the highway is in interim conveyance to the Gulkana Village Corporation. Small areas on the northwest corner of the Gulkana River crossing and all land immediately adjacent to Bear Creek are already in private ownership. DOTPF manages a 300 foot right-of-way along the highway within this unit.

Visual Resource Management Objectives

The management recommendations presented for this unit focus on the themes of retention, enhancement, impact mitigation, and sensitive land use and development.

Retention: To retain those scenic elements which make this area particularly attractive

to recreational users, local residents and other highway travelers.

Enhancement: To enhance the driving and recreational experience by providing adequate roadside facilities and by instituting view management practices.

Impact Mitigation: To reduce the visual impact of existing land uses which detract from the distinctive visual quality of this area.

Sensitive Land Use and Development: To encourage all development to respond sensitively to the scenic resources within this area.

Management Recommendations

Greenbelts

In keeping with the visual resource management objectives for this unit, greenbelts can serve as appropriate management tools. However, since there are no means to formally designate or implement greenbelts on private lands, these are recommendations only. Because of the road's elevated position in the landscape, roadside lands are highly visible; therefore a 100 foot greenbelt would establish a setback from the road to reduce the magnitude of development visibility. Within this greenbelt, large scale clearings should be discouraged and no more than 25% of the vegetation should be removed in any one area. Access roads should follow contours as much as possible.

Land Use & Development (LU)

Since all of the land within this unit is privately owned and situated close to the existing community of Gulkana Village, there is a great potential for future development. It is important that land uses and development take full advantage of the visual absorption capability of this land and site landscape alterations appropriately in order to maintain the area's high scenic quality. Landowners should be encouraged to respond to the considerations outlined under greenbelts and to the recommended greenbelt width as a setback for permanent structures.

It is recommended that development take place either within the existing village settlement area or in Management Units 15 or 17 where visual absorption capabilities are higher and scenic quality is lower.

Turnouts (T)

Currently, there are no existing roadside turnouts which take advantage of the scenic view potential of this area. Two sites have been identified as potential scenic viewpoints and another as a recreational parking area.

T - 1 As the traveler approaches from the north, a surprise and spectacular view is opened up at the top of the hill overlooking the Gulkana River and extending to the Wrangell Mountains. Development of a small gravel widening for pulling off the road is recommended. An existing level area on the east side of the road could be graded and graveled, although a turnout on the west side would be safer for southbound travellers who are more likely to use the site. Development on the

west side, however, will involve more extensive grading in the right-of-way. Signing on the highway is recommended to alert travelers to the turnout location.

T - 2 A small gravel widening at this site would provide northbound travelers with a place to get off the road and take pictures of the spectacular view across the Copper River lowlands to the Wrangell Mountains.

T - 3 This existing paved turnout near Bear Creek has very limited scenic views, especially considering the potential for views nearby. However, it is located close enough to Bear Creek that it should be maintained as a recreational use parking area.

Rest Area / Interpretive Sites (Rest)

The Gulkana River Crossing is an area with significant scenic resource values and the potential for considerable recreational usage. To provide day use facilities and landscape interpretation information, a rest area should be developed on the southeast bank of the river.

Rest-1 This site is already disturbed with a large gravel-surfaced clearing extending almost to the river's edge, which appears to currently be used as parking for recreational use. Recommended reclamation and development measures include the following:

- Replant portions of the clearing to break up the expansiveness and provide trees for wind and sun relief.
- Provide picnic facilities and rest rooms, sited so as to minimize their visibility from the road.
- Reduce the amount of parking in this clearing and encourage use of the former material site for parking, as outlined in Impact Mitigation (M - 2).
- Include an interpretive display with information regarding the Gulkana and Copper River valleys and Wrangell Mountains, as well as the history of Gulkana Village.
- Provide information regarding the location of the Gulkana Village Campground.

Recreation Sites (Rec)

The following recreation sites are recommended

The Bear Creek and Gulkana River crossings are attractive to recreational users and should be developed and maintained to promote this use while retaining the area's scenic qualities.

for attention:

Rec-1 Bear Creek. At present, there is very little disturbance from recreational fishing use at Bear Creek. This undisturbed character should be retained. Roadside parking should be restricted to the existing nearby turnout as outlined under Turnouts (T-3).

Rec-2 Gulkana Village Campground. The campground which is managed by Gulkana Village, is located on the northwest bank of the Gulkana River immediately adjacent to the highway. The site's exposure to the highway could be reduced by increasing the density of vegetation in the right-of-way between the campground and the road. Signing should be provided on the highway for this site, alerting campers to its location.

Impact Mitigation (M) / Reclamation (R)

The gravel extraction sites which are located near the Gulkana River crossing have a negative visual impact on this scenic area. Two sites, one on either side of the road, are very distracting due to their high contrast, large scale and the duration of views from and proximity to a high use area. The following measures are recommended for reducing some of the impacts.

M - 1 Westside. Provide a dense vegetation screen within the right-of-way to reduce the visibility of this site from the riverbanks.

M - 2 Eastside. Regrade this former material site and develop it as the main parking area for the day use facilities and rest area proposed on the southeast bank of the Gulkana River. In addition, a dense vegetation screen should be provided within the right-of-way to reduce visibility from the highway.

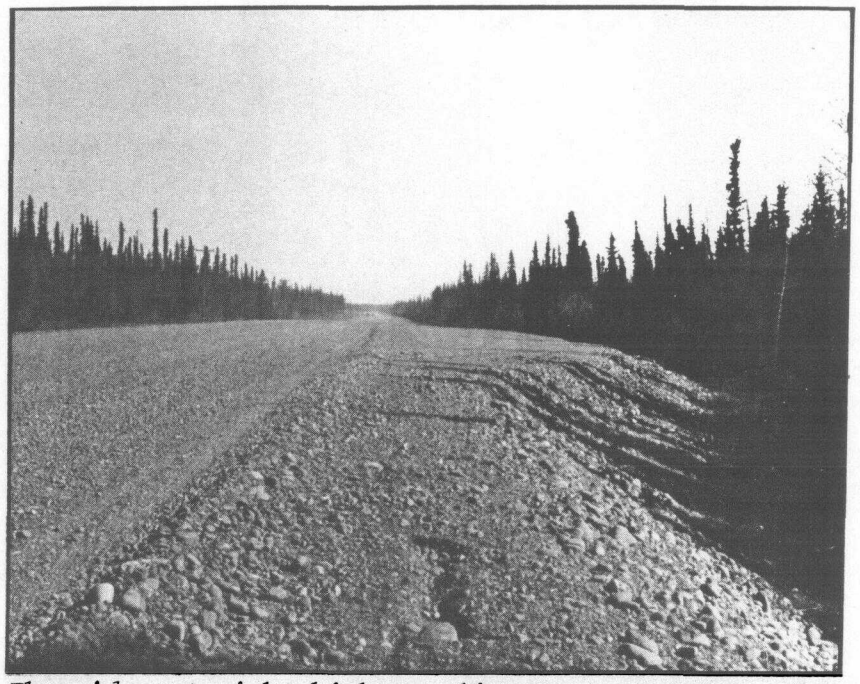
Gulkana Village

This native settlement is located on the northeast bank of the Gulkana River about 1/2 mile from the highway. Distant views of the village from the highway could be enhanced by careful landscape management in the large clearing between the highway and the village. Approximately 1/4 acre of this clearing could be established as an entry way landscaped with natural planting—trees, shrubs, wildflowers. This would provide a strong element of foreground interest framing the views of the village as well as reducing the visual impact of the clearing.

Right-of-Way Management

The exposed soil and the sharp color, line and form contrasts of the cut banks and fill slopes in the right-of-way create a strong, negative visual impression. The cut banks could be made to conform to the natural character of the surroundings by regrading them to reflect the shape and contours of the banks along the Gulkana River. The visual impact could also be significantly and positively improved if low growing shrubs and flowering plants, such as vetch or lupine were established on the cut banks and taller brush, alder or willow was established on the fill slopes. Encouraging revegetation may require reducing the roadcut slope or terracing.

Bear Creek to Dry Creek



The wide, straight highway alignment creates a relatively monotonous view of this landscape.

General Description

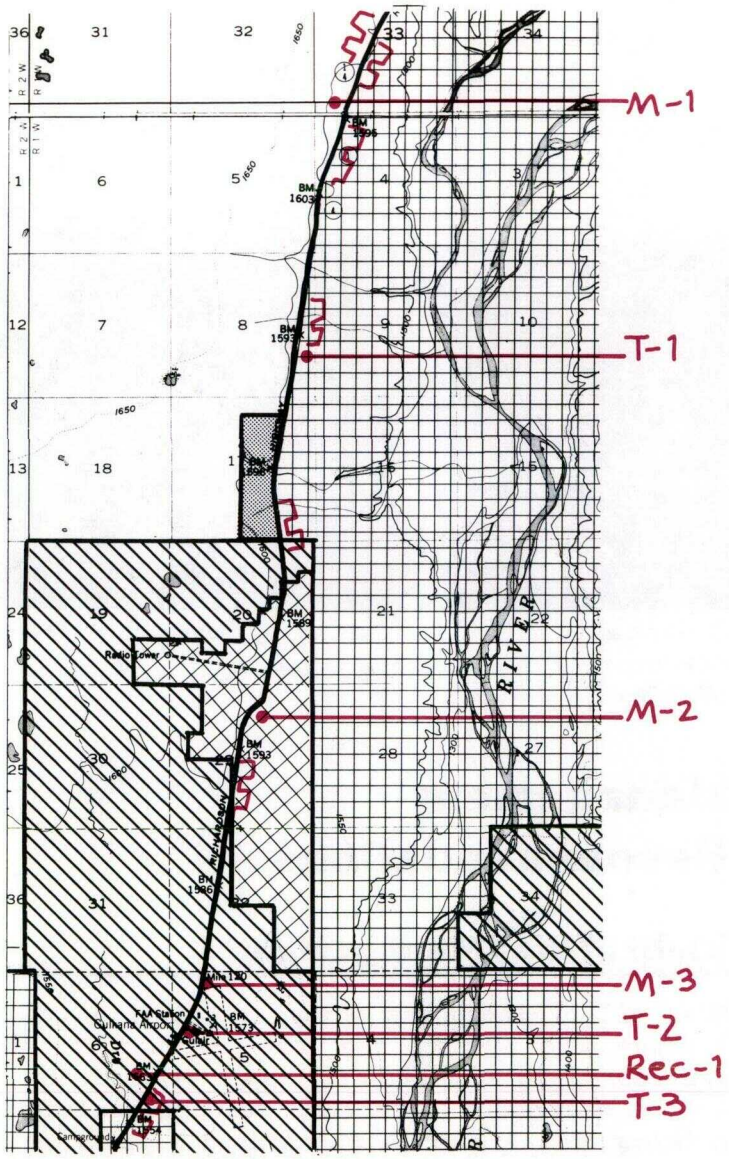
Management Unit 17 is an 8.4 mile stretch of the central Richardson Highway between Bear Creek and Dry Creek. It is a relatively straight, wide corridor through dense spruce and spruce-hardwood forests that parallels the Copper River located 1 to 2 miles to the east. Despite the proximity of the Copper River, the traveler has limited views beyond the densely forested right-of-way edge. The Gulkana Airfield clearing offers the only expansive view to the Copper River basin and the Wrangell Mountains to the east. The Chugach Mountains to the south and the Alaska Range to the north line the horizon for forward views along the highway.

All noticeable land uses - besides powerlines, a radio tower and the highway itself - are concentrated at the Gulkana Airfield. Dry Creek Campground is located on the southern end of this unit, but it is not visible from the highway.

In summary, this is not a particularly scenic part of the central Richardson Highway. However, the driving experience could be enhanced through sensitive land use, development and view management.

17 Bear Creek to Dry Creek

Assessment Units R38 – R43



NORTH 0 1 2 mi.

KEY

M - Impact Mitigation
T - Turnout
Rec - Recreation
- View Management

State Owned Land
Native Corp. Land
Native Selected Land
Federal Land
Private Land

Land Ownership & Management Responsibility

Most of the land surrounding the highway in this unit is managed by the BLM or the State. There are Native village and regional corporation selected lands and one Native allottment, as well as State classified private residential/recreational land located near the radio tower. The northernmost mile of land adjacent to the highway is in interim conveyance to Gulkana Village. The Gulkana Airfield is located on state land. A total of approximately four miles of the highway are bordered by future Native and other private lands. DOTPF manages a 300 foot right-of-way throughout this management unit.

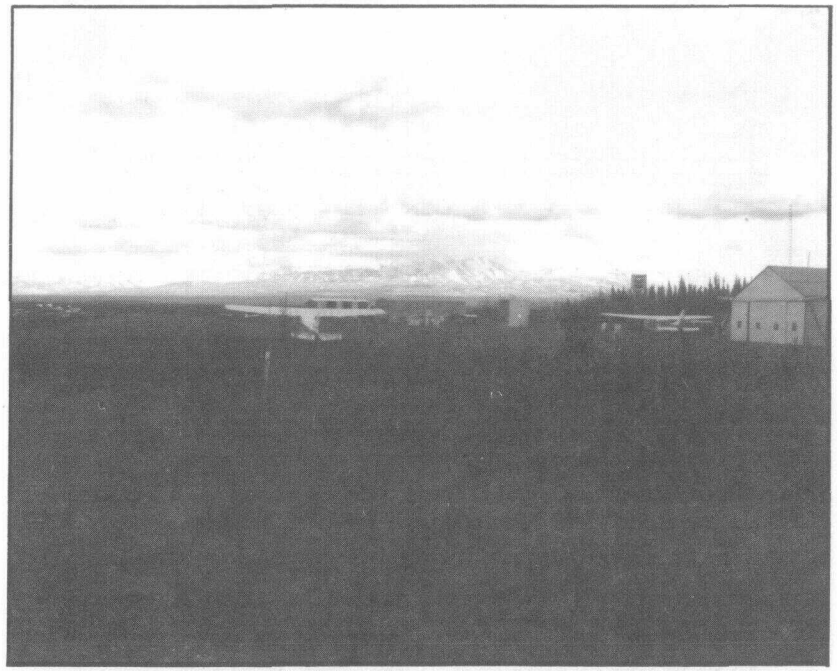
Visual Resource Management Objectives

The management recommendations for this unit focus on the themes of enhancement, appropriate roadside management and sensitive land use and development.

Enhancement: To respond to the many opportunities to enhance the visual experience of this landscape's natural and man made features.

Appropriate Roadside Management: To adopt right-of-way management practices which will create a positive visual impression of the landscape for the highway traveler.

Sensitive Land Use And Development: To encourage sensitive land use and development which will increase visual interest and diversity and minimize negative visual impacts along the highway.



The Gulkana Airfield clearing offers travelers the opportunity for expansive views of the Wrangell Mountains.

Management Recommendations

Right-of-Way Management

Most all of the lands which are visible from the highway are within the right-of-way corridor. Therefore, DOTPF plays the most significant role in the management of scenic resources along this portion of the central Richardson Highway and has the opportunity to maintain and enhance the traveler's experience of these resources.

Currently, the practice of completely clearing a wide (35-50 foot) strip of land on either side of the highway accentuates the enclosed, linear, and monotonous character of the road and sets the highway apart from the surrounding landscape. Cleared slash left in the right-of-way is an additional distraction and a fire hazard as well. The drainage clearings left from the recent highway upgrading project are also cluttered with cleared slash and leave an abrupt edge where natural vegetation begins.

Right-of-way management within this unit should provide for safe and efficient travel while maintaining the natural character of the landscape and enhancing the traveler's driving experience. The following recommendations for better management practices are designed to accomplish this objective:

- Vary the widths of vegetation clearing in the right-of-way to respond to site specific conditions (e.g. wider clearings on the inside edge of curves, deeper clearing in areas of known moose movement, etc.). Where the road alignment consists of very long tangents and sweeping curves, the field of view should be sufficient so that excessively wide clearings are not necessary.
- Remove or burn cleared slash from the right-of-way.
- Allow trees to intrude on the cleared areas - both scattered and in masses - to break up the linear character of the highway corridor.
- Encourage low brush and flowering plants in the right-of-way, removing only the taller vegetation where greater visibility is needed. Strive for a gradation of vegetation heights from the road to the edge of the management strip.
- Where visibility and protection of the pavement do not necessitate wider clearings, allow the right-of-way vegetation to grow as close as 15 feet from the road edge.
- Except where managed for viewing opportunities, maintain a minimum of 75 feet of natural vegetation within the right-of-way to serve as a buffer for adjacent lands and as a reinforcement to the recommended greenbelt.
- Selectively thin additional individual trees around stark-edged clearings to "feather" the edge.

View Management (V)

Due to the enclosed character of this unit and its close proximity to the Copper River, the management of roadside vegetation to open distant views can be a particularly useful scenic resource management tool. Sensitive and selective thinning and clearing can create excellent lateral views east across the Copper River to the Wrangell Mountains or northwest to the Alaska Range. The small clearings that were made for drainage purposes within the right-of-way now provide very brief, filtered views to the Wrangells. More selective clearing and thinning could further open these views and soften their blunt edges, mitigating their negative impacts and adding interest to the driving experience. Several specific locations for recommended view management practices have been identified on the unit map.

In addition, clearings which are the result of development can provide very positive viewing opportunities, such as the one at the Gulkana Airfield. Therefore, as discussed under Land Use

and Development, sensitively sited clearings are encouraged.

Greenbelts (G)

Within this densely forested area, a narrow (25 foot) greenbelt beyond the right-of-way edge would be sufficient to maintain the natural character of the landscape in most of the unit. However, at the Dry Creek crossing, a 100 foot wide greenbelt should extend along either side of the creek for 1/8 mile. At the Gulkana Airfield, where views are open for a great distance and the airfield is immediately adjacent to the highway, a greenbelt would be inappropriate and unnecessary.

Since a significnt portion of the lands adjacent to the highway are Native owned, there are no means to consistently implement a greenbelt recommendation throughout the entire management unit. However, the Bureau of Land Management and the State have an excellent opportunity to set an example for future development by implementating the greenbelt recommendations on public lands, particularly those which are classified for disposal private residential/recreational use but have not yet been developed. Native regional and village Corporations have the option to voluntarily designate an appropriate greenbelt setback on their lands and establish guidelines in the future development of these lands.

The following management guidelines are recommended for the greenbelt lands within this unit:

- No permanent structures should be located within the greenbelt.
- No more than 50% of the natural vegetation should be removed, except where managed for scenic views.
- Retain deciduous trees to provide filtered views.
- Retain spruce trees to screen undesirable views, such as near parking areas.

Land Use & Development (LU)

The overall visual experience and diversity within this unit could be improved with the addition of man-made features which are sensitively sited and designed to blend with or complement the landscape. Due to the proximity of this area to the established community of Glennallen, the potential for future development can be expected to be relatively high. Although the visual absorption capability of the land adjacent to the highway is high and some new development could add visual diversity and interest, excessively large scale developments or insensitive siting could create significant negative visual impacts. Therefore, the following guidelines are appropriate for future development:

- Encourage the development of small scale residential, commercial and recreational uses on land immediately adjacent to the highway.
- Discourage larger scale or higher density development near the highway; instead, locate these uses further from the road edge in order to minimize visual congestion and clutter as well as traffic hazards.
- Use the guidelines set forth in the greenbelt recommendations to identify the appropriate development setback and vegetation management practices.

Encourage desirable large clearings - such as farms on the east side of the highway where there are opportunities to open expansive and distinctive views.

Utilize colors, materials and building forms which complement or blend in with the surrounding landscape.

Utilize right-of-way and greenbelt vegetation to screen parking areas of commercial establishments and to frame views toward the focus of the establishment.

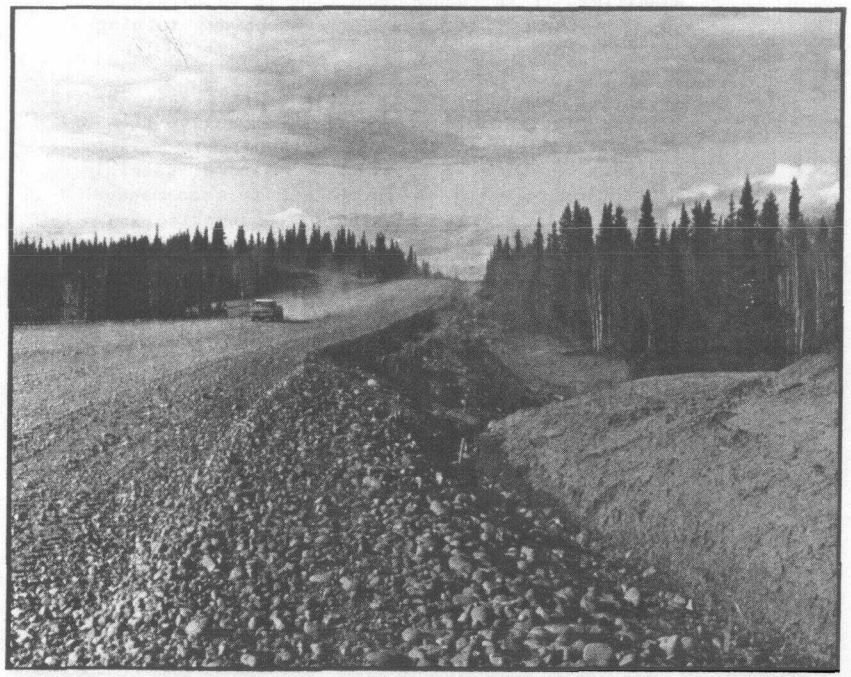
Gulkana Airfield

The Gulkana Airfield is an excellent example of an area where the visual experience from the road was enhanced by opening expansive views. The airfield clearing provides an open view across the Copper River Lowlands to the Wrangell Mountains. Additionally, the activity at the airfield itself is an attraction to many travelers. These site amenities should be retained and enhanced to maximize their experiential qualities. The following minor modifications are recommended to enhance this site:

Litter Control: The turbulent winds created by the airplanes appear to scatter litter which is alongside the road. Stricter litter control should be enforced at the airfield and there should be routine roadside litter cleanup.

Airfield-Related Structures: The apparent lack of on-site maintenance around the residences at the north end of the field has created a cluttered appearance. The unnecessary clutter should be removed and the structures should be painted. Landscaping around the buildings would also improve the overall site appearance.

Scenic Turnout: A small turnout should be constructed on the east side of the highway to give travelers the opportunity to stop and appreciate both the airfield activity and the scenic views. (See Turnouts, T-2).



Recent construction and upgrading have left visible scars in the right of way.

Turnouts (T) & Recreation (Rec)

The following roadside turnouts are recommended in Unit 17:

T-1 Existing Gravel Turnout. Although this turnout does not offer any scenic views or on-site scenic

amenities, it is recommended that it be maintained as a turnout for emergency stopping, turning around, etc.

T-2 Potential Scenic Turnout - Gulkana Airfield. The Gulkana Airfield offers the first expansive views when traveling north from Glennallen. The activity at the airfield is also a special attraction to many travelers. It is recommended that a small gravel widening (accommodating 2 to 3 cars) be established on the east side of the highway. Additional on-site analysis and consultation with the airfield manager will be necessary to designate the best turnout location to provide memorable views yet avoid conflict with airfield operations.

T-3 Existing Gravel Turnout. This existing turnout offers an excellent view of Mt. Drum, however, entry and exit visibility is relatively poor. This turnout should be maintained but signs should be posted next to the highway on either side of the turnout alerting travelers of its location. Paving would reduce the difficulty of entry from the highway. In addition, an information sign could be posted at the turnout noting the facilities available at Dry Creek Campground just to the north.

Rec-1 Dry Creek Campground. Dry Creek Campground is a state managed campground with 58 camping units. This facility is a good example of sensitive siting which eliminates any visual impact on the road.

Impact Mitigation (M)

The following sites require management attention to mitigate their negative visual impacts:

M-1 Road Intersection: The large clearing at this road intersection is out of character with the surrounding landscape and appears much larger than necessary. Natural revegetation at the edges of the site should be encouraged to reduce its visual impact. Introduction of flowering plants, such as lupine, vetch and fireweed would provide an element of visual interest and provide soil conditioning until taller and denser vegetation is established.

M-2 The Vacated Road Alignment: This area is visually distracting because of its contrast with the surrounding dense vegetation. Since another turnout is not needed along this stretch of highway, it should be blocked from vehicular access and revegetation should be encouraged. Particular attention should be given to establishing vegetation (tall trees and shrubs) on the strip of land between the two alignments to screen the vacated segment.

M-3 Construction Staging Area and Scales: This site appears to have been temporarily established for road construction activity. Regrading and revegetation should be anticipated for the time when the site is no longer in use. This would help blend the gravel surfaced clearing in with the existing low shrub vegetation at the roadside near the airfield clearing.

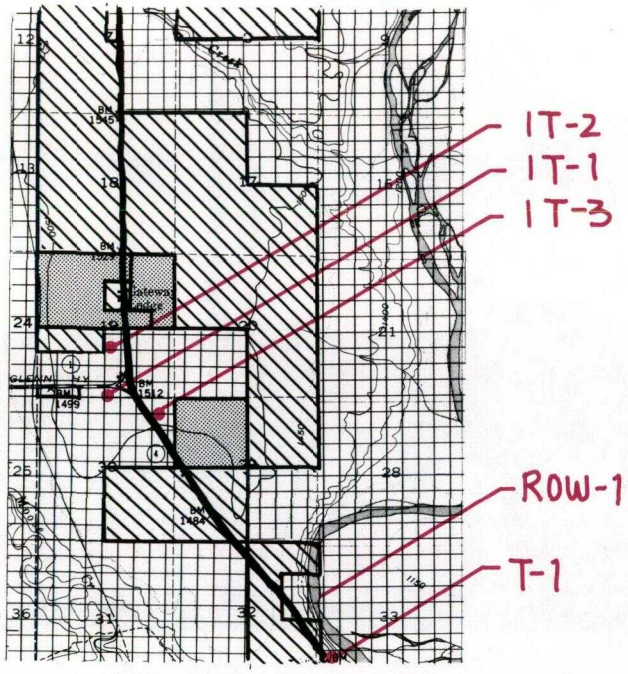
South Glenn - Richardson Jct.

Many views are limited to roadside establishments and right of way vegetation due to the flat terrain and dense spruce forest.

General Description

Management Unit 18 encompasses approximately 5 miles of the Richardson Highway around its junction with the Glenn Highway near Glennallen. It is within the Copper River Lowlands, the river being less than a mile to the east. Due to the generally level topography and the dense stands of predominantly white spruce vegetation, views are often restricted to the area immediately adjacent to the highway. Some of the higher distant mountains (Mt. Drum and Mt. Sanford to the east and the Chugach Mountains to the south) are occasionally visible along the road corridor, especially where tree cover has been removed.

This unit has low intrinsic visual quality due to limited views and little visible landscape diversity. The visual impacts from land developments and landscape alterations further lower the scenic resource values. The character of the vegetation and the nearly level topography result in a high visual absorption capability.



18 South Glenn - Richardson Jct.

Assessment Units R44 – R45

NORTH 0 1 2 mi.

KEY

IT- Information Turnout
ROW- Right of Way Mgt.
T- Turnout
State Owned Land
Native Corp. Land
Private Land

This area is characterized by considerable roadside commercial development due to its proximity to Glennallen - the region's major commercial and service center - and to the fact that it is the junction of two major highways. The road has recently (1982) been widened and resurfaced to facilitate traffic movement and provide for safe access to adjacent businesses and other developments.

Land Ownership & Management Responsibility

Land ownership adjacent to the highway is mixed, with much private land, two large tracts of University land and other State lands which have been identified for land disposals. The DOTPF manages a 300 foot wide highway right-of-way along the Richardson Highway in this unit.

Visual Resource Management Objectives

Scenic resource management objectives recommended for this unit relate to two general themes: sensitive development and enhancement.

> **Sensitive Development:** To allow for continue growth and development while trying to minimize some of the significant negative visual impacts, particularly those associated with linear commercial development along major highways.
>
> **Enhancement:** To take advantage of opportunities to enhance the driving experience and scenic resource values primarily through opening distant views, imaginative right-of-way management and encouraging visually pleasing land uses and development.

The Glenn Highway junction could be enhanced with aspen and birch plantings within the right of way.

Management Recommendations

Right-of-Way Management (ROW)

The right-of-way and land immediately adjacent to it are particularly important in this management unit because so much of the viewing experience is limited to these areas. Along roads, scenic resource management commonly utilizes two management strips - the right-of-way and the area immediately beyond, commonly referred to as a greenbelt. Here the right-of-way, under the management of the State DOTPF, is the area where there is the greatest potential for effective scenic resource management. Beyond the right-of-way, the diversity of land owners, their varying needs for the use of this land and the fact that it is outside of a borough or local government combine to make it difficult to implement land management actions such as greenbelts.

Present right-of-way management in this unit focuses primarily on vegetation control. Trees and shrubs are cleared back to the right-of-way edge and grasses are planted or encouraged to invade the area along with low growing annuals. While roadside clearing does allow for visibility and facilitate maintenance, it does not need to

be done in the same extensive and uniform manner. This practice accentuates the visual width and impact of the road, calls attention to the uniform right-of-way edge and leads to a monotonous driving experience. Guidelines for more visually sensitive right-of-way management can be found in the general discussion for the central Richardson Highway. Specific recommendations for this management unit include the following:

- Encourage trees and shrubs to invade portions of the right-of-way on the west side of the road in order to break up the strong linear appearance of this edge and introduce some visual variety. White spruce trees would be desirable on this side since they are effective screens and can help orient views to the east side of the road.

- Except for some deciduous trees and lower shrubs, selectively clear the east side of the road back to the right-of-way to open views towards the Wrangell Mountains. This practice should concentrate on areas beyond the right-of-way which are cleared or semi-open so that more distant lateral views can be created. The resultant character would be coniferous trees encroaching close to the road on the west side with a wider clearing and groups of deciduous trees on the east.

- Accent the actual highway junction with aspen and birch plantings. Such a deciduous grove would be visually distinctive yet relatively transparent. Summer color could be added by planting bulbs and flowers — such as poppies — and encouraging native wildflowers — such as lupine, fireweed and dandelions. This junction is a visual and functional focus and should receive some special land management treatment.

ROW-1 This is an area where clearing of the right of way and some selective thinning or clearing of lands immediately adjacent to it could open up filtered or open lateral views to the Wrangell Mountains. The Copper River is relatively close to the road here and its steep bank cuts could provide the best opportunity for such distant views within this management unit.

Land Use & Development (LU)

The potential of this area for development — commercial, residential and light industrial — is high because of its easy access, proximity to a regional service center (Glennallen), exposure to large volumes of traffic and readily developable lands. Land use and development that is sensitive to scenic resources can be accomplished through the following three ways:

1. Adopt the recommended greenbelts and the associated management guidelines.

2. Design visually attractive or sensitive developments (architechturally designed buildings, functional site layouts, adequate landscaping, properly scaled and located signage).

3. Institute appropriate right-of-way management to help soften the visual impacts of land clearing, regrading and other landscape alterations associated with development.

The following guidelines are recommended to help realize the objective of visually sensitive land use and development for this management unit.

- Encourage those land uses which require extensive clearing to locate on the east side of the highway so as to open views towards the Wrangell Mountains. The Gulkana Airport just north of this management unit is a good example of this. Other possible land uses and developments which would have a similar effect would be agriculture, landscape nurseries and truck gardens, various forms of light industry, and even sand and gravel extraction activities if properly screened.

- Adopt roadside greenbelts around residential development as buffers from the noise, dust and hazards associated with high volume, modern highways. These greenbelts could be developed into pedestrian-bicycle routes for local residents.

- Minimize the number of access roads from the highway. Frontage drives servicing a number of developments are preferable to numerous individual entrances. Entry roads can be highlighted by using accent plantings and sensitive signage and by creating visual breaks with right-of-way plantings between roads.

- Encourage commercial development around existing nodes (the highway junction and Glennallen) and direct more attention to reducing the visual impacts of parking and commercial signage.

- As noted in the general recommendation for this study area, the State of Alaska can establish funds to assist developers of roadside lands to engage the services of professional designers (architects, landscape architects, graphic designers) to ensure that these developments adequately respond to visual considerations.

Greenbelts

Beyond the road right-of-way, greenbelt management strips can be effective tools for realizing visual resource management objectives related to sensitive development and enhancement. A 25 foot wide greenbelt beyond the right-of-way is recommended throughout this management unit. It should be formally implemented on state and University lands, and included as a requirement on state land disposals which are adjacent to the road. On private lands it is considered voluntary since no implementation mechanism exists. However, every effort should be made to encourage private landowners - particularly Native corporations - to adopt the greenbelt widths and associated management guidelines. The following guidelines are recommended for greenbelts within this management unit:

- Retain at least 25% of the existing natural landcover and minimize the disturbance to the soil and topography. Use the existing vegetation to help screen parking areas for commercial developments.

- Keep permanent structures back beyond the greenbelt area.

- Encourage some clearing and selective thinning of deciduous trees within greenbelts on the east side of the road to help open distant views and be consistent with recommended right-of-way management actions.

- Encourage coniferous trees (white spruce) on the west side of the road within the greenbelts to support the recommended character of the right-of-way.

- Encourage landscaping within the greenbelt around the highway junction to reinforce the special character recommended for this area. Landscaping should use birch and aspen trees and wildflowers to conform to the right-of-way plantings.

Road Related Recreational Facilities

Two types of road related recreation facilities are recommended for this management unit: Information Turnouts (IT) which are located at highway junctions to provide the traveler with information related to road conditions, services, and recreation opportunities, and Turnouts (T) which are typically small widenings in the road to allow for pulling safely off the road. At the south Glenn-Richardson highways junction, three separate information turnouts are recommended - one for travelers arriving from each direction. An alternative to this would be to develop a single information turnout using a portion of state owned land on the south side of the Glenn Highway approximately 1/2 mile west of the junction. However, poor site visibility and potential problems with safe and efficient entry and

exit suggest that this development would be less desirable than the three separate smaller turnouts described below.

IT-1 This information turnout would be for travelers arriving from the west along the Glenn Highway. It is located .3 miles west of the road junction on the south side of the highway. Development could consist of widening and paving the road shoulder to allow 4 to 5 vehicles to pull out of traffic as well as providing a telephone and an information display board. Small brochures which summarize important road and regional information should be available for people to take with them.

The site has adequate space within the right-of-way for development. While the actual junction is visible from the location, this turnout would be far enough away so as not to create congestion and safety problems at the intersection. Visibility is good for safe entry and exit. Most of the views are limited to nearby lands and developments, but Mt. Sanford can be seen towering above the Ahtna lodge to the east. Careful attention given to right-of-way plantings could adequately screen the turnout from adjacent land development, and this landscaping could be part of the "accent" plantings recommended for the highway junction area.

IT-2 This recommended information turnout is for travelers arriving from the north along the Richardson Highway. It is located .25 mile north of the junction on the west side of the highway. Development would be similar to the turnout described above. This site has excellent visibility for safe entrance and exit and could be developed within the right-of-way. The actual highway junction is visible from this site.

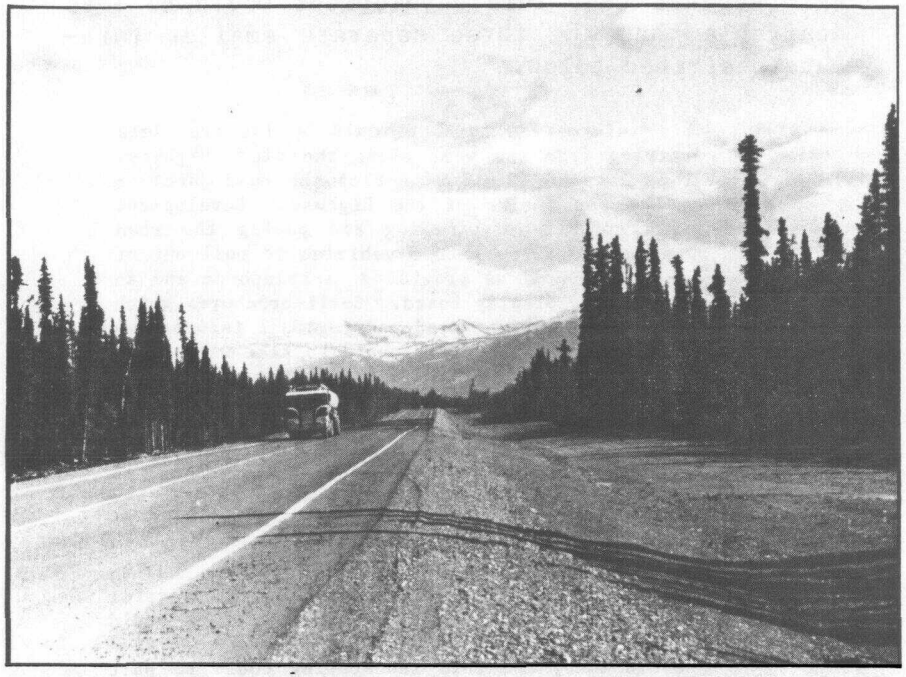
Development on adjacent lands poses potential problems for using this site as a turnout. Road related commercial development could introduce additional entry and exit points along the road, including signs and other features, which might conflict with the functioning and visibility of this turnout. Existing development patterns do not conflict with this proposed turnout, and if proper attention is given to vehicle circulation and site development on lands adjacent to the road such conflicts could be minimized.

IT-3 This site is located on the east side of the Richardson Highway .25 miles south of the junction. It would be used by travelers arriving from the south. Site conditions and development recommendations are similar to the other two information turnouts described here. Presently there is no development on this side of the road south of the junction. If this changed, it could create problems similar to those discussed for the other two sites.

T-1 Existing turnout with historic marker. This marker has information related to the Alaska Road Commission and bears no meaningful relationship to its location. Moreover, entering and exiting the site can be somewhat hazardous because it is within a curve and on a hill. Yet it does have potential for panoramic views across the Copper River towards the Wrangell Mountains. More appropriate information relating to the natural or cultural history of the area could replace the road commission information which could be placed at a site where the natural landscape is not such a dominant focus.

The primary recommendation is that the entry-exit conditions be investigated further to determine whether or not development and use of this site should be encouraged. Since the views are particularly significant and viewpoints over the Copper River uncommon in this area, consideration should be given to moving the turnout 1/8 to 1/4 mile north of the existing site if safer entry and exit are necessary and if such a site could still provide spectacular views. Selective thinning of roadside vegetation could enhance these views. Short walking trails to overlooks should be considered an option, although some distant views from the actual parking area are desirable. Picnicking and other day uses could be considered for this site. The primary limitation for such development would be land ownership - since trails to viewpoints, picnicking and adequate parking would require development beyond the road right-of-way and adjacent lands are either privately or University owned.

Copper Center Area



To the south, the Chugach Mountains are often framed by the nearer vegetation and gently sloping terrain.

General Description

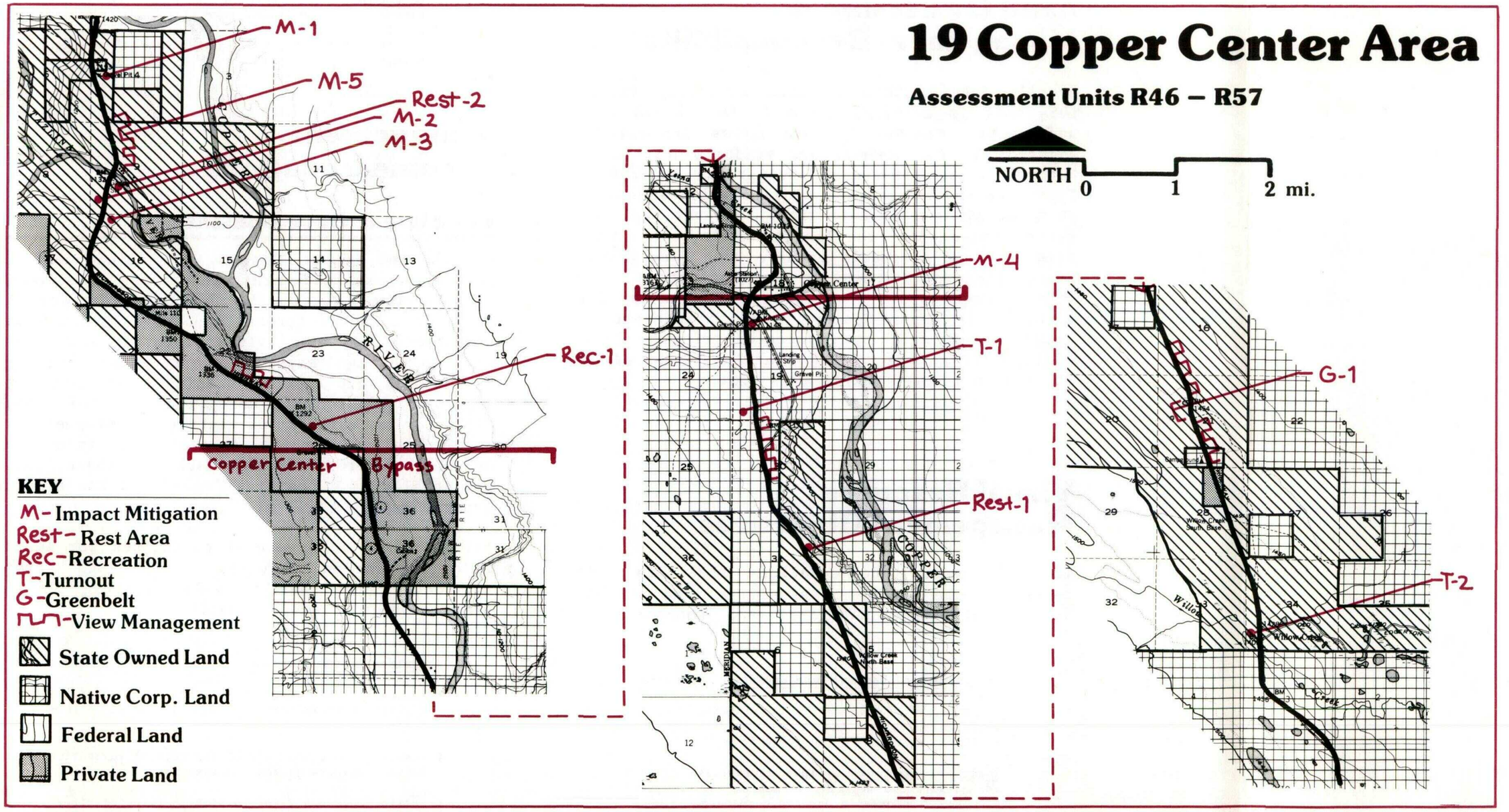
Management Unit 19 begins 2.3 miles south of the south Richardson and Glenn Highway junction and extends for 19 miles to a point 1/2 mile north of Willow Lake. (Six miles of the Richardson Highway passing through Copper Center were omitted from the study. This portion of the highway is planned for realignment to bypass the Copper Center commercial and residential area.) Throughout most of this unit, the highway closely parallels the Copper River. It also crosses the Tazlina and Klutina Rivers.

The land use intensity is relatively low outside the Copper Center area. However, a few industrial sites have created significant negative impacts on the visual landscape quality.

Most of the highway in this unit traverses a fairly enclosed corridor of spruce-hardwood forests. At irregular intervals, however, this enclosure is broken by highly distinctive views. To the east, there are expansive vistas across the Copper River Valley to the distinctive peaks of the Wrangell Mountains. To the south, the Chugach Mountains are often framed by the nearer vegetation and gently sloping hills. And to the north, the traveler can at times see as far as the Lake Louise plateau.

19 Copper Center Area

Assessment Units R46 – R57



Land Ownership & Management Responsibility

Overall, the pattern of land ownership within this unit is complex, since it is divided into many small tracts. Those lands immediately adjacent to the highway are predominantly under Native, other private or University ownership. There are several parcels of land which are under state management at this time. However, all but two of these, near the Tazlina River, are either existing land disposals or have been surveyed in preparation for disposal in the near future. The DOTPF manages a 300 foot right-of-way except for within the Copper Center area and adjacent to private lands which were patented prior to 1952. Additionally, the DOTPF Tazlina Maintenance Station is located within this unit.

Visual Resource Management Objectives

The management recommendations for this unit relate to the themes of sensitive land use and development, impact mitigation and enhancement.

Sensitive Land Use and Development: To encourage sensitive land use and development which uses the character of the landscape to minimize negative visual impacts and instead create visually distinctive additions to the views from road.

Impact Mitigation: To take appropriate actions to mitigate the negative impact of existing land uses and developments on scenic resource values.

Enhancement: To respond to opportunities to enhance the experience, understanding and appreciation of this landscape's distinctive natural and man-made features, particularly those with historic significance.

Management Recommendations

Land Use & Development

Outside the Copper Center area development is fairly sparse and scattered along the road; consequently, where the highway corridor is enclosed in dense forest, sensitive land use and development could add visual interest and diversity to the landscape. Properly sited clearings could open distinctive scenic views from the highway. Within this unit, there is the potential for a variety of future developments - residential, commercial, agricultural, industrial and timber production. Each of these could potentially have positive impacts on the driving experience.

Following are some general guidelines for sensitive land use and development within this area. All development should avoid locating in the areas of highest scenic quality.

Residential Development

- Maintain a setback of at least 25 feet beyond the highway right-of-way for all permanent structures.
- Remove no more than 25% of the natural vegetation between structures and the roadside.
- Retain deciduous trees to provide filtered views.

- Incorporate colors and materials which complement or blend in with the natural landscape.

Commercial Development

- Maintain a setback of 25 feet beyond the highway right-of-way.
- Utilize the right-of-way vegetation to provide screening for parking areas.
- Retain deciduous trees to provide filtered, but adequate, visibility.
- Maintain some distance between commercial establishments to avoid strip-like development of the roadside.
- Utilize materials and designs for structures that conform to the cultural character of the region while maintaining a level of diversity (e.g. the Grizzly Bear Pizza establishment is a good example of this concept).

Agricultural Development and Timber Production

- Selectively remove spruce trees between the development and the highway and retain deciduous trees to provide filtered views, especially of agricultural fields.
- Where possible, locate clearings on the east side of the highway where they can provide expansive views across the Copper River Lowlands to the Wrangells.
- Retain masses of natural vegetation between smaller clearings to provide diversity rather than making one large scale open clearing.

Industrial Development

- Locate all clearings for material extraction beyond the recommended greenbelt and utilize vegetation and landform to screen activities.
- Avoid visible development near rivers and creeks.

Greenbelts (G)

Due to the densely forested landcover adjacent to the road, the generally level to gently rolling topography and the wide (300 foot) right-of-way, a relatively narrow greenbelt management strip (25 feet) would be adequate throughout most of this unit. However, a wider greenbelt width (100 feet) is necessary at the major river crossings (Klutina and Tazlina Rivers) and around an open view to a small lake (see G-1 on map).

Private landowners are encouraged to voluntarily adopt the following guidelines for greenbelt management on their land. Native corporations and the University are urged to formally adopt these guidelines as part of their management practices to set an example to other landowners.

- No permanent structures should be located within the greenbelt.
- Retain at least 75% of the natural vegetation except where there are opportunities for opening distinctive views.
- Utilize greenbelt vegetation to screen parking areas and other unattractive land uses.

Right-of-Way Management

Due to the complex pattern of small tracts of predominantly privately owned lands throughout this highway corridor, the managment of the right-of-way lands will play a fundamental role in maintaining consistency in scenic resource management. To reinforce the greenbelt concept, the maximum amount of natural vegetation should be retained within the right-of-way, while at the same time responding to traffic safety needs

and the opportunities for enhancing views.

Throughout this unit, except where managed for viewing opportunities, a minimum of 50 feet of natural vegetation should be retained as a buffer between the highway and adjacent lands.

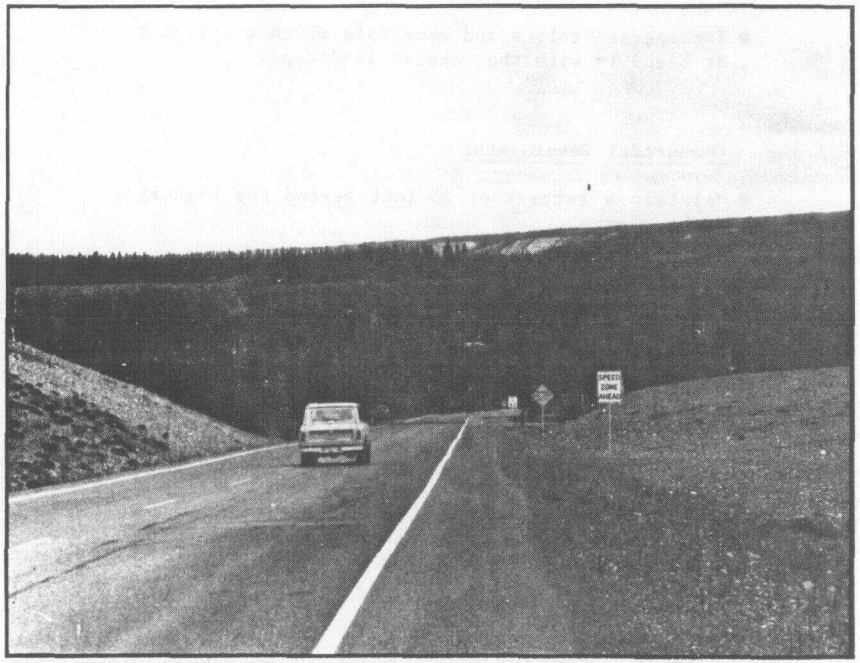
There are currently two major sources of negative impacts on the driving experience within this management unit - the many unvegetated road cuts and the visual accentuation of the road's linear character as a result of uniform, wide clearings (35 feet beyond the road edge) on either side of the road.

Road cut impacts can be reduced by the following considerations:

- Regrade to shallower slopes, in keeping with the surrounding natural landscape.
- Seed areas with nitrogen-fixing, soil-building plants (vetch, clover, lupine, alder) to initiate natural revegetation.
- Refrain from further clearing or thinning and allow natural succession to take over.

Some appropriate techniques for reducing the linear feeling of the road as a result of wide uniform clearings include the following:

- Plant or allow intrusion of scattered trees and masses of trees within the cleared strip.
- Allow low brush to remain in clearings.
- Where brush is not yet established, seed with flowering plants (vetch, lupine) to add visual diversity and interest.
- Vary the width of clearings in response to site specific needs, such as visibility on the inside of curves, known moose movement corridors and winter shade patterns on the road surface.



The visual impact of roadcuts could be reduced by seeding with nitrogen-fixing, flowering plants, such as clover, vetch, or lupine.

Copper Center Bypass

The design for the Copper Center Bypass should include plans for small information turnouts noting the historic points of interest in Copper Center. It is recommended that a turnout be located at the north end of the bypass on the west side of the road for southbound travelers. Another turnout should be located at the south end of the bypass on the east side of the road for northbound travelers. The opportunity for establishing a site with day use recreation facilities near the Klutina River should be explored.

Rest Area / Interpretive Sites (Rest)

Two potential rest area sites have been identified in this unit, one of which would provide good opportunities for landscape interpretation.

Rest-1 Old Highway Alignment: The top priority site for rest area development appears to have been developed as a rest area and subsequently vacated. It is located on a paved loop turnout created by a vacated alignment and provides outstanding views across the Copper River to the Wrangell Mountains. It is completely screened from the highway by dense vegetation. This would be an excellent interpretive site for the Copper River Lowlands landscape. Redevelopment, requiring minimal investment, would include the following:

- Selectively thin vegetation on the east side of the rest area to open views to the Wrangells and the Copper River.
- Provide picnic tables, toilets and trash receptacles on the west side of the rest area where vegetation can be used for screening and creating private picnic sites.
- Construct a walking trail to the Copper River - which would be an approximate 1/2 mile hike for the most direct route.
- Selectively thin the vegetation on the west side at the north and south ends of the site to open views of the entrance. This will alert the traveler to it's location.
- Provide an interpretive information display with information regarding the Copper River Lowlands landscape as well as the history of the Copper Center settlement.
- Provide information signs on the highway located approximately 1/2 mile on either side of the entrance to inform travelers of the rest area location.

Rest-2 Existing Rest Area - Tazlina River: This existing paved rest area offers accommodations for picnicking and access to the Tazlina River. The site is adequately screened from the road and is sensitively developed, but has limited opportunities for views of the surrounding landscape. Some improvement of viewing opportunities could be accomplished with selective vegetation thinning. This site should be maintained as a day use facility, but landscape interpretation of the Copper River Lowlands character type should be provided at Rest-1.

Turnouts (T)

Two turnouts are noted in this unit.

T-1 Existing Turnout. This short gravel loop turnout on the west side of the highway has virtually no amenities and serves as an emergency pullout or short term turnout only. There are no existing or potential scenic views from this point. It is recommended that this turnout be retained for traveler use, but that additional right-of-way vegetation be encouraged between it and the highway to reduce its visual impact as a clearing.

T-2 Existing Paved Turnout - Willow Creek: It is also recommended that this turnout be retained. It provides parking and access for fishing at Willow Creek. There are nice views to the south of the Chugach Mountains from here.

Power & Communication Lines

Powerlines parallel the highway within the right-of-way for most of the length of this management unit. Their visual impact varies with their location and the right-of-way vegetation management. Negative visual impacts can be reduced if the following management practices are employed:

- A wide strip of vegetation between the powerlines and the highway provides an excellent screen - often eliminating all visual impact.

- The placement of the lines close enough to a backdrop of tall trees where the lines and poles are generally lower than the tree tops, reduces the impact by eliminating the lines from the close horizon.

- A combination of these two approaches - where scattered tall vegetation is allowed to grow within the right-of-way management strip, partially screening the lines and poles - is the most effective management tool.

View Management

View management, by selectively thinning and clearing roadside vegetation, is a particularly useful tool for visual resource management within this corridor. The field study identified several opportunities where this tool could be applied to enhance existing, but brief filtered views to the Wrangell Mountains across the Copper River Lowlands. Selective removal of spruce trees would increase the duration of the views and provide an attractive foreground frame.

Impact Mitigation (M)

Material sites and clearings apparently associated with the highway and the Trans-Alaska Pipeline are the major visual problems in this unit. The following sites have been identified for specific impact mitigation actions:

M-1 Material Site. This very extensive gravel extraction area is located within one of the most panoramic scenic vistas along this stretch of the highway. In addition to the large scar created by the gravel extraction, there is a large unattractive warehouse located on the west side of the site. Reducing the visual impacts here is especially difficult due to the elevated road alignments. However, the impact could be somewhat reduced by the following measures:

- Establish additional vegetation on the north side of the road entrance to reduce visibility from the north.

- Construct a berm or fence with tall vegetation within the right-of-way adjacent to the site, especially in front of the warehouse structure, to reduce visibility from the west.

- As material resources are depleted or no longer needed in portions of the site, begin active reclamation through regrading and revegetation to reduce the size of the clearing.

M-2 Highway Maintenance Storage Yard. The size of this clearing on the west side of the highway is out of scale and character with the surrounding dense forests, and there are no views from the site. Constructing a combination fence and tall vegetation screen within or at the edge of the right-of-way alongside the clearing would help reduce the impact. This would be an excellent opportunity for DOTPF to set an example to other landowners of visually sensitive roadside management.

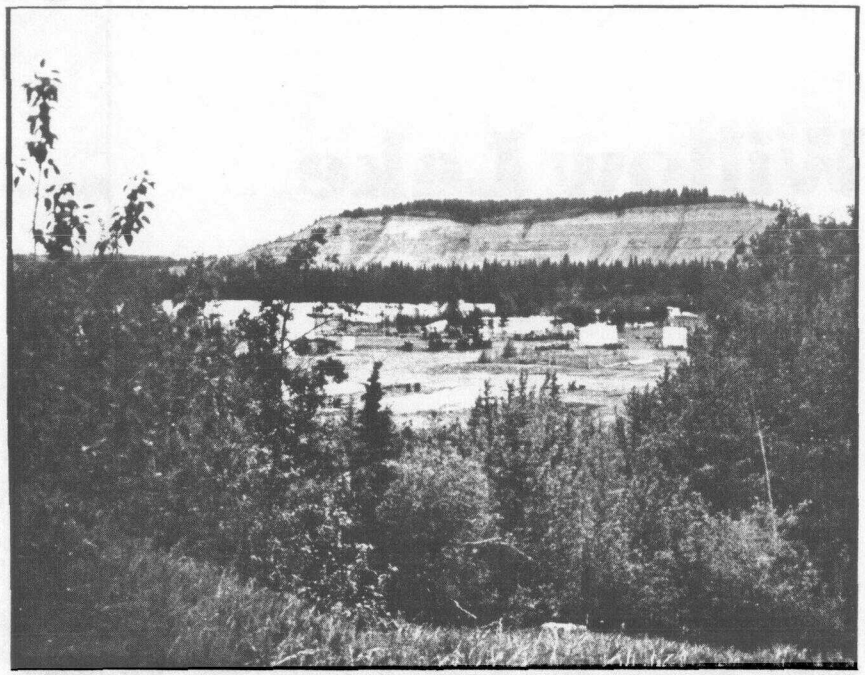
M-3 Department of Natural Resources clearing. The exposed soil in a clearing situated on a steep hill below the DNR building creates a strong color contrast to the natural surrounding landscape. This is particularly noticeable from the south. It is recommended that this site be actively revegetated to reduce its impact. This is another opportunity to display public agency efforts to manage visual resources on roadside land.

M-4 Materials Site. This site includes a large depression created by material extraction. The negative visual impact could be significantly reduced by adopting the following measures.

- Construct a substantial berm within the right-of-way lands adjacent to the site and plant it with tall vegetation.

- Regrade the east side of the site to allow revegetation to occur.

M-5 Commercial Garage Structure. The garage site has a cluttered and congested appearance. The property owner should be contacted to discuss ways to reduce the visual problems by site organization and screening while providing for adequate business visibility.



Additional vegetation planted in the right of way would reduce the visual impact of DOTPF's maintenance storage yard.

Recreation Site

There are limited recreation opportunities on the central Richardson Highway within this management unit. One site, however, could serve as a campground.

REC-1 Potential Overflow Camping Facility. Although there may be ownership conflicts, this former material site could be developed as a small overflow camping area. There are no existing camping facilities between the Edgerton Road cutoff and Glennallen. This site also has outstanding views across the Copper River to the Wrangell Mountains. The modifications that would need to be made in order to develop this site include the following.

- Restrict the access to the site from the highway to one narrower entrance.
- Construct a vegetated berm approximately 50-75 feet east of the road edge to screen direct views from the highway to the site. This would create a split in the entry road which will guide entering vehicles to one side and exiting vehicles to the other side.
- Regrade the site and establish masses of vegetation to break up the expansiveness of the site and provide some privacy for campers.
- Construct a short trail to the top of the north ridge (on-site) to provide accessibility for tent camping in the small aspen grove above.
- Construct a short trail to the top of the small ridge on the east side for a scenic viewpoint and picnicking area.
- Provide an interpretive information display on the surrounding natural landscape.
- If not developed for recreational use, this site should be screened from view from the highway.

Willow Lake

Willow Lake is a memorable landscape feature and serves as the foreground to a panorama of the Wrangell Mountains.

General Description

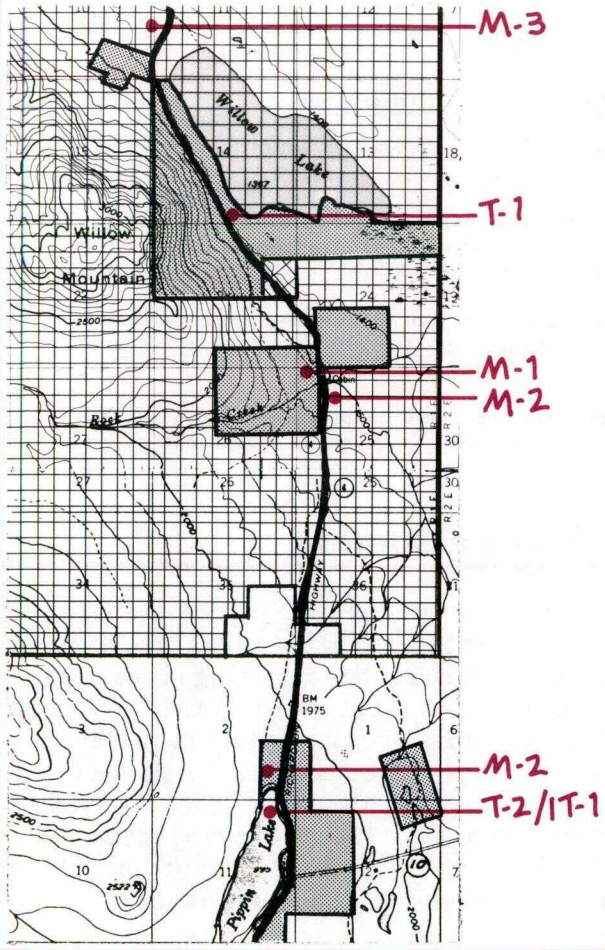
Management Unit 20 includes 6.6 miles of the central Richardson Highway between Willow Lake and the Edgerton Road cutoff. The highway skirts the base of Willow Mountain and runs close to the shores of both Willow Lake and Pippin Lake.

Land development is scattered along this section of the Richardson, and predominantly consists of residential structures situated near the lakes or highway and pipeline associated land uses. The Trans-Alaska Pipeline is a distinguishing visual feature and closely parallels the highway.

The area's scenic resource values are high. Willow Lake plays a dominant role in the foreground and middleground views throughout most of the unit, particularly for northbound travelers. The alignment of the highway along the terraces of Willow Mountain provides dramatic views across Willow Lake and the surrounding Copper River Lowlands to the majestic peaks of the Wrangell Mountains.

Land Ownership & Management Responsibility

Most of the land adjacent to the highway is owned by Native corporations and other private indivi-



20 Willow Lake

Assessment Units R58 – R61

NORTH 0 1 2 mi.

KEY

T- Turnout
M- Impact Mitigation
IT- Information Turnout

Native Corp. Land

Federal Land

Private Land

duals, except a relatively small tract of oil and gas right-of-way land and the Alaska Pipeline route and some federal land shown in the map above. The DOTPF manages a 300 foot highway right-of-way throughout this unit unless the adjacent private land was patented beore 1952. In this case the right-of-way is narrower.

Visual Objectives Management Goals

The management recommendations which are presented for this unit focus on the themes of retention, impact mitigation, sensitive land use and development, and enhancement.

Retention: To retain the existing high quality of the visual resources which may be seen from the highway.

Impact Mitigation: To mitigate the impact of land management practices which are not sensitive to these scenic resources.

Sensitive Land Use and Development: To encourage sensitive land use and development which takes advantage of landscape opportunities to minimize visual impacts.

Enhancement: To respond to the traveler's need for information and to enhance the opportunities to experience the landscape's natural and man-made features.

Management Recommendations

Greenbelts

Throughout most of this rather densely vegetated corridor, a narrow greenbelt would be adequate to maintain scenic resource values. However, the area around Willow Lake requires special considerations because of its greater visual exposure.

Due to the lack of any means of implementing a greenbelt classification on private lands, a number of guidelines are suggested for private landowners to follow in their development plans.

Greenbelt Width

- Willow Lake - a 100 foot greenbelt should be extended around the shore of the lake.
- For one mile on either side of Willow Lake a 100 foot greenbelt should be extended beyond the right-of-way on the east side of the road.
- For the remainder of the corridor, a minimum of 25 feet beyond the right-of-way is an appropriate greenbelt width.

Greenbelt Management Guidelines

- Locate permanent structures outside the greenbelt.
- Remove no more than 25% of the natural vegetation, except where there are opportunities for opening distant views.
- Utilize greenbelt and right-of-way vegetation to screen parking areas and other unattractive land uses.
- Retain deciduous trees to provide filtered views; retain spruce trees to block or screen views.

Land Use & Development

In keeping with the visual resource management objectives, residential, agricultural and recreational activities should be encouraged as appropriate land uses which will help retain the high scenic quality of this area. Industrial development or material extraction should be discouraged where they would be visible from the highway or other high use areas. The following guidelines should apply the to the development of lands adjacent to the highway and to Willow Lake:

- Respond to the greenbelts consideration to guide development setback distances and vegetation management.
- Incorporate colors, materials and building forms which complement or blend in with the natural landscape, and which create diversity in the man-made features of the landscape.
- Site lakeside development to take advantage of views of the lake while minimizing the visibility of structures from the highway or from the lake itself.

- Encourage industrial development to locate in areas of lower scenic quality (e.g. further north on the Richardson Highway).

- Site structures to take advantage of areas with high visual absorption capability (e.g. dense vegetation on level to gently rolling topography).

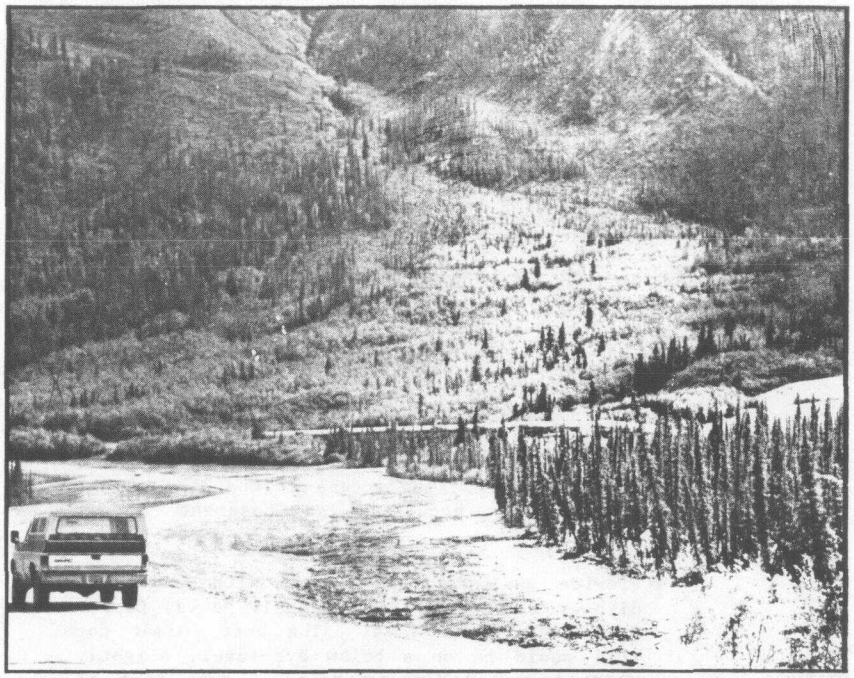
Right-of-Way Management

Sensitive management of the right-of-way can play a major role in maintaining the scenic resources of this area. Because most of the land beyond the right-of-way is privately owned, only land within the right-of-way can be publicly managed to enhance scenic resource values. It is recommended that, because of the unit's particularly high scenic resource values, retention and enhancement of these qualities be a priority.

Today, there are wide, cleared areas adjacent to the road which visually isolate the highway from the surrounding landscape. Vacated alignments which have not been reclaimed accentuate this quality. Additionally, the exposed soils on cut banks and fill slopes emphasize the highway's intrusion on the landscape. Right-of-way land should be managed to better integrate the road in the landscape and utilize the right-of-way as a buffer for adjacent land uses.

The following recommendations have been developed to guide this management scheme.

- Encourage revegetation within the cleared lands adjacent to the roadside. Initial seeding with vetch, lupine and alder could provide soil conditioning and encourage more rapid establishment of taller vegetation as well as add immediate visual diversity.



Wide right of way clearings tend to separate the high way from the surrounding landscape.

- Establish both scattered trees and masses of trees within the cleared area, especially between the existing and vacated alignments.

- Vary the width of future clearings in response to site specific needs (i.e. clear only the inside of curves for visibility or around known moose crossing areas).

- Clear selected vegetation only when necessary to meet specific objectives rather than clearing all vegetation.

- Utilize right-of-way vegetation as a visual buffer for adjacent land by maintaining at least 75 feet in natural vegetation, except in those situations where there are opportunities to open views.

Regrade cut banks to a more natural slope and encourage vegetation on both cut and fill slopes by seeding with vetch, lupine and alder.

Turnouts (T)

Several turnouts are recommended in this unit:

T-1 Willow Lake Viewpoint. This small paved turnout offers excellent panoramic views across Willow Lake to the Wrangell Mountains and their majestic peaks. Recommendations for development of this site include the following:

- Establish pedestrian access to the lake - this may require acquiring an easement across private land.
- Provide an interpretive sign with a graphic display identifying the Wrangell peaks, Copper River and Willow Lake. The best format for this would be on a below eye-level, slightly slanted upward display board - such that it does not block the view itself.

T-2 Pippin Lake Turnout. This existing turnout offers direct access to the shore of Pippin Lake and is recommended for development of an information site for the Edgerton Road junction. See the Information Turnout section for an outline of development recommendations.

Impact Mitigation (M)

The only significant visual impacts on the area's scenic quality are caused by highway and pipeline associated clearings and material extraction sites. The following site-specific recommendations have been developed to guide the mitigation of these impacts. Because of the high scenic resource values in this unit, all of these actions should have priority.

M-1 Material Extraction Site - Rock Creek. The size and character of the landforms at this site are in stark contrast to the surrounding landscape. Gravel extraction has left a powerpole sitting atop an island about 50 feet higher than the road surface. This site should be screened by a berm covered with dense alder, aspen and spruce.

M-2 Vacated Alignments. The vacated road alignments on both sides of the highway in this unit have left large clearings which accentuate the separation between the roadway and the natural landscape. Dense vegetation screens (alder, spruce, aspen) should be established in the right-of-way between the vacated and new alignments. Site reclamation may require some topsoil.

A portion of the vacated alignment near Pippin Lake is recommended for reclamation during the development of an information turnout. See Information Turnout for a more detailed outline.

Impact mitigation problems such as these can be expected if the realignment proposals are implemented on the northern portion of the central Richardson Highway.

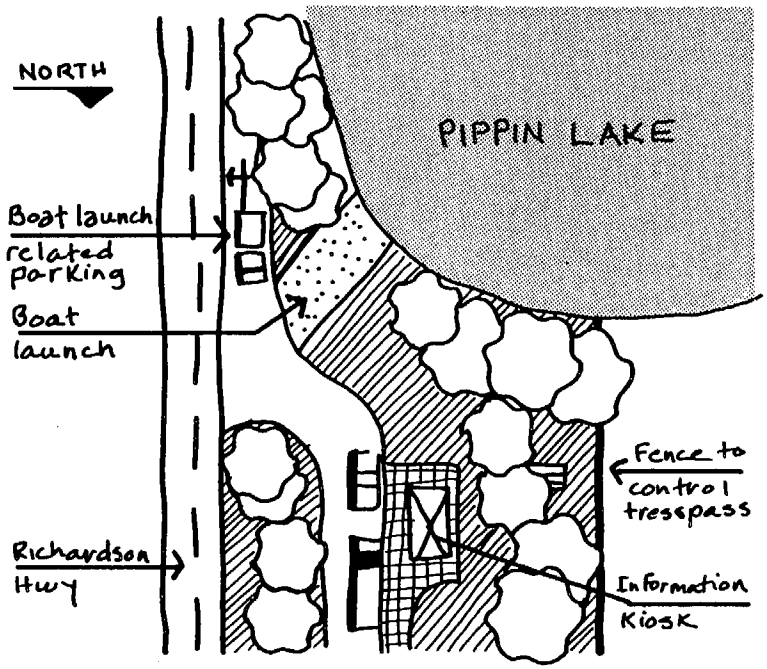
M-3 Pipeline Associated Clearing/Extraction Site. This large clearing on a hillside dominates the view of both the pipeline and the surrounding landscape on the west side of the highway. Due to the steepness of the extraction site itself and the changing point of view of the traveler, screening this site would be difficult. However, establishing spruce trees and high brush on the west side of the pipeline could reduce some of the impact. This would also increase the contrast and enhance the view of the pipeline. This site should receive high priority for both active reclamation through on-site revegetation and partial mitigation through establishment of the recommended vegetative screen in the right-of-way.

Information Turnouts (IT)

Due to ownership and development patterns, a single information turnout is recommended at the junction of the Richardson and Edgerton

highways. The recommended site is located on the west side of the Richardson Highway at milepost 83, approximately .2 mile north of the junction. Existing development on this site consists of a small gravel turnout and boat ramp down to Pippin Lake. The lake is a particularly attractive amenity, with good views across it to the surrounding mountains. A vacated road alignment is located adjacent to the site which could be used to provide adequate development space. Information should be provided regarding the Edgerton, McCarthy and Richardson highways. Information about access to the Wrangell-St. Elias National Park should also be included. While communication of important road related information would be the primary function of this turnout, it could also serve as a boat launch site and a place for day use activities, such as picnicking and resting.

Turnout development should respond to the opportunity for lake access, views to the south and west, the warm microclimate, existing lakeside vegetation and the adjacent vacated road alignment. Potential problems which need to be considered in site design include the problem of possible trespass on adjacent private lands and potential conflicts between the primary use of the turnout (road information) and its other uses (boat launching, picnicking, etc). The diagram illustrates a schematic development concept for this site.



Edgerton Road

Edgerton Road

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General Description

The thirty-three mile long Edgerton Road links the Richardson Highway with the community of Chitina, located at the confluence of the powerful Copper and Chitina rivers. Chitina was established at the turn of the century after the bonanza copper strike in the Wrangells. The area soon flooded with miners and the town became the link between the mines and the outside world. The present road follows the route of the old pack trail that connected Chitina to Copper Center, a weigh station on the Valdez to Fairbanks trail. Although the Kennecott mines closed in 1938, the mining boom opened the area to other development, and the Edgerton road was built in 1933. It takes its name from US Army Major Glenn Edgerton who served on the Alaska Territorial Road Commission.

Today, the Edgerton is a two lane road paved as far as the Tonsina River and continues as a gravel road to Chitina. From an experiential point of view, the road has two distinct parts: after leaving the Richardson Highway, the first half is predominantly a rural farm road focused around the small community of Kenny Lake. The second half, beginning after the Tonsina River crossing, is a more dramatic scenic drive climbing the foothills of the Chugach Mountains and providing frequent views of the Copper River and impressive peaks in the Wrangell mountains, including Mt. Drum, Mt. Sanford, Mt. Wrangell, and Mt. Blackburn. The road ends in the historic town of Chitina. Today, the collection of old buildings is the home of a small community of Alaskans who prefer living away from the boom of the city. The town offers services for those who are out to enjoy the areas diverse recreational opportunities, and it is a jumping off point for the Wrangell-St. Elias National Park and Preserve.

Issues & Concerns

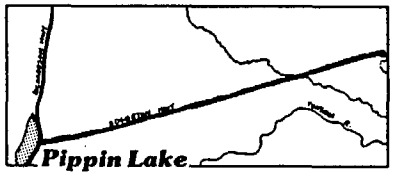
- **Management of Scenic Qualities along the Edgerton Road**

Impressive views of the Wrangell Mountains and the steep, eroded banks of the Copper River across cultivated fields or forests make the drive along the road a memorable scenic experience. Because most of the land outside the road right-of-way is privately owned, roadside management practices will have the greatest single impact on maintaining and enhancing these scenic values. See Management Units 21 to 24 and Edgerton Road Findings and Recommendations, Right-of-Way Management, View Management, Greenbelts, and Land Use and Development.

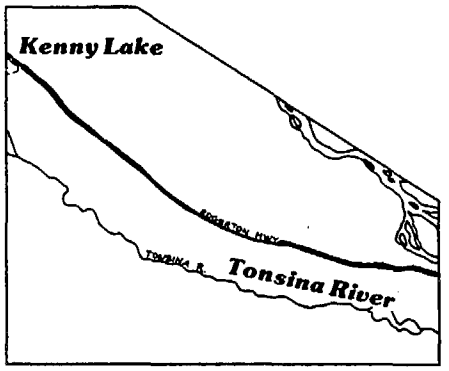
- **Land Use and Development**

The mosaic of rural residences and farms along the Edgerton Road is integral to the landscape character and visual experience. While most of these uses enhance the view, some are distracting because of excessive vegetation clearing, junk left next to the road, or building designs that are in contrast with the areas rural quality. In addition, private land outside a local government jurisdiction is not subject to management controls. Instead, the issue is one of advising owners of the benefits they gain by developing in a way that is sensitive to scenic quality and providing tools to do so. See Management Units 22-24 and Edgerton Road; Findings and Recommendations.

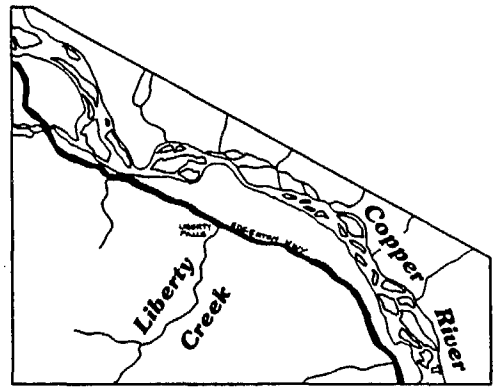
Management Units - Edgerton Highway



21 Approach to Kenny Lake



22 Kenny Lake Farmlands



23 Tonsina River-Liberty Falls

24 North of Chitina

- **Paving**

The Edgerton Road is paved to the Tonsina River and from there it continues as a gravel road all the way to Chitina. The combination of the gravel surface's high silt content, summer winds, dry weather and high travel speeds make stopping along the road an extremely dusty experience, detracting from the roads otherwise high scenic values. See Management Units 23 and 24 and also Edgerton Road - Findings and Recommendations.

- **Liberty Falls Recreation Area**

Focused around the base of Liberty Falls is a small 5-unit campground located about 11 miles west of Chitina. The combination of the falls and the rushing waters of the creek, its setting in the woods adjacent to but below the road, and the privacy and the spaciousness of each campsite makes this the most attractive and sensitively designed campground on any of the four roads. However, the campground has serious

problems with overuse. During the summer, tent campers are forced to double-up in sites and self-contained recreation vehicles occupy all available parking and maneuvering space. Alternatives for meeting this heavy demand are needed--either through expansion which maintains the attractive character of the present site, or by identifying additional campground facilities. See Management Units 23 and 24 and the Edgerton Road - Findings and Recommendations.

Lower Tonsina River Crossing

The crossing of the Edgerton Road and the Tonsina River is a popular but undesignated, access point for fishing and boating along both the Tonsina and Copper Rivers. Because this area was not planned to accommodate recreational use, access is difficult and, at times, unsafe; riverbanks suffer from vehicle-induced erosion; and there are no organized places for parking or recreational activities. The scenic and recreational quality of this crossing and the view to the Copper River is sometimes diminished by the area's chaotic use. See Management Unit 23 and Edgerton Road —— Findings and Recommendations.

Chitina Village

An historic mining service center in a dramatic mountain setting, Chitina is now a destination for fishing, tourism, and other recreation activities. As the area's popularity increases, the capacity of surrounding recreational facilities will be exceeded, detracting from visitors' enjoyment as well as the quality of life for local residents. Expansion of recreational opportunities around Chitina has implications for scenic resource management. See Management Units 24 and 25 as well as Findings and Recommendations for both the Edgerton and McCarthy Roads.

Findings & Recommendations

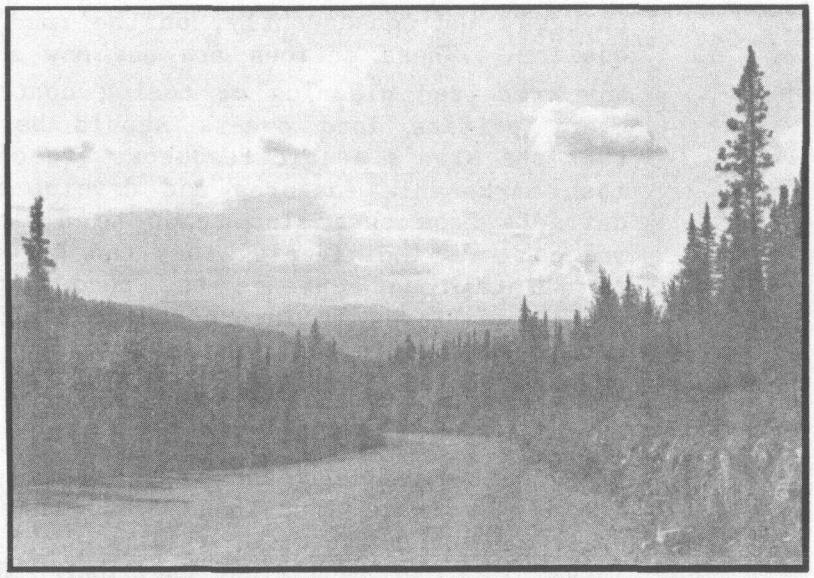
Summary of Scenic Resource Values

The drama of the Wrangell Mountains, the restrained power of the Copper River, and the dispersed pattern of rural development contribute to the high scenic quality of the Edgerton Road. West of the Tonsina River, the road is distinguished by distant mountains serving as a backdrop for nearby farms and cultivated fields. The flat lines and light color of land in cultivation contrast with the otherwise dark greens of the dense spruce/hardwood forests dominating the plateau which lends a pleasant diversity to the driving experience. At the same time, the clearing opens up surprise views to distant mountains. The distinctive log homesteads, often sporting a moose rack over the front door, sprawling barns, and personalized mail boxes convey a feel for life in rural Alaska.

After crossing the Tonsina River, the landscape changes. The road climbs the Chugach Mountain foothills, paralleling the Copper River with its steep cut banks. The river and the rolling forested terraces beyond are the foreground for

panoramas of the Wrangell Mountains which dominate the skyline. Dense roadside vegetation and the variable topography open and enclose spectacular views. Although the steep slopes of the Chuagach limit development, the area is popular for recreation and many travelers on the Edgerton road are bound for Chitina to fish for salmon along the Copper River.

The natural scenery here verges on spectacular as the winding road yields constantly changing views of the river and the Wrangells. Yet it is an area already modified by human use. The juxtaposition of development and untouched land is fundamental to experiencing the landscape and understanding the region.



One of the most distinguishing aspects of the east half of the Edgerton Road are the dramatic views of the Copper River Valley and the distant foothills as the road descends the Chugach foothills.

Management Theme

The Edgerton is unlike the three other roads. The existing residential and agricultural development combined with its future development potential set it apart from the wild character of both the Denali and McCarthy roads. Neither is it a truly multi-purpose thoroughfare like the central Richardson highway. The Edgerton Road is distinguished by its distinctive mountain and river views, rural farm development, and recreational opportunities. These help set the theme for scenic resource management goals and recommended actions.

Four themes are appropriate for this road relating to its rural, recreational, scenic, and road qualities.

Rural

Lands along the Edgerton have a rural homestead and agricultural flavor which should be maintained and enhanced by continuing to provide opportunities for this type of use and development.

Recreational

It is a recreational corridor supporting activities as diverse as hunting and fishing, wilderness camping and sightseeing.

Scenic

The Edgerton is a road, not a wide, high speed highway. It is also a deadend, where slow

travel speed and a winding route is in keeping with its function as a low volume, rural residential service road.

Roads

It is a scenic drive, continually dominated by the Wrangell Mountains and the Copper River.

Scenic Resource Management Goals

Given the multiple functions served by the Edgerton, four interrelated goals should guide land management activities along the road:

- To integrate scenic resource management considerations in all development and land use activities, both on public and private land.
- To manage the roadside lands to blend in with the surrounding landscape and enhance the appreciation of those natural landscape features that are unique to the Edgerton.
- To promote road design and land management practices that reinforce the image of the Edgerton Road as a rural and scenic road.
- To encourage the continued use and development of the settlement, agricultural, and recreational resources along the road in a manner that is sensitive to its high scenic values. A related goal is to advise property owners along the road about how they can benefit from adopting careful development practices.

Implementation: Land Ownership & Management Responsibilities

The future character of the Edgerton Road and the lands along it will be shaped by three groups, each with differing goals and responsibilities: (1) Private land owners, (2) Native regional and village corporations, and (3) the State Department of Transportation and Public Facilities (DOTPF).

(1) Most land along the road is privately owned in varying sized parcels. Decisions by these independent "land managers" can, and will, have a major impact on how the area grows and changes, and consequently, on the road's scenic quality. These actions are not now subject to any organized planning or zoning control: however, private land owners should be reminded that the area's scenic resources are one of its most marketable features and development which detracts from that also tends to diminish land values. As individuals, they can be encouraged to maintain and enhance the road's rural and scenic qualities by incorporating simple design considerations in their own development and land use activities.

(2) Native village and regional corporations are also private land owners but they are set apart because they own or will own significantly large blocks of land along the road. The extent of their land holdings and their interest in deriving maximum benefit from the use of these lands means it is in their interest to enhance the full range of resource values including

scenic. They have the opportunity to formally establish developement standards to protect scenic values when they lease, sell, or otherwise develop the land, and they should be encouraged to do so.

(3) As manager of the only significant amount of public land along the Edgerton--lands within the right-of-way -- DOTPF is in the position to have the greatest impact on scenic resource management along the road. By sensitively using techniques such as roadside clearing, retaining vegetation, opening views and screening unattractive uses or activities, DOTPF can continue to protect and enhance scenic qualities. The department should adopt scenic resource management policies and practices and incorporate them in their ongoing roadside management activities.

Management recommendations for the Edgerton Road respond to issues identified by the technical team for the scenic highway study, field work findings and other important management considerations. More detailed scenic resource management recommendations are contained in the four Management Units 21 thru 24.

Right-of-Way Management

Right-of-way management assumes greater significance along the Edgerton Road because virtually all land outside the 200 foot wide strip is privately-owned. The right-of-way area often dominates the foreground view and also frames or filters more distant views; therefore, how these prominant lands are managed is always of concern.

Given the dense spruce and hardwood forests that line the highway and the characteristic steep topography east of the Tonsina River, appropriate right-of-way management can be an effective scenic resource management tool for much of the road.

The goal of roadside management should be to create a naturally vegetated edge. While some clearing along the edge is necessary for road visibility, maintenance and avoidance of auto-wildlife collisions, this can be accomplished without indiscriminate cutting. For example, west of the Tonsina River, tall trees and bushes are generally cut back from the road a depth of 20-25 feet. The strip next to the road is covered with lupine, horsetail, and other herbaceous plants creating a softened and,in the spring, a colorful edge. This sensitive treatment of the roadside is a practice that should be continued. To add additional visual interest, the depth of the cut strip can be varied to create a more irregular edge. This would be especially desirable along some of the long, straight road alignments near Kenny lake.

As a general rule, the following considerations should guide right-of-way management practices along the Edgerton Road:

- Allow natural vegetation - ground covers and low brush - to encroach upon the road edge.
- Selectively clear trees and brush only where necessary for safety and visibility.

Right-of-way management practices which direct the dense roadside vegetation to be cut to varying depths would help relieve the monotonous linearity and still maintain adequate visibility. Planting ground covers, like vetch, on the road edge is encouraged.

- Attempt to create a natural, "feathered" road edge, graduating from low or brushy plants next to the road, to high brush, and finally taller trees;
- Vary the depth of the cut strip along the road to avoid a hard straight edge and help create visual interest;
- Minimize soil cover disturbance during roadside clearing and seed cut areas next to the road with lupine, vetch or other flowering plants;
- Vary cutting practices by location. For example, the interior edge of curves can be cut back further to increase visibility, while leaving vegetation closer to the road on the other side.

Beyond the maintenance strip, natural vegetation should generally be retained in the right of way. (For exceptions, see the following discussion on view management.) This will contribute to the rural and natural character of the Edgerton Road, screen developments beyond the right-of-way, and reduce the impact of road traffic and noise on adjacent land use.

With care, these right-of-ways will have a significant, if not the most important, impact on maintaining the scenic qualities of driving the Edgerton Road. As the agency responsible for managing these lands, DOTPF's Division of Operations and Maintenance should develop and institute management practices that incorporate these specific recommendations. To assist in this task, as well as guarantee that a consistent management program is undertaken, each year a plan for that season's field maintenance activities should be developed by the maintenance station's supervisor or foreman in consultation with a landscape architect.

View Management

Although, in general, continuous vegetation should be encouraged as close to the road edge as possible, in some locations trees should be cut or thinned in order to open views of the Wrangell Mountains, Chugach Mountains and cultivated fields. This sequential opening and closing of views through changes in vegetation or topography will enhance the diversity and interest of driving the Edgerton Road.

The view management program should be tailored to the different qualities and characteristics

of the two distinct segments of the road: (1) the Richardson Highway Junction to the Tonsina River and (2) the Tonsina River to Chitina.

The farms and cultivated fields near Kenny Lake add significantly to the scenic quality of the first half of the Edgerton Road. Here, alternating dense stands of spruce/hardwood forests, narrow bands of trees which filter views, and open fields create the visual interest. This variety should be maintained through DOTPF's right-of-way management program. Four practices are appropriate along this road segment, depending upon surrounding land use and the desired character of the scenic experience:

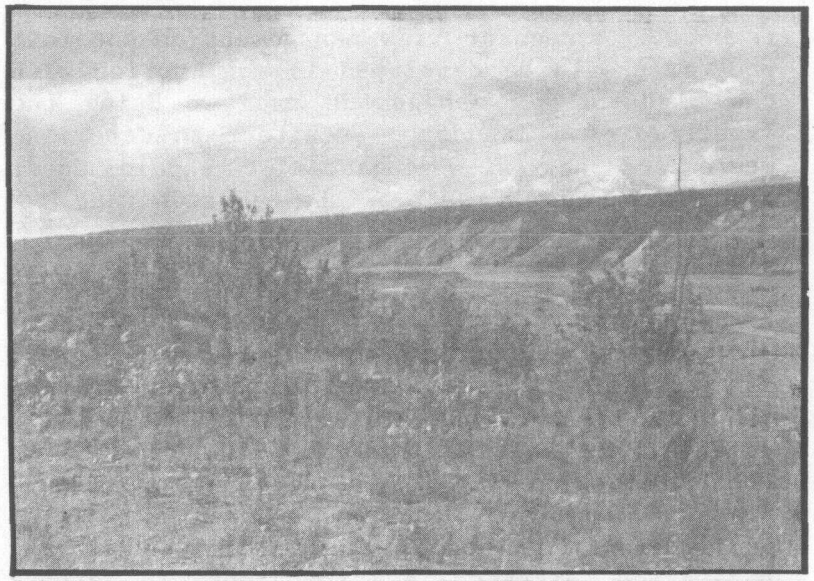
(1) All vegetation should be maintained in the right-of-way where: (a) there is no cultivation beyond the right of way, (b) vegetation would screen views of objectionable development and (c) dense vegetation near the road would provide variety by creating a "tunnel" entrance to the following open area.

(2) Only narrow bands of vegetation (approximately 25 feet) need to be maintained to screen or filter views where (a) vegetation would screen unattractive development or (b) vegetation is needed to add variety in otherwise totally open areas.

(3) The right-of-way can be left in low plant or low shrub cover where expansive and totally open views are desired over farm lands or where it will open views to the Chugach or Wrangell Mountains.

(4) The opportunity for surprise views to the distinctive Wrangell peaks through cuts for driveways or across open fields should be retained.

As the road climbs the Chugach Foothills between the Tonsina River and Chitina, the view management program should focus on opening or main-



Views of the Copper River and Mt. Drum can be even more impressive by selectively trimming brush and trees around turnouts. Such areas should be identified in the yearly maintenance program for regular attention.

taining views to the Wrangells. Currently, dense vegetation and topography combine to create a visually interesting sequence of openings and enclosures. However, some views are partially blocked by trees that have grown up in the foreground. Steep topography next to the road makes it possible to trim or cut only a few trees to significantly improve the panorama of the Copper River and the Wrangells. The recommendations contained in Management Units 23 and 24 note areas where some specific view management actions are appropriate. However, many of these decisions will rest with the field office of DOTPF's Division of Operations and Maintenance as part of their ongoing road main-

tenance. A regular view management/enhancement program should be developed in conjunction with the right-of-way management program using the expertise of a landscape architect to determine where and how view enhancement should occur along the entire length of the Edgerton Road.

Greenbelts

As a relatively narrow management area between the road right-of-way and adjacent land uses, a greenbelt is another tool that can be used to enhance the viewing experience from the road. These lands are generally managed in an undisturbed or natural condition, employing vegetation, distance, and topography to setback development from the road edge to maintain the existing landscape character or screen views. But they can also be areas where some landscape modification takes place to increase the variety of the visual experience and to open up more distant views.

Because of the dense vegetation bordering the Edgerton Road, steep topography, visually interesting farming developments, and the pattern of private ownership, greenbelts are not recommended for most of the Edgerton Road. Instead, careful right-of-way management and sensitive land use can be adequate to maintain the road's scenic quality. There are, however, four key areas where greenbelts are encouraged:

(1) Tonsina River Crossing. For one-quarter mile on either side of the river, a 100 foot greenbelt is encouraged to protect the views and recreational resources of this important node. Within this strip, permanent structures should be discouraged and instead sited outside the greenbelt. Limited vegetation clearing or thinning could take place to develop nonstructural recreation facilities.

(2) Chitina Airport Road. For approximately one half mile on either side of the road, a 100 foot green belt is recommended to retain the first undisturbed views of the Copper River and the Wrangells after leaving Chitina. All permanent development should be located outside the greenbelt and vegetation clearing should be limited. Flatter topography extending towards the river makes development more visible at this location and consequently, setbacks are desireable to protect the panoramic view.

(3) Chitina Lakes Area. From the south end of One-Mile Lake to approximately 4 miles west of Chitina where the valley opens, a 100 foot greenbelt is encouraged to maintain the undisturbed views of steep rock faces and of One, Two, and Three-mile Lakes. Development and clearing should be avoided through the area except for recreational uses which can be screened from the road. For the most part, land along this segment is undevelopable due to precipitous topography.

(4) Development of any permanent structure along the Edgerton Road is encouraged to maintain a setback of at least 25 feet from the right-of-way both to maintain the road's high rural and scenic quality and, also, to buffer development from road traffic, noise, and dust.

Because these recommendations will primarily apply to private land, no means presently exist to implement them. Private land owners are strongly encouraged to incorporate greenbelt recommendations in their own development. Maintaining the land's scenic qualities will increase its desireability for additional residential, agricultural, recreational, and other development. Indeed protecting natural landscape features should also increase property values.

Both the Ahtna Regional Corporation and the Chitina Village Corporation will manage large pieces of land along the road. They have the unique opportunity to incorporate these greenbelt recommendations in their land management program or to include them as conditions for lease or sale. It will be to their advantage to manage these lands in a way that protects the diverse resource values of which scenic quality and recreation are primary.

Recreation

Providing opportunities for active public recreation - camping, fishing, boating, hiking, and picnicking - is another way to enhance appreciation of the landscape. Recreation is also becoming an important commodity for Alaskan communities whose economies are built on tourism and recreation. Of the development opportunities along the Edgerton Road, recreation should have a high priority east of the Tonsina River to take advantage of the mountains, small lakes, creeks, and historic attractions such as Chitina, McCarthy, and Kennicott.

Perhaps the biggest draws are the area's rivers which each summer bring hundreds of dip-netters to the banks of the Copper River in a quest for Red or King salmon. As the area's recreation popularity grows, new facilities will be required. Now, the only developed campground along the Edgerton Road itself is managed by BLM at Liberty Falls. Presently its use far exceeds its capacity of five units. This study identified four areas along the Edgerton road that are appropriate for future recreation development:

(1) Tonsina River Crossing. This informal fishing and boating access node has the potential to be developed as both an overnight and day use recreation area, taking advantage of the site's easy access, good fishing, and river views. Dense vegetation along the river will also provide ample screening. See Management Unit 23.

(2) Liberty Falls Campground. Some limited expansion can be accommodated in a gravel pit adjacent to the existing campground. Large scale expansion is discouraged in order to maintain the extremely attractive character of this small site. See Management Unit 23.

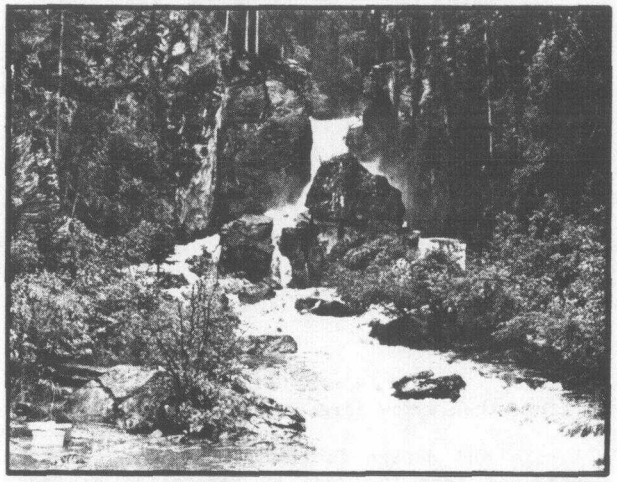
(3) One Mile Lake. The old road alignment behind the lake can be developed as a day use recreation area to capitalize on good grayling fishing and mountain sheep viewing. Some overnight camping might be accommodated on nearby land. See Management Unit 24.

(4) Small Hidden Lake East of Liberty Falls. A small lake, presently hidden by dense vegetation, could be privately developed by its Native owners for day use recreation. See Managment Unit 23.

The location and development of new recreation facilities should be guided by the following considerations:

- Develop smaller, more intimate, facilities rather than a few large campgrounds.
- Locate and design facilities so they are well screened from the road by vegetation or topography.
- Provide convenient road access.
- Where possible, focus the facility on an interesting natural feature.

- Use natural land forms and topographic features to guide site design and access road location.
- Take advantage of the local microclimate: look for sites that have warm south facing slopes, shelter from strong winds, and avoid steep slopes.
- Use vegetation to screen development, parking, and commercial or other permanent facilities from the road.
- Locate trailhead or other recreational use parking so it is not extremely visible from the road.
- Design and locate signing so that is clearly visible and provides adequate notification of the upcoming facility.
- Encourage land owners along the road to develop some private recreation areas.



Liberty Falls is the focus of the most attractive and popular campground on any of the four roads. Only very limited expansion should be allowed here in order to retain its sense of seclusion and scenic beauty.

Land Use & Development

The great variety of homesteads and farms along the Edgerton Road add visual interest and also put human development in scale with the immense natural surroundings. Development can, however, be distracting where the front yards of homes are littered with old cars and dilapidated buildings. Many owners are unaware of the impact that their actions have on the road's scenic qualities and the advantages to them of protecting these values. Therefore, landowners near the road should be given some guidance on how to maintain scenic quality yet still meet their development needs for home or business construction, land clearing and cultivation.

A design and land management manual should be prepared and distributed to all property owners. At a minimum, this manual should include:

- Identification of important scenic qualities of the Edgerton Road and the implications for land use.
- Examples of how development affects this scenic quality - both enhancing and diminishing it.
- Illustrated suggestions for development practices along the road. These may be presented in a series of "this, rather than this" format. Suggestions would cover appropriate land uses, siting, standards to take advantage of vegetative screening and natural landforms, land clearing practices, building design, and property maintenance.

It would be appropriate for the University of Alaska Cooperative Extension Service to prepare this material or, upon its preparation by a consultant, publish and distribute it. The

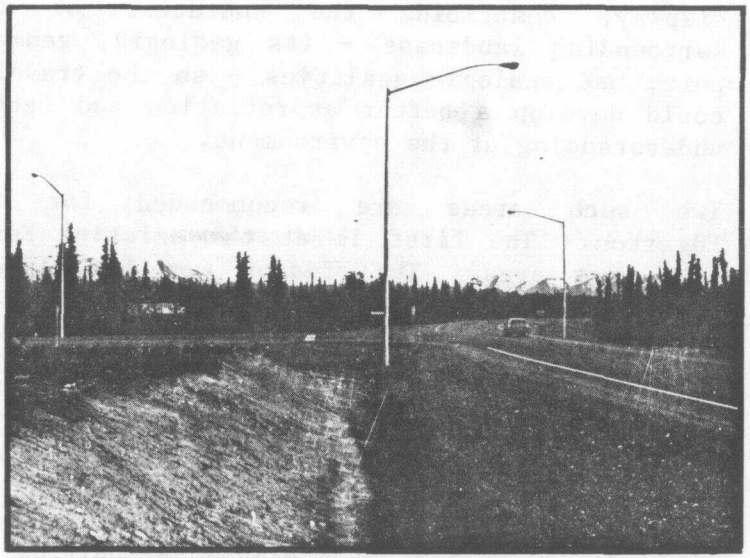
Extension Service is a well respected source of information for rural Alaskan residents and one that they rely on for advice on numerous aspects of rural life. The content could be prepared by a staff or consultant landscape architect/planning team from the National Park Service, BLM, or the State DNR.

Development on public lands should also follow these standards and can set an example for appropriate development on private land. DOTPF's Chitina maintenance site is an example of how not to develop along the road: indiscriminate clearing and absence of screening creates a visual blight. It would be appropriate for DOTPF to relocate the site or take action to mitigate some of these negative impacts through better site layout and screening.

Turnouts

Along the Edgerton Road, three major types of turnouts have been identified: (1) an information center, (2) rest area/interpretive sites, and (3) scenic turnouts. These have been identified and located to provide the traveler both with roadway information and information pertaining to the natural environment, as well as relief from long, tedious hours of driving.

(1) The Edgerton Road Information Turnout is actually located on the Richardson Highway, about one-quarter mile north of the junction. Situated on the north end of Pippin Lake, it would combine informational with recreational opportunities related to the lake itself. In addition to proviving basic information regarding road conditions, services and recreation



An information turnout is recommended just north of the junction of the Edgerton Road and the Richardson Highway to provide road-related information and recreation opportunities at Pippin Lake.

opportunities for the Edgerton Road, it would also provide some similar information on the McCarthy Road and notice of access to the Wrangell-St. Elias National Park and Preserve. See Management Unit 20.

(2) Rest areas/interpretive sites are recommended along the Edgerton as places developed for longer stops, providing picnic areas, rest rooms, litter recepticles, and perhaps, some short recreational trails. In addition, the rest areas would contain an informational

display, describing the character of the surrounding landscape - its geologic, geomorphic, and ecologic qualities - so the traveler could develop a better appreciation and better understanding of the environment.

Two such areas are recommended for the Edgerton. The first is at the existing Kenny Lake rest area. The present facility already offers the amenities of a lake, ample space, and several waste receptacles. Restrooms and a walkway to the lake could be added features. This is an appropriate spot to describe the general landscape of the Copper River lowland terraces, especially for the traveler coming from the west through eight miles of rolling terrain, and the history of development in this agricultural region. See Management Unit 22.

The second rest area would be sited at One Mile Lake which is already recommended as a day use recreation area. Located in the heart of the Chugach Mountain Foothills, the site combines a lakeside location, a dramatic mountain backdrop, and a variety of recreational opportunities, making it an appropriate rest area. See Management Unit number 24.

(3) Turnouts. Additional turnouts as places to safely pull off the road, to snap a photograph, enjoy a view, or turn around, are identified at intervals along the Edgerton. Most turnouts are oriented towards an impressive view of the distinctive cut banks and the meandering form of the Copper River and the Wrangells. In particular, the view from the present site of the Edgerton Cutoff Historic Marker should be improved through selective tree trimming, and the present sign replaced by interpretive information on the Wrangells themselves. Such a display could name the peaks and describe how they were formed as well as recount an episode from the history of the area's settlement. Information pertaining to other turnouts on the Edgerton Road can be found in Management Units 22 through 24.

Paving

Dust is a chronic problem on the unpaved portion of the Edgerton Road east of the Tonsina River. The fine silt content of the gravel surface, dry summers, frequent strong winds, increased summer traffic, and high speeds conspire to make this a particularly dusty drive. Not only does this make it more difficult to enjoy the road's scenic quality, but it also detracts from the recreational use of roadside lands. Much of the Edgerton's recreational potential is on lands immediately adjacent to the road, and these become immersed in dust clouds with each passing car.

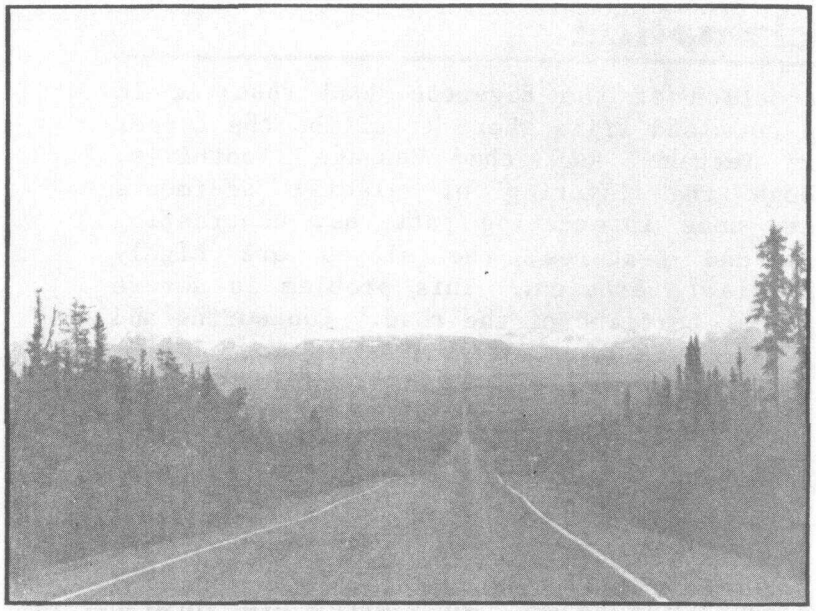
There are few ways to mitigate the problem except through paving; and the remainder of the Edgerton should have a high priority for paving. The gravel bed is in good condition and would probably require only minimal preparation. When paved, the present alignment should be followed, retaining curves and maintaining the same paved width that exists northwest of the Tonsina River. The intent should be to discourage speed and to increase the comfort and enjoyment of driving the Edgerton Road for residents and recreational users alike. Paving would also tend to reduce the visual impact of the road because a narrow paved surface does not appear as wide as the present gravel road.

Reclamation

Construction of the Edgerton Road resulted in steep cuts and fills where it climbs the Copper River Terrace and the Chugach Foothills. Although the layering of glacial sediments creates some interesting patterns, contrasting colors and textures, the slopes are highly vulnerable to erosion. This problem is severe along some portions of the road. Contouring and revegetation is required in these locations but there is the equally pressing need for DOTPF's Operations and Maintenance office to establish a continuing program of erosion control, bank stabilization and revegetation along the Edgerton. See Management Units 22 and 23.

Sand and gravel is required for ongoing road maintenance and several such sites are located along the road generally within the right-of-way. As a matter of policy, these sites should be sensitively located to minimize the visual impact on the driving experience by siting them away from the road, outside the right-of-way, and behind topographic features, vegetative screens or berms. There are currently several material sites and a sand storage site along the Edgerton which require screening while still in use so they will not detract from the landscape's scenic quality. Because of the high vegetative screening capacity along the road, there should be little problem locating all future sites in well screened locations.

Approach to Kenny Lake



This eight mile long straight stretch of road is a unique aspect of the unit, providing excellent views of the Wrangells. Varying the vegetation cutting practices and species along the right-of-way can help create some roadside diversity.

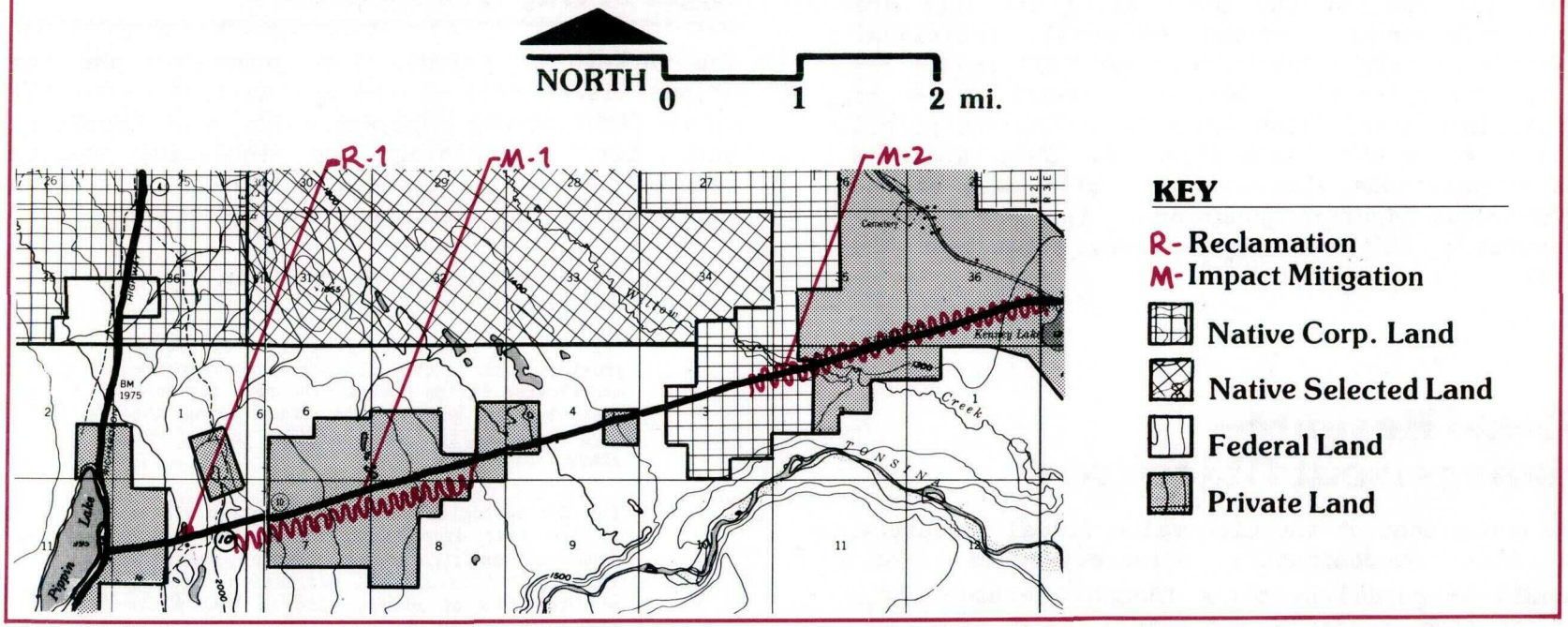
General Description

Management Unit 21 originates at the junction with the Richardson Highway at Pippin Lake and extends east along the Edgerton Road for 7.7 miles to the community of Kenny Lake. Located on the broad Copper River terrace, the area is densely forested in spruce and aspen, which generally encroaches close to the road edge. From a high vantage point near Pippin Lake, the terrain falls off in a series of rolling terraces towards the east, providing a magnificent open panorama of the Wrangells on the near horizon, including the peaks of Mt. Drum, Mt. Sanford, Mt. Wrangell and Mt. Blackburn. This memorable vista is characteristic of the entire unit and is one of its most photogenic aspects. There are views of the Chugach Mountains to the south, but the lack of notable views and the climb back up the terrace make the drive in the westbound direction much less dramatic.

The road itself is one of the most distinctive elements in this unit. For almost the full length of the unit it cuts an almost perfectly straight path across the uplands. This is broken only by small depressions and ridges, giving the road a slight roller coaster quality. As the road drops into one of the depressions, the views to the Wrangells are temporarily enclosed, then open again as the road crests the next small ridge. The dense spruce and aspen vegetation aligning the road accent its linearity. While as a general rule, long straight road tangents create uninteresting driving experiences, the combi-

21 Approach to Kenny Lake

Assessment Units E1 – E4



nation of the distant Wrangell Mountains with the ramrod-straight road slicing across the foreground landscape creates an impressive vista. For many this opening drive along the Edgerton is one of its more memorable and pleasant aspects.

Beyond the road, the unit has a rural, farm character. Numerous residential lots line the roadside, in addition to a number of community facilities such as a school and church. Although not dominant, there are several farms and cultivated fields scattered throughout the unit. In general, however, the area appears only moderately developed; and from the western end the view across the unit is of an evenly forested landscape.

Land Ownership & Management Responsibility

The pattern of land ownership is a patchwork in Unit 21. Most of the lands along the road are privately owned - either in small, individual parcels or larger Native holdings (allotments and corporation lands). There are several pieces of State land near Willow Creek including one parcel slated for a state land disposal. Thre is also a large materials site only 1/2 mile east of the Richardson-Edgerton junction. The State DOTPF manages a 200 foot right-of-way throughout the unit.

Visual Resource Management Objectives

The management of the high value visual resources in this predominantly privately-owned area, should be guided by three themes: enhancement, appropriate roadside management, and sensitive land use and development.

Enhancement: To enhance the dramatic visual relationship of the mountains and road using vegetation to complement the road's linearity and accent periodic vistas that open at ridges.

Appropriate Roadside Management: To manage right-of-way lands in a manner that retains the special relationship of the road to the landscape and minimizes development intrusions in this corridor.

Sensitive Land Use and Development: To encourage private development - particularly agriculture - that is sensitive to the rural quality and scenic values of the area.

Management Recommendations

Right-of-Way Management

The pattern of private land ownership and the strong visual role played by the road in Unit 21 makes right-of-way management the most important tool for maintaining and enhancing scenic values. There are several qualities or aspects of the drive that are important to retain:

(1) The linearity of the road as it crosses the plateau.

(2) The enclosure created by vegetation growing close to the road edge. While there are cleared strips next to the road for some segments, in general the trees along the road help define the corridor and focus views.

(3) The periodic opening of mountain vistas as the road drops down the terraces. A sense of anticipation is created when the road drops into a small depression, closing off the distant views, with an "entry" to the area beyond defined by trees growing close to the road on the next ridge. The surprise comes as the crest is reached and the view opens to the next valley. This sequential experience is characteristic of the drive to Kenny Lake.

These qualities, which are essential to the character of this segment of road, can be maintained with sensitive management practices on the part of DOTPF's maintenance crews affecting brush clearing, retention of trees and other vegetation in the right-of-way, and planting programs.

Specific guidelines for right-of-way management include the following:

- Retain all native vegetation within the right-of-way where not necessary to trim for road visibility. This means adjacent property owners should be prohibited from clearing these lands.

- Where cutting is necessary for road visibility, minimize the depth of the cut strip (20-25 feet is ample). Also, vary the depth of the cut strip along the road so a hard cut edge is not created. This will add visual interest to the long straight corridor.

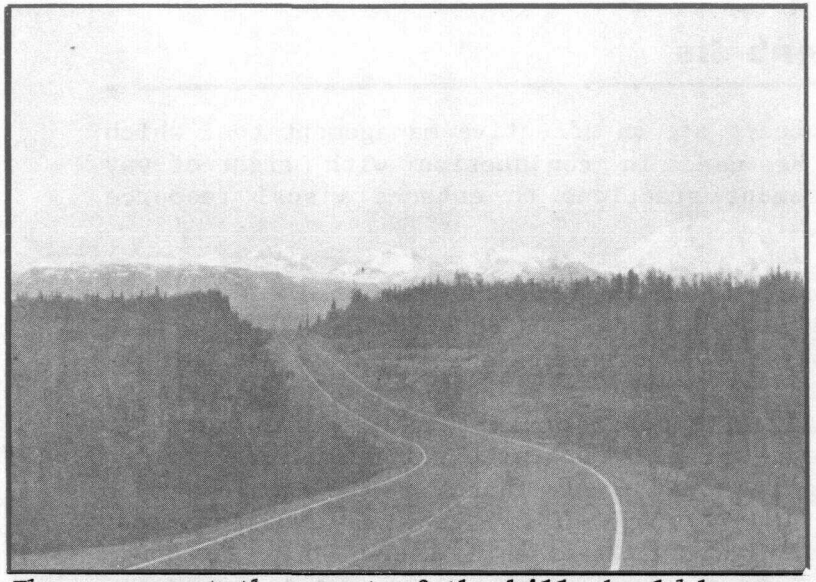
- At the ridges which serve as "gateways" to subsequent valley panoramas, encourage trees to grow even denser and closer than 20 feet to the road edge. Preferably, these will be spruce as its year-round, dark green foliage creates a well-defined enclosure.

- Along road edges other than ridges, encourage the growth of deciduous trees - aspen, poplar, willow, etc. The more lush foliage will help to create a softer edge for the long road corridor and the contrasting colors with the denser spruce on the ridges will add visual interest, especially in the fall. Also, in those areas of agricultural development, a band of deciduous trees along the roadside will permit filtered lateral views to the fields beyond, thus enriching the driving experience, particularly for westbound travelers.

- Seed low growing and flowering plants (lupine, vetch, horsetail) in those areas immediately next to the road to create additional color and also provide a feathered vegetation edge ranging from low plants, to high brush to taller trees.

- Minimize the number of access roads through the right-of-way where possible to maintain the sense of the road "corridor".

- Clearing practices should take care to minimize soil disturbance within the right-of-way.



The spruce at the crest of the hill should be retained close to the road edge, creating a distinctive entrance to the long, straight stretch of road beyond.

Impact Mitigation (M)

Some poor right-of-way management practices in the past require attention in this unit to minimize their impact on the driving experience.

M-1 Tree clearing in the right-of-way, apparently for power pole maintenance, has left an unsightly scar next to the road. Removing the slash and debris and establishing vegetation characteristic of the surrounding area would significantly improve the present appearance and help return the area to its natural condition.

M-2 Cut banks along the road as shown on the map would benefit from plantings of ground covers and low shrubs.

Greenbelts

Greenbelts are an effective management tool which can be used in conjunction with right-of-way management practices to enhance visual resource values.

Formal greenbelts are not recommended in this management unit for two reasons: (1) the pattern of private ownership along the road outside an incorporated city or borough means that there is no effective means of implementing the greenbelt concept and (2) the relatively dense vegetation along the road means that careful management of land in the right-of-way can provide reasonable protection of the scenic resources. Although greenbelts are not recommended, private landowners are encouraged to set back all development at least 25 feet from the inside edge of the right-of-way. This is recommended not only to protect the quality of the views from the road but also to provide a more pleasant setting for the property owner away from the noise, fumes, and traffic on the road.

Land Use & Development

Large lot residences and farms are characteristic along the road in this unit and they help set the rural development tone for the first half of the Edgerton Road. In general, they do not detract from the scenic resource values; in fact, they tend to add diversity and interest along the road. Residential dwellings - particularly those built of natural materials which are well maintained - add color and variety. The open fields with their contrasting color and vegetation add visual diversity. In keeping with the rural road theme, additional residential and agricultural development would be appropriate in this unit. New development, however, is encouraged to follow guidelines designed to retain the special scenic and rural values of the area:

- Discourage commercial uses along the road except near the junction or near Kenny Lake Community. Dispersed commercial use tends to be unsightly and is an inefficient use of land.
- Encourage all development to set back a minimum of 25 feet from the inside edge of the right-of-way.
- Promote the adoption of sensitive design and development guidelines through the Cooperative Extension Service. A publication would be designed to educate the residents about the purpose and specific practices of visual resource management and how their development can incorporate these concepts. Community workshops or local television programs could also be used to convey the message.

Material Sites & Reclamation (R)

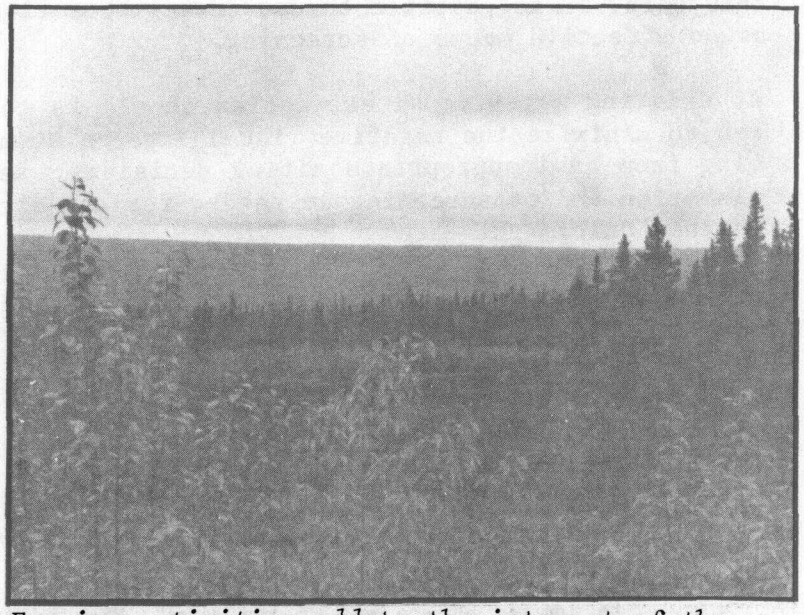
When located in the right-of-way and visible from the road, material sites constitute a significant visual blight on an otherwise scenic driving experience. While an accessible source of materials is essential for road maintenance, the site need not be located in a visually prominant position. Generally sites should be located outside the right-of-way. Special care must be taken to screen the site from view. Along the Edgerton in

this unit, it is possible to use dense vegetation as an effective means of screening.

At existing material sites, action should be taken to minimize the negative visual impacts stemming from an inappropriate siting decision. Reclamation and/or screening is needed for one site in this unit:

R-1 Gravel extraction has severely disturbed a large material site 1/2 mile from the junction. It is completely open to view and located immediately adjacent to the road. As an active site, some method of screening is needed while it is still in use. A five foot high berm could be constructed between the road and the site and planted with ground cover, brush and trees. This would provide screening and help blend the berm with the surrounding landforms. Access into the site through the berm should be kept at the minimum size necessary for equipment and should be located at one end of the site. When no longer required, the site should be graded to more natural contours and naturally or actively revegetated.

Kenny Lake Farmlands



Farming activities add to the interest of the drive along the Edgerton Road because the open fields provide contrasting colors and textures to the spruce and foothills beyond.

General Description

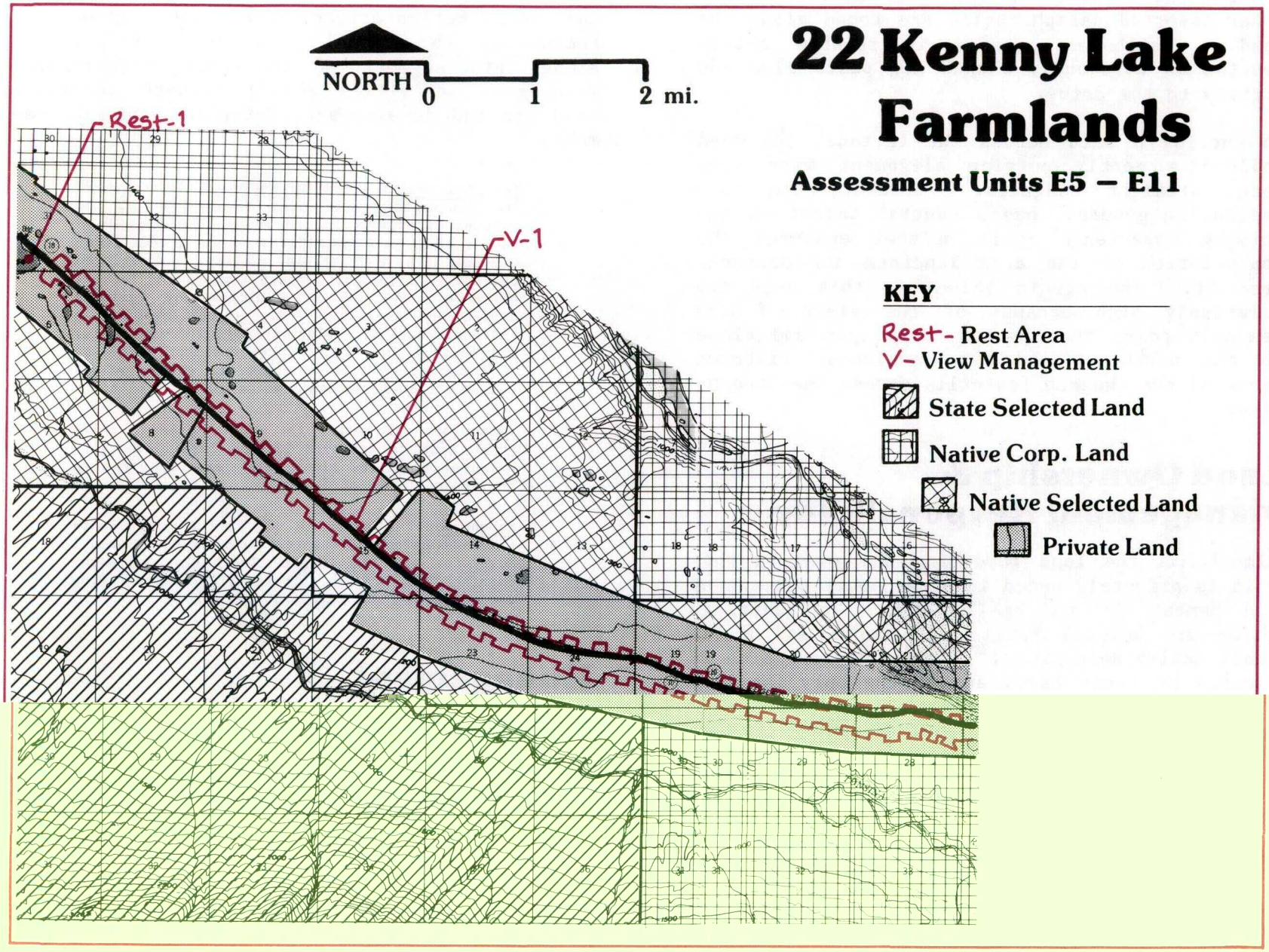
Management Unit 22, is a 10.5 mile stretch of road, bounded by the community of Kenny Lake on the west end and the edge of the upland terrace at the confluence of the Copper and Tonsina Rivers on its east end. This unit derives its character from the combination of distant views of the Wrangell Mountains and close views of the cultivated farmlands on gently rolling terrain.

Arrayed across the horizon are Mt. Drum, Mt. Sanford, Mt. Wrangell and Mt. Blackburn. Periodic and filtered views of these dramatic peaks give distinction to what would otherwise be a relatively homogenous and uninteresting landscape. While both the Copper and Tonsina Rivers are near at hand and play important roles in shaping the terrain of the Copper River uplands, their presence is not noticed in this unit.

Dominating the foreground views are the farms that are scattered across the entire terrace. Their presence increases both the area's visual interest and its scenic values. With the generally flat terrain and dense spruce and aspen vegetation, clearing for cultivation and development opens up otherwise hidden views of the surrounding Wrangell and Chugach mountains. Contributing to the units' visual diversity are open fields alternating with dense forests or narrow strips of trees which filter the distant views. Some of the homesteads add to the rural character in their use of typical Alaskan architectural motifs. Log cabins sporting a moose rack over the door, hand-built homes, or

22 Kenny Lake Farmlands

Assessment Units E5 – E11



front yards overflowing with old automobiles and other assorted paraphernalia are found along the road. Mailboxes painted in rainbow colors mounted on tortuously shaped log posts also add variety to the drive.

In cutting a path across the terrace, the road follows a gently curving alignment with some long, straight tangents. However, the road

of distant mountain views as well as the important contribution private development has made to increasing the visual diversity and interest along this segment of the road. Therefore, management activities should promote sensitive land use and development, retention and enhancement.

Sensitive Land Use and Development: To encourage

sequence of open fields and dense forests are essential elements of this unit's character. These qualities can be maintained through careful attention to roadside management practices.

In order to maintain road visibility, provide for snow removal, and minimize animal road kills, trees and the understory vegetation have been cut to a depth of 20-25 feet from the road edge for long stretches in this unit. Now growing back in lupine, horesetail and other small shrubs, the road edge has a softened, natural appearance which is enhanced by colorful flowers in the summer. The practice of encouraging native flowering plants to grow to the road edge should be continued. Other complementary and recommended management practices include the following:

- Generally minimize tree thinning and cutting in the right-of-way; selectively trim trees and vegetation only where necessary for roadside visibility.
- Create a natural "feathered" edge in those areas scheduled for cutting by leaving low plants immediately next to the road, some taller, brushy plants just beyond the edge, followed by taller trees.
- Vary the width of the management strip to make the edge appear more natural.
- Avoid disturbing the soil in cleared areas.
- Encourage scattered concentrated plantings of aspen as an accent along the drive. Aspen is notable for the bright green color in spring and brilliant yellow in the fall.
- Do not clear along the entire length of road during one season as another means of varying the impact of management practices on the road's visual diversity.

View Management (V)

The sequential vegetation changes in the drive, along open fields with unobstructed views to the mountains, into a "tunnel" of dense trees on either side of the road, and then in to a partially open area where a thin band of trees filters views across another field, helps to create spatial and visual variety in this somewhat monotonous terrain. In their management of land adjacent to the road, DOTPF's maintenance and operations crews can enhance this diversity by using selective cutting and planting practices to both open up and frame views.

V - 1 Unique scenic vistas of the Wrangells or the Chugach Mountains should be identified where it is important to keep surrounding trees and brush cleared to maintain the views.

In other areas, DOTPF's maintenance of vegetation in the right-of-way strip should be sensitive to the sequential spatial experience along the road. As a general rule, trees should be retained in those areas where the landscape is open and trees are needed to create a break. Trees can be thinned in those areas where it will enhance views to fields beyond or create a visual break after a long forested enclosure.

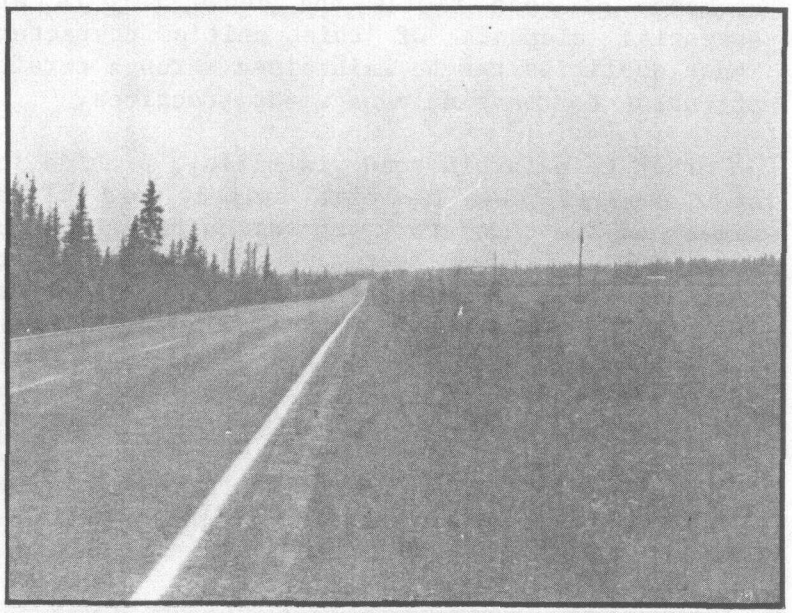
A precise identification of areas appropriate for cutting or planting is not attempted here. Instead, a staff landscape architect should work with the maintenance crew on an annual basis to define the yearly management plan. This program would identify areas for vegetation maintenance or thinning as well as where some additional screening may be necessary. Specific plants - such as aspen or other deciduous trees - may be recommended as a roadside accent.

Greenbelts

In this unit, where private land ownership predominates, greenbelts are not recommended. However, private landowners are encouraged to set back all development a minimum of 25 feet from the inside edge of the right-of-way in a partially screened location. This will help buffer residences and other uses from the noise, fumes and traffic on the Edgerton Road as well as help retain the more rural, scenic quality of the road.

Land Use & Development

The scenic quality and visual interest of this unit are enhanced by the farms and residential development located along the road. Not only are the open fields a pleasing contrast in color and vegetation type to the surrounding landscape, but also the barns and homes themselves are interesting landscape features. In addition, the agricultural development in this area is a clear indication of land capability. The combination of soil type, topography, exposure, climate and accessiblity make this one of the few areas in the region that is presently suitable for cultivation and appropriate for additional development. This can be an interesting aspect to interpret for the traveler. At the same time, it is important to make private landowners aware of the scenic resources of the area and how their actions - homebuilding, clearing, and cultivation - contribute to the quality of the surrounding environment. And once they have developed an appreciation for these concerns, it is important to translate this into appropriate development actions. This objective can be approached in



Roadside farms open up areas which would otherwise be enclosed by dense spruce hardwood forest, as on the left side of the road. Barns and homes are interesting features in the landscape.

either of two ways. First, a design and development manual could be prepared and then distributed by the Cooperative Extension Service. This educational and advisory material would contain:

- A discussion of what scenic resource management is and the special qualities of the Kenny Lake area.
- Specific local examples of how development affects the scenic experience, both contributing to it and detracting from it.
- A list of development practices for the area, presented as suggested "dos" and "don'ts".

This manual could be distributed to all area residents independently. It could also be used in conjunction with public informational meetings or a statewide television program on state scenic roadways.

More information may not be enough to motivate people to change their plans for clearing all trees next to the road or to get them to screen a commercial storage area. In many cases, this kind of change must be tied to an incentive. Therefore, a second option is to establish a Roadside Development Bonus. Individuals who developed or improved their property according to standards established to enhance the road's scenic quality would be eligible for a cash bonus. This approach could be part of an overall state program of designating scenic resource management themes for Alaska's road system, defining the management program and establishing the standards for the bonus' along that road.

In Unit 22, private development is encouraged to adopt the following standards:

- Encourage spatial diversity along the road by retaining the alternating pattern of open fields interspersed with dense forests and/or narrow bands of trees. In addition to adding variety, the trees can serve as windrows and dust, fume and noise filters between the road and fields.

- Encourage private landowners to store old cars, equipment, and other items in storage sheds, behind screens of trees, or otherwise out of view from the road. A more "tidy" appearance is generally viewed as an indication of more care for the land. Encourage continued creativity in mailbox design along these rural roads. Bright colors, unique patterns and designs, and gnarled wood or other unusual posts are means of declaring individual identity. For visitors the mailboxes are interesting visual details that are often the only visible sign of human use.

- Encourage home, cabin or barn designs that use wood or other natural materials in a rustic or rural style. For example, a log cabin or a shed roof barn are typical of out-back Alaska. While design should not be dictated, sensitivity to maintaining the rural atmosphere should be promoted. The use of manufactured homes, trailers or typical suburban tract homes is discouraged.

- Encourage sensitive site development to take advantage of views, solar orientation and vegetative screening potential.

- Promote farming and residential use in this unit; discourage commercial use, except near Kenny Lake community, and recreational use, except near Kenny Lake.

Signs for Private Businesses

The few businesses that are located along the road are marked by signs. Because there are only a few of them and they are generally in good taste, they, like the mailboxes, add an element of visual interest. However, if there is further development in the area, an overabundance of signs or out-of-scale advertising would detract from the scenic experience. Therefore, within the right-of-way, it is suggested that commercial signage adhere to the following standards.

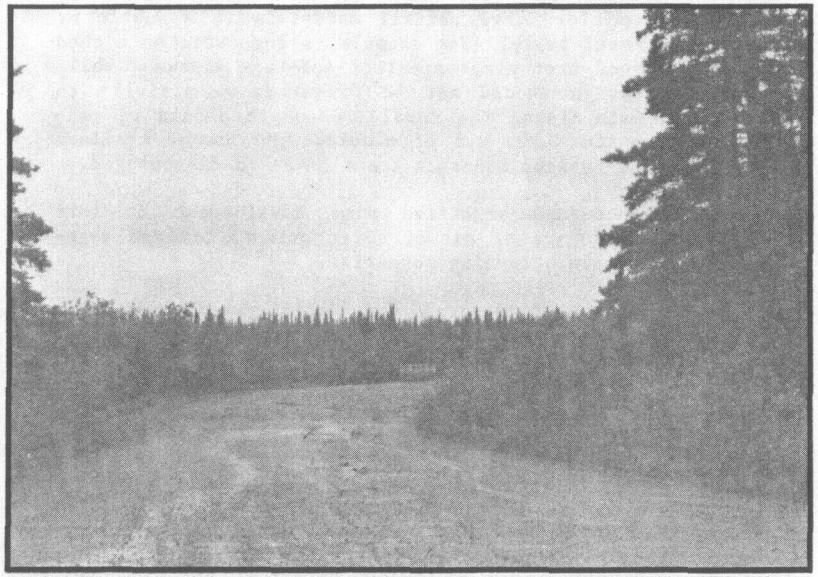
- The sign should be no larger than 4 by 6 feet.

- Wood signs - especially hand painted or carved - are preferred.

- Backlit signs should be prohibited. Lighting should be incandescent, from the top or bottom.

- "Trailer Signs" or other signs with changeable vinyl lettering should be prohibited.

- Signs should be set far enough back from the road edge to maintain visibility.



The Kenny Lake wayside can be improved to provide an interpretive exhibit on the surrounding landscape. Not all litter barrels are required - some can be removed and the others relocated in a screened spot.

Turnouts (T) & Rest Areas (Rest)

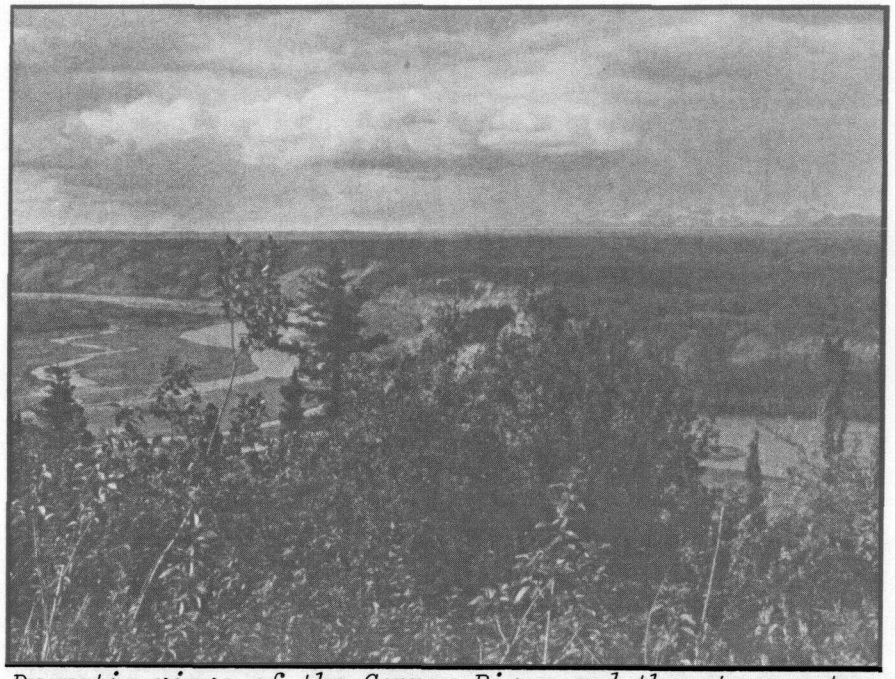
The Edgerton Road and this management unit in particular, are areas of concentrated private development with limited dramatic views. However, the unit is also typical of the surrounding landscape, and thus a rest area/interpretive site is recommended.

Rest-1 Kenny Lake Rest Area. Just outside the community of Kenny Lake is an existing rest area, located on the lake itself. The site has a large paved parking area, several garbage barrels and lake access. Because of the minimal cost associated with improving the site, the amenity of the lake and the good expression of the surrounding landscape, this site is suggested as an appropriate rest area/interpretive site for the Copper River lowlands character. In addition to describing the character type, the interpretive information presented here can also describe the historic development of the area and the current local farming activities. The types of crops and level of development could also be placed in the context of other state agricultural areas.

Only minor improvements are necessary for the rest area itself, other than the interpretive signing:

- Provide better access to the lake for walking and birdwatching. A boardwalk could be constructed over the marshy area to the lake's edge.
- Relocate the trash barrels. Although six barrels are now provided, two to three are sufficient. It is also suggested that the orange barrels be replaced by a new receptacle designed to blend better with the natural surroundings. Brown or dark green barrels or a buried receptacle would be acceptable. The receptacle should also be relocated in a screened location but visible enough to promote use.

Tonsina River - Liberty Falls



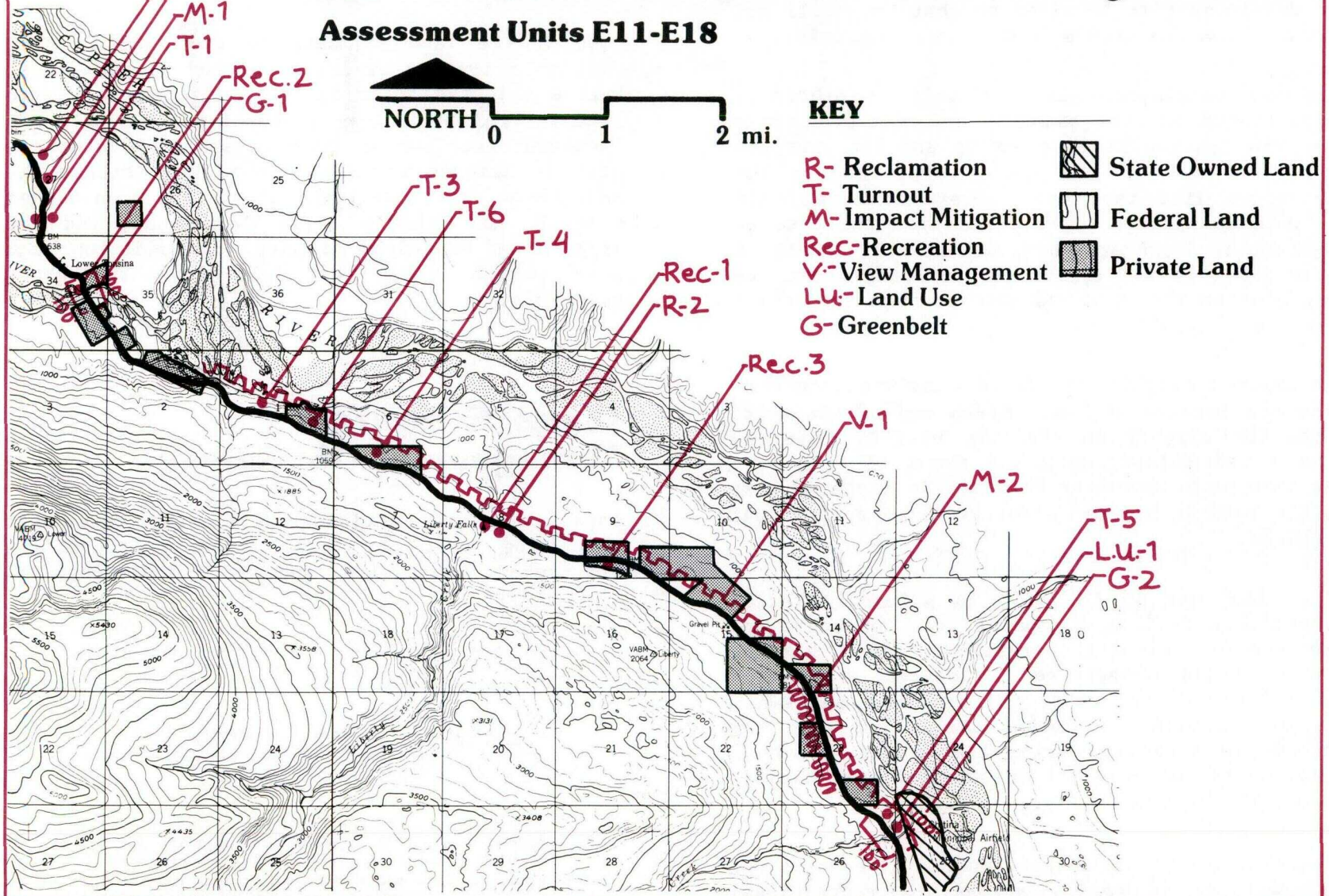
Dramatic views of the Copper River and the steep cut banks are characteristic of this part of the Edgerton, but some tree and brush clearing would enhance the views.

General Description

This 11.7 mile portion of the Edgerton Road leaves the terraced farmlands near Kenny Lake on the west to cross the Tonsina River and climb the Chugach Foothills, ending about four miles northwest of Chitina. In this management unit, the road parallels the Copper River along the upland terrace. Thus the river, with its braided stream, broad river bed and the steep cut banks that enclose it, plays an important role in the driving experience. The rolling and forested uplands to the east of the Copper River, with their alternating dense stands of spruce and deciduous trees, serve as the foreground for the distant Wrangell Mountains. The Wrangells, and the peaks of Mts. Drum, Sanford, Wrangell, and Blackburn, dominate the skyline. The scenic quality of this unit is very high, with constantly changing composite views containing the Copper River and the Wrangells, which vary as the road winds its way up the slopes of the Chugach foothills. The foreground vegetation of spruce/hardwood forest and the rolling topography at times frames and at other times blocks views from the road, creating a pleasant sense of sequential diversity. Overall, the scenery and panoramic views in this unit are spectacular, providing many opportunities to experience the variety and drama of the landscape.

23 Tonsina River - Liberty Falls

Assessment Units E11-E18



In general, the visual absorption capability of this unit is moderate. The topography is steep, but the dense vegetation permits some land use and development to be sited so that they will not detract from the area's high scenic qualities.

Land use development in this unit is presently concentrated at the western and eastern ends. Near the Tonsina River crossing and for approximately one mile to the east, several large lot residences line the road. Most of these homes are well-maintained or screened from the road by vegetation. However, there are several locations where old cars and ramshackle buildings near the road clutter the view and detract from the area's high scenic qualities.

The Chitina Airport and DOTPF's Maintenance Station are located at the eastern end of the unit. While the airport is scarcely visible from the road - using topography and trees as screens - the Chitina Maintenance Facility is situated next to the road in an open area, creating some visual problems.

Other land use in the unit is primarily recreational, as this is a popular area for sport and subsistence fishing, rafting, and hiking. Liberty Falls Campground is located on a creek midway through the unit. It is small and well-designed around a dramatic falls, but used far beyond its capacity during the summer. How to accommodate the need for additional facilities is one of the issues this study addresses.

Presently undeveloped, the Tonsina River crossing is used as an easily accessible recreational area.

Land Ownership & Management Responsibility

Most of the land adjacent to the road in this unit is privately owned, with the majority of it Native selected or in Native allotments. Public land is limited to several small parcels of state land near the Tonsina River crossing, a materials site in Assessment Unit E-16 midway through the management unit, two right-of-way sites on either side of the Liberty Falls Campground, and the state-owned Municipal Airport. In addition, the DOTPF manages a 200 foot right-of-way throughout this unit.

Visual Resource Management Objectives

Land management decisions affecting this unit should be guided by three concerns: retention, enhancement, sensitive land use and development.

Retention: To retain those scenic qualities which make this portion of the Edgerton a special driving experience.

Enhancement: To enhance the viewing experience by managing the vegetation to maintain and open additional views.

Sensitive Land Use and Development: To encourage development on selected lands adjacent to the road so that it harmonizes with the area's high visual quality and also helps to meet some of the demand for additional recreational opportunities and quality residential sites.

Management Recommendations

Right-of-Way Management & Impact Mitigation (M)

Because of adjacent private land ownership and steep topography, many of the management activities affecting the scenic experience along the road will be the responsibility of the State DOTPF. Three activities are of particular importance and each is addressed in turn: maintaining vegetation in the right-of-way, view enhancement, and cut and fill management.

Maintaining Vegetation in the Right-of-Way. In addition to the magnificent views of the Copper River and the Wrangells, the overall character of the Edgerton Road is enhanced by the immediately surrounding natural vegetation, consisting primarily of spruce/hardwood forest on upland hills. DOTPF manages a 200 foot right-of-way through this unit and it should be their policy to maintain as much native vegetation as possible in order to retain the undisturbed quality of the road. Because of the steep topography on either side of the road this natural strip can serve as an effective buffer to future development of private lands since the structures will generally be above or below the line of sight.

Present right-of-way management in the unit is good - low lying plants or high brush meet the gravel road edge. Such sensitive treatment should continue. It is suggested that future management practices incorporate the following guidelines:

- Maintain vegetation to the road edge.
- Where trimming or cutting is necessary for driving safety, it should be done in a selective manner to obtain a softened, natural appearing edge. Both the depth of the cut strip and the height of the vegetation cut should be varied to avoid hard edges. On curves only the trees on the inside edge of the curve should be trimmed leaving vegetation on the other side free to grow closer to the road.
- Alternate the timing of vegetation maintenance along the road by segments, so all are not in the same stage of regrowth at the same time.
- Cleared areas next to the road should be revegetated in low brush or flowering native plants.
- Remove all slash from cut areas.

View Enhancement. While the right-of-way should be managed to encourage continuous vegetation as close to the roadway edge as possible, in some locations trees should be thinned and brush kept trimmed to open up views to the Wrangell Mountains. The sequential opening and closing of views adds interest to the driving experience. Both the road alignment winding through the Chugach foothills and the dense forest vegetation provide the opportunity for this spatial diversity along the Edgerton Road. Trees can totally, however, obscure or partially block desirable views which careful management can correct. For example, the existing turnout at the Edgerton Historic Marker has a panoramic view of the river and mountains but at the present time, foreground trees make it difficult to appreciate the entire skyline. Cutting these nearby trees would do

much to enhance this viewpoint. Selective locations along the road in this unit would benefit from similar actions. The boundaries of the recommended view management area are noted on the map. (See V-1).

Because of the difficulty of identifying every view here, it is recommended that the supervisor or foreman of DOTPF's maintenance and operation crew work with a staff landscape architect each year to outline the season's maintenance program, identifying cutting and thinning locations and specific practices to guide the cutting.

Cut and Fill Management. Building the road on the slope of the foothills and also down the face of the upland terrace created areas of steep cuts. In some locations, these were blasted through bedrock and the rough-hewn rock faces add to the appreciation of local geology and create visually interesting patterns and textures. Some of these cuts, however, are through glacial deposits which, though in dramatic contrast to the rolling terrain are also highly susceptible to erosion if not stabilized. Appropriate slope contouring and revegetation are effective means of stabilization. It appears that some cut banks along the Edgerton are planted - either naturally or human induced - and holding the bank well, yet several banks exhibit severe erosion problems. These require DOTPF's immediate attention for contouring and planting. Erosion control and bank revegetation should become an ongoing part of DOTPF's annual maintenance program.

M-1 The steep cut banks here are eroding and show signs of active sliding. These should be contoured and planted to provide bank stabilization and reduce visual contrast.

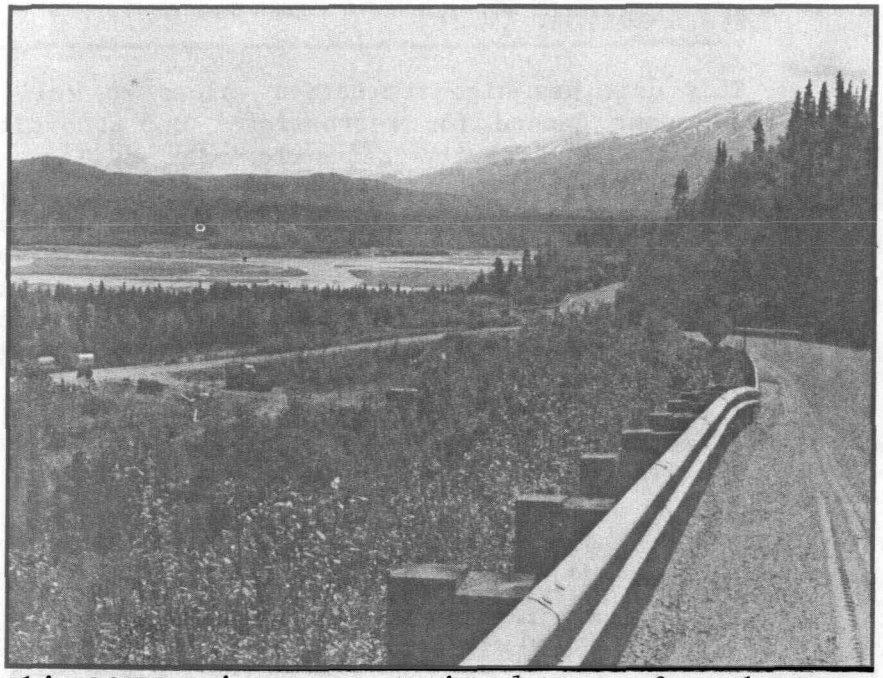
M-2 A series of cut banks requiring stabilization and revegetation to minimize existing erosion problems.

Paving

A chronic problem for recreational use of this road is dust. The high silt content of the gravel surface, dry summers, frequent winds, increased summer traffic, and high speeds combine to make the east Edgerton a very dusty ride. This detracts from the scenic and recreational opportunities - lakes, viewpoints, etc. - which are located at the roadside. This highway should have a high priority for paving to help control this problem. The cost would not be prohibitive since the existing gravel roadbed is in good condition. It would also be important to maintain the existing alignment and narrow paving width, just as that which presently exists on the western Edgerton, to maintain the pleasant, recreational qualities of the road.

Land Use & Development (LU)

The generally steep topography in this management unit places limits on private development. As a result, it will likely be the areas near the Tonsina River, the airport, and a few scattered areas along the road where any future development will focus. Some private development can be compatible with the highway's scenic qualities and



This DOTPF maintenance station detracts from the panoramic view across the Copper River. Better site design, screening, or relocation would be appropriate for this highly scenic and extremely open area.

landowners should be encouraged to keep the following considerations in mind to both minimize the impact of the road on their use and enjoyment as well as to reduce the impact of the development on the road's scenic quality:

- Locate buildings out of view of the road, either behind vegetative screens, or small hills or berms. Driveways should be kept to a minimum number and designed to reduce their visual impact.
- Discourage development on steep slopes, particularly if it involves cutting or filling.
- Encourage large lot, dispersed development to maintain the undeveloped character of the road.
- Encourage recreation-related developments, such as public and private campgrounds at lakes or creeks to help accommodate some of the area's high demand for such facilities.
- Any additional commercial or industrial use should be located close to the airport and well-screened.

One development in this unit requires specific management attention.

LU-1 Development on public land should set an example for activities on private land. The Chitina Maintenance Station, operated by DOTPF and located immediately adjacent to the road near the airport, is an open dirt pad for storing equipment and two office trailers. This site detracts from a panoramic mountain vista beyond the roadside clutter. Site improvements are essential. If possible, DOTPF should move the facility closer to the airport building, which is reasonably well-screened behind a stand of spruce and aspen. The other option would be to landscape the site and reorganize the use of the area. If not a permanent camp, the site should be reclaimed, regraded, and planted when it is no longer needed.

Greenbelts (G)

The pattern of private land ownership adjacent to the road makes it impossible to effectively implement a greenbelt throughout most of this unit, and the dense roadside vegetation means that appropriate right-of-way management can be an effective strategy for retaining and managing scenic quality. However, there are two areas,

which because of particular scenic sensitivity, should be recommended for greenbelt designation:

G-1 The Tonsina River crossing is a recreational node and a visual corridor to the Copper River. Because it is flat and open, private development would be difficult to screen here. Therefore, it is recommended that there be established a 100 foot greenbelt beyond the right-of-way for 1/4 mile on either side of the river. Within this strip, private development and recreational use can take place, but with additional concern for minimizing clearings and more concern for screening.

G-2 For 1/4 mile on either side of the road to the airport, a 100 foot greenbelt is recommended. This is an area with the first panoramic views after leaving Chitina over relatively flat terrain. Development within this greenbelt could occur but would be encouraged to meet high development standards:

- Minimize cleared areas.
- Screen buildings from the road.
- Align driveways with topography and consolidate access to minimize intersections with the Edgerton Road.
- Retain as many trees as possible within the greenbelt.

Along the rest of the unit it is recommended that all development be set back 25 feet from the right-of-way edge.

Private landowners in these locations are strongly urged to adopt the greenbelt concept and follow the management guidelines. In addition to retaining scenic quality, it would also protect private property from road disturbance and provide privacy. A design and management manual would provide information on the greenbelt concept and identify and illustrate development guidelines.

Recreation (Rec)

This unit has high recreation values as well as an unmet demand for recreational opportunities. The area's activity tends to peak during the Copper River salmon season each summer. While there are other campgrounds closer to Chitina and the Copper River, this unit offers pleasant forested sites that are not plagued by the winds and exposure characteristic of the other sites. Two locations in this unit merit particular attention:

Rec-1 Liberty Falls Campground. Right off the road and surrounding Liberty Falls and creek, this campground is the nicest facility on the Edgerton. It combines privacy, easy road access, and a lovely setting by the falls. Because of its amenities, the facility is heavily used in the summer. Frequently every available parking area is filled by numerous self-contained recreational vehicles and doubling up in campsites is not uncommon. The question facing land managers is whether to enlarge this facility. The present campground fits in with the landscape in a sensitive fashion; it is scarcely visible from the road and each site has a measure of privacy and orientation to the falls or creek. Expansion here would be difficult if not impossible. However, one of the two right-of-way sites located on either side of the campground could be reclaimed to provide additional camping area. The site to the west is the present trailhead for the Liberty Creek Falls Trail and is presently used for some camping. It would be possible to add five to six sites here. Major expansion in this area is to be discouraged. It is preferable to develop other facilities along the highway to help disperse use and retain the special, personal qualities of this present campground.

Rec-2 The Tonsina River Crossing is also a recreation node, but an informal one, since there are no developed facilities and the land is privately owned. The views, river access, and fishing, camping, and picnicking potential make this an ideal location for a more active recreation

site. There is enough available land on the northwest corner of the crossing to provide overnight camping set away from the river. In addition, a day use and boat launch area could be developed on the southeast or southwest corner of the river where there is level land. (It appears to receive this use informally already). The other corner could be left in its natural vegetation and development on the northeast corner would be helped by some screening. The potential for additional development here merits further study. Since the land here may be Native selected, the area could be developed as a private recreational site. As long as permanent developments were located adequately behind the dense vegetation, they would not constitute a visually disruptive use.

Rec-3 A small lake near the road has private recreation potential as the location for several small recreational cabins or a small private recreation facility. Development density should be limited because this is an exposed site. In addition, some roadside vegetation could be thinned to slightly open the view to the lake.

Turnouts (T)

There are few turnouts within this management unit to meet the travelers' needs for a safe place to pull off the road for a driving break or to take advantage of a view. A number of sites are recommended where safe access, ease of development, and good views make them good turnout candidates:

T - 1 This location has the potential to provide a panoramic valley view, as it has lovely vistas of the Copper River and surrounding landforms and geology. Some information on the land form and character could be included as interpretive information at the site. It is also 1/10 of a mile uphill from five fenced gravesites that are stair-stepped up the bluff and add an element of historic and cultural interest to the drive, especially when driving west from Chitina. The interpretive sign could note these sites and their historic significance. A gravel pad for a turnout exists here already, thus minimal development is required. This is a high-priority site for development.

T - 2 Another potential turnout site is located at a higher elevation and also has excellent views of the Copper River. It is an old sand storage site and would require some filling and grading, trimming of foreground vegetation, and the possible addition of a guardrail.

T - 3 This potential turnout has views of the valley and Wrangell Mountains and is backed by incredible rock faces. The site would require some expansion of an existing gravel pad, grading, and signing. It has good visibility and would make a safe pullout.

T - 4 This is an existing sand storage site that provides excellent views of Mts. Sanford, Drum, and Wrangell. The site could be reclaimed by contouring, grading and a possible addition of a guardrail. The foreground vegetation should be thinned to open the view.

T - 5 This existing gravel widening could be graded as a small turnout with an expansive valley view. However, the Chitina Maintenance Station is in the foreground and requires screening or other impact mitigation to make the view as attractive as it could be.

T - 6 The existing historic marker describing the story of the Edgerton Cutoff is located at one of the more spectacular overlooks of the Copper River Valley and the Wrangell Mountains. The signs' story seems anticlimactic in the presence of the natural scenery. Thus, this site should be developed with an interpretive display of the Wrangells, including a statement on their geologic history and role in the area's development, as well as a map naming the peaks. Foreground trees should be cut and thinned to help open and frame the views.

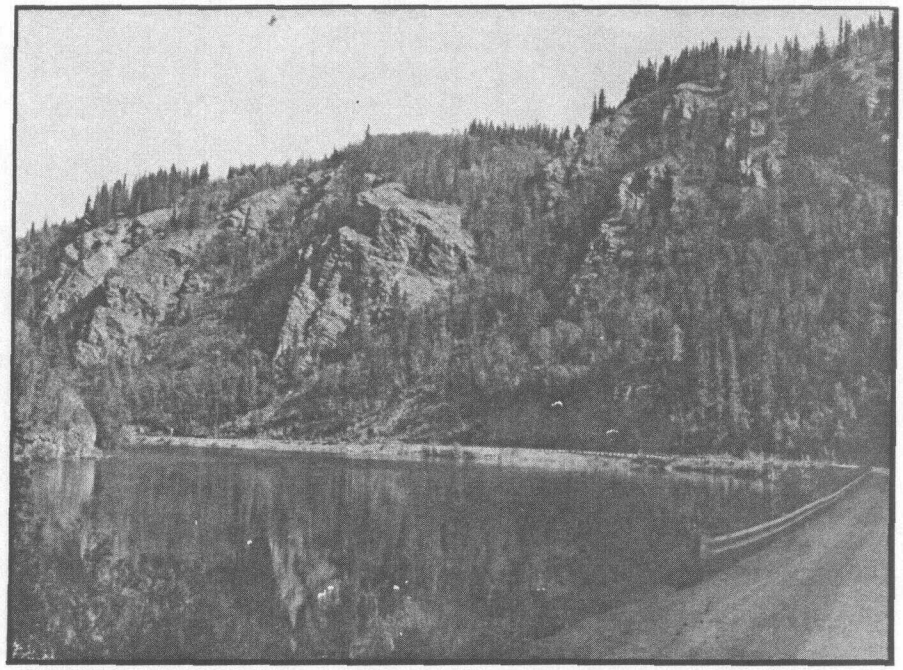
Reclamation (R)

Although not a major problem in this unit, several material sites require some reclamation to minimize their impact on the scenic driving experience. In the future, material sites should be located outside the right-of-way and well screened from the road.

R - 1 A large sand extraction site here should be contoured and reclaimed when no longer in use.

R - 2 This large, unattractive gravel pit near Liberty Falls requires screening and/or reclamation when no longer in use. Presently this site is highly visible when driving west from Chitina.

North of Chitina



Through most of the unit, the Edgerton winds through a steep and narrow gorge creating both a sense of enclosure and anticipation that culminates with a series of three lakes. While recreational use is appropriate, facility development would be difficult to screen and would detract from the rugged, scenic quality.

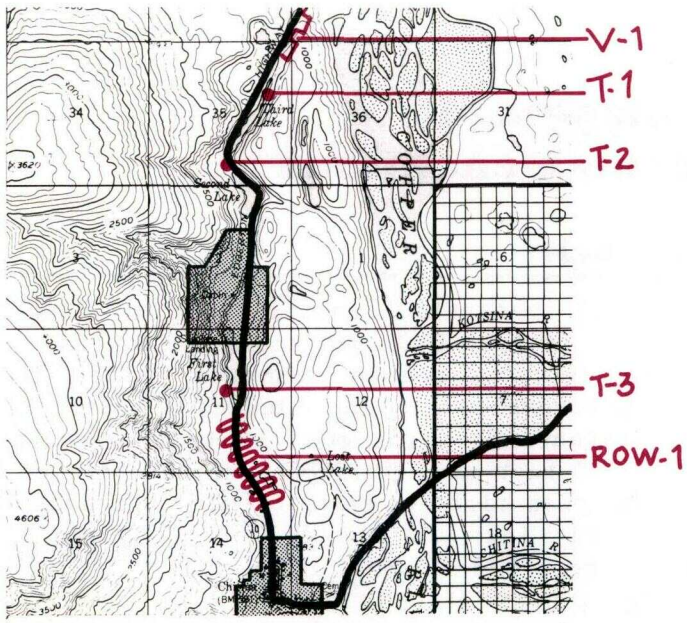
General Description

Management Unit 24 consists of approximately 5 miles of the Edgerton Road just north of the community of Chitina. The road parallels the Copper River to the east with the lower hills and mountains of the Chugach to the west. These nearby hills and mountains play a dominant role in the driving experience - creating a winding channel through the hills that essentially blocks all views to the Copper River and Wrangell Mountains to the east, and provides a constantly changing background of slopes, vegetation patterns, and rock features to the west. Land cover near the road is predominantly spruce/hardwood forest, with alpine tundra, small snowfields, and rocky barren ground visible on the higher slopes to the west. Water features include lakes and small creeks.

Scenic resource values are moderate, and the visual absorption capability of this area is generally low - primarily due to the steeply sloping hillsides close to the road edge through much of the unit. Distant views are possible only at the ends of the unit. From the north end there

24 North of Chitina

Assessment Units E19 – E22



NORTH 0 1 2 mi.

KEY

V- View Management
T- Turnout
ROW- Right of Way Mgt.

Native Corp. Land

Federal Land

Private Land

are glimpses of the Wrangell Mountains, Mt. Wrangell and the Copper River valley. The south end provides some views of Spirit Mountain upon entering Chitina. One Mile, Two Mile, and Three Mile Lakes are major visual foci along the drive. This unit is an attractive entry/exit into Chitina and the Copper River area.

There is little visible land development within this management unit. There is one small residence at the north end and a sanitary landfill which is set back from the road in a well-screened location near One Mile Lake. The only suggestion of its presence is a sign at the access road. The three lakes receive moderate

recreational use. The old road alignment on the west side of One Mile Lake allows people to get away from the noise and dust of the existing road and makes this area particularly popular. The road itself is well-maintained, very wide, and winds through the area in a manner which provides changing views and orientations. Dust is the primary problem associated with the road - the new, wide road encourages fast travel and it is heavily used. The dust problem is exacerbated by the frequent summer winds out of the south which are channeled through the area.

Land Ownership & Management Responsibility

Beyond the highway right-of-way, all lands near the road are either under private ownership or will be owned by the Chitina Village Corporation. The DOTPF has responsibility for managing the road right-of-way which is 200 feet wide through most of the unit.

Visual Resource Management Objectives

Visual resource management actions should be guided by three primary objectives for this management unit: (1)retention, (2)enhancement, and (3)sensitive development.

Retention: To retain those characteristics which make this a particularly interesting and pleasing driving experience as well as a distinctive road entry into the community of Chitina and the lower Copper River area

Enhancement: To enhance the pleasant driving experience through careful road and right-of-way management

Sensitive Development: To encourage recreation and residential development in places and ways which use the land's visual absorption capability and provides the necessary screening, privacy, and separation from the noise, dust, and disturbances associated with a major roadway

Management Recommendations

Greenbelts

The visual absorption capability of this management unit is low; thus the primary means of maintaining existing scenic resource values is to keep land development and landscape modification at a distance from the road. It is recommended that a 100 foot wide greenbelt be established beyond the road right-of-way, between the south end of One Mile Lake and the end of the gorge (just beyond Three Mile Lake). The first 25 feet of this greenbelt should be left in its natural state, without altering landcover or landform, except in cases where it would open up desirable views or provide vehicle access to the area beyond. Some land clearing can take place in the remaining 75 feet except that it should not involve more than 50% of any given area. Construction of permanent structures within this 100 foot wide area is discouraged. This would help to ensure that development does not play a dominant visual role and adequately insulates private development from highway intrusion. The steep, almost undevelopable, hillsides in this unit mean that the greenbelt guidelines will not limit much development.

Some recreational development is desired at One Mile Lake, and here, some clearing and well-screened facilities would be acceptable in the greenbelt if necessary.

Since this will be Native owned land, the village corporation should take this opportunity to adopt this greenbelt recommendation as an easement for all land sales and developments which are adjacent to the road.

Land Use & Development

Due to the steep, rocky slopes which are common throughout this management unit, intensive development would be difficult except for a few small areas adjacent to the lakes. From a visual resource management perspective, land development should respond to the following considerations:

- Avoid additional roadside development north of the existing development near Chitina and manage the right-of-way to create a natural and dramatic entry to Chitina (See Row-1 on map)
- Encourage limited residential development east of the road over the crest of the adjacent hills, overlooking the Copper River Valley and Wrangell Mountains.
- Encourage large, as opposed to small, lot development (5 acres or more) in order to disperse it across the landscape and reduce the visual impacts of more intense development.
- Minimize the number of access roads from the highway to private land developments. Share or consolidate access wherever possible.
- Avoid all developments on the steep slopes west of the highway.
- Encourage residential and recreational homesite use and avoid industrial or commercial uses which can be visually dominant and disruptive to land-cover and land forms.

Recreation (Rec)

Recreational use within this management unit should take advantage of the existing amenities of lakes and visually interesting mountains. However, due to the low visual absorption capability and relatively confined areas suitable for use, it is recommended that only day use public recreation areas be developed. Both to the north and south there are already facilities for overnight use and areas that could better accomodate such use. Specifically, the area at One Mile Lake is recommended for a day use recreation area (See T-2).

Road Design & Management

Dust is an important concern for recreational use of roadside land in this area. A particularly bad problem in the summer, road dust obscures views and makes activities at the roadside lakes especially miserable. It is recommended that this portion of the road be paved in order to eliminate the problem. This will, at the same time, reduce the visual impact of the road itself since a paved road would not appear as wide as the gravel road which now exists. (See also the paving discussion in Management Unit 23.)

Right-of-way management should continue to selectively clear roadside brush and attempt to create a natural appearing roadside edge. Present roadside management is good. Selective clearing and removal of slash should be the guiding principles for all right-of-way work within this management unit. The goal should be to maintain views

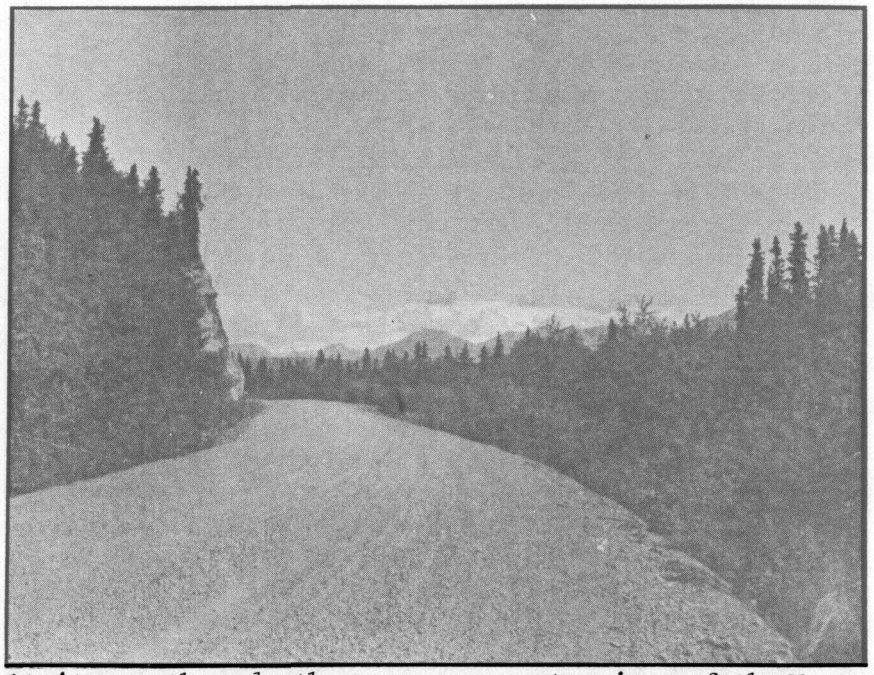
across lakes and to near and more distant hills and mountains while at the same time providing a visually natural road edge, reducing the visual width of the road, and screening and filtering views wherever possible. Selective clearing or trimming of roadside vegetation can also open distant views, such as the spot where the road leaves the gorge outside Chitina, providing the first view across the Copper River (See V-1). Wildflowers and flowering plants are desirable within the right-of-way and should be encouraged.

Turnouts (T)

There are two existing roadside turnouts in this short unit and only one limited opportunity to provide more due to the constraints of topography. These sites, however, are important to retain due to the area's popularity and the attraction of its natural amenities.

T-1 Existing Turnout Overlooking Three Mile Lake. This turnout receives considerable use for fishing and viewing, has a safe entry and exit, and is well-maintained. Trees and other vegetation should continue to be encouraged around the turnout edges. Additional facilities or structures are not appropriate since the site is small, exposed, and such additions would be visually dominant. Better sites for these kind of facilities exist nearby.

T-2 Potential Site at Two Mile Lake. There is an opportunity to create a small turnout at the north end of Two Mile Lake which offers nice views of the lake and gorge. Development of the site would require some filling at the end of the lake in the marshy area. Visibility for access and egress should be evaluated carefully since the site is on a broad corner. This site should not have a high priority for development and only be considered when overall area demand warrants.



At its north end, the gorge opens to views of the Wrangell Mountains and the Copper River. In this area, sensitive right-of-way management and tree thinning can help open more distant views.

T-3 Existing Turnout and Recreational Use Area on the Old Road Alignment on the West Side of One Mile Lake. This road provides lake access and is separated from the noise, dust, and disturbance associated with the existing road. It has a poorly marked entrance, particularly at the north end. This could be developed as a day use lake loop road, though through traffic would not be desirable due to the narrow road and its poor condition. An entry should be developed near the south end of the lake where parking would be provided. Vehicular use beyond this area should not be encouraged except for boat launching. Day use activities, such as picnicking, swimming, fishing, boating, wildlife observation, and hiking, should be promoted but not overnight use. It appears that the area was at one time a road wayside and is one of the best sites in the area for day use and roadside related recreation.

McCarthy Wild & Historic Road

McCarthy Wild & Historic Road

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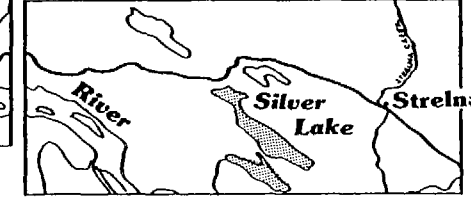
General Description

The road between Chitina and McCarthy, now commonly referred to as the "McCarthy Road," closely follows the old grade and alignment of the Copper River and Northwestern Railroad. This railroad, built between 1908 and 1911, connected Cordova on the Gulf of Alaska with the Kennecott Copper Mines near McCarthy. This privately built and operated railroad ran until 1938 when, after falling copper prices and a threatened strike, the mine closed. Almost immediately efforts were made by citizen groups in Cordova, Chitina and McCarthy to convert the railroad alignment into a vehicular road since this was the only form of transportation connecting these small communities. However, such plans were never fully realized due to problems ranging from frequent washouts to lack of funding and political support.

It was not until 1971 that a highway bridge across the Copper River was completed, facilitating vehicle access to much of the McCarthy Road. However, the remainder of the road was plagued by continual bridge and trestle washouts and only for a short period of time could people actually drive all the way from Chitina to McCarthy. Today, the steel span Kuskulana Bridge is the only remaining functional railroad structure and the Gilahina Trestle is the last standing wooden railroad trestle. The old trestle is rapidly deteriorating and it will be a race against time to see if restoration efforts can begin before decay has progressed too far.

Today the McCarthy road connects the two small communities of Chitina and McCarthy and provides access to numerous scattered residences and recreational homesites. Even by Alaskan standards Chitina and McCarthy are small. In 1970, Chitina had a population of 50 and McCarthy's year round population is considerably less. Chokosna, a small dot on most maps, is nothing more than one family and numerous undeveloped lots clustered around an airstrip. Strelna, another name commonly seen on maps, has a number of scattered homestead-style developments and little else. Native allotments and homesteads are found all along the road, with the largest concentration around the Long Lake--Lakina River area, near McCarthy, and west of

25 Gateway McCarthy Wild & Historic Road

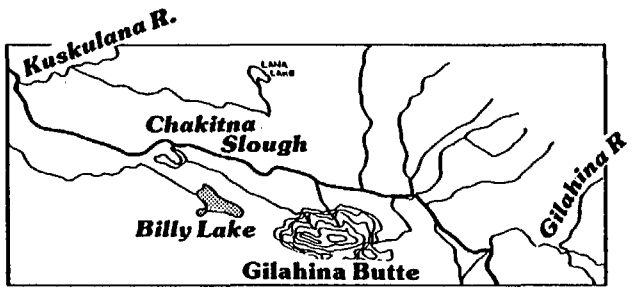


26 Silver Lake-Strelna

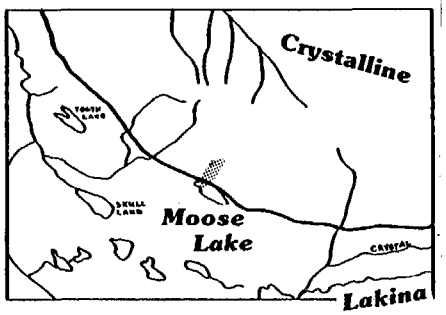
Strelna. The only commercial/recreational developments, aside from those at Chitina and McCarthy-Kennicott, are the lodge-campground at Silver Lake about 10 miles east of Chitina and a small private campground nearby. While some mining activity still occurs up the Kuskulana River and east of McCarthy, it is not visible from the road and road use for hauling supplies and ore is limited.

The McCarthy Road follows the upland terraces above the Chitina River and, to avoid grade changes, gradually climbs from an elevation of approximately 500 feet at Chitina to close to 1500 feet at McCarthy. It is within a spruce-hardwood forest where natural openings occur within poorly drained bogs and around the numerous lakes. The Chitina Glacier sculptured the local topography. It carved out the valley; created the numerous shallow lake depressions; and deposited the moraines and various materials which are the basis for the present variable patterns of soils and vegetation communities. The landscape is generally typical of a river valley in Southcentral Alaska, and the surrounding distinctive mountains are distant and only visibly dominant at the road's eastern (near McCarthy) and western (near Chitina) ends.

Management Units- McCarthy Wild & Historic Road

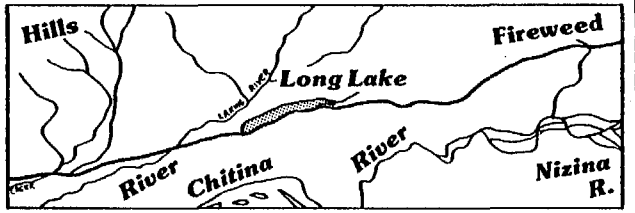


27 Kuskulana & Gilahina

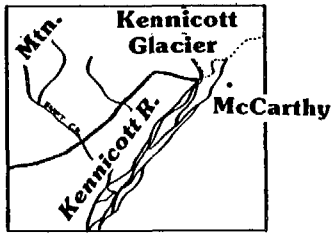


28 Moose Lake

29 Lakina River-Long Lake



30 Roads End-McCarthy



Issues & Concerns

- **McCarthy Road Realignment Proposal**

The use of the former Copper River and Northwestern railroad bed for vehicle traffic has created numerous problems. Areas with unstable slopes, poor soil conditions and inadequate water drainage have led to high maintenance costs, difficult driving conditions and frequent road blockages. In addition, the very narrow, winding, dirt surfaced road does not meet commonly accepted standards for public roads. Because cars have more flexibility and mobility than trains, many problem areas could be readily avoided by moving the road so that low lying areas, creeks and rivers could be crossed more efficiently. Consequently, there has been interest in realignment of the road and upgrading it to state standards for secondary highways. Specific plans were outlined in the Chitina - McCarthy Highway Environmental Impact Statement (1973); however, no action was taken until the federal land status issue was resolved. While no formal alignment and road upgrading plans have yet been proposed. there is interest, particularly on the part of the DOTPF to minimize maintenance costs, reduce potential hazards and permit greater public use of the road. Therefore realignments and road upgrading remain issues. (See the general discussion on Road Design and Alignment and Management Units 25 through 30.)

- **Access to McCarthy**

Crossing the Kennicott River to get to McCarthy has always been a challenge and a problem. Vehicular access was only possible for a short time up to the early 1970's when there were bridges over both forks of the Kennicott River. While most people agree that the current method (as of August, 1982) of crossing these river forks via old, hand operated cable trams is unacceptable, there is considerable disagreement on whether vehicular access into McCarthy should be provided. Since the process of getting into McCarthy is such a fundamental aspect of the recreational use of this road, it seems important to evaluate the various access modes with respect to their effects on scenic and experiential qualities. (See the general discussion on McCarthy Access and Management Unit 30.)

- **Services for Travelers**

Presently the McCarthy Road has few amenities and services to meet traveler needs. Increased recreational use may require that roadway information turnouts, scenic viewpoints, passing and turnaround pullouts as well as rest areas and picnic sites be developed. The location and character of such facilities should take advantage of site opportunities and amenities and be sensitive to the goals and objectives recommended for the road. (See Management Units 25 through 30).

- **Mining**

The mineral resources within the Chitina River Valley have always attracted people to the area. While mining activity in the future may be limited because of the national park and preserve status, the numerous existing claims and considerable Native corporation landholdings suggest that it will continue to be an important land use. Mining activity will, for the most part, continue to be distant from the road. However, increased use of the McCarthy road as a haul road for materials and ore could significantly alter

its character and impact scenic and recreational resource values. (See the general discussion on mining as well as the discussion on Land Use and development for each management unit.)

- **Wrangell-St. Elias National Park and Preserve**

The McCarthy Road is one of two access roads into Wrangell-St. Elias National Park and Preserve. The location and character of park related recreational facilities--information signage, campgrounds, trailheads and visitors centers--need to be sensitive to scenic resource values, be located at appropriate sites and contribute to the quality of the recreational driving experience. (See the general discussion for the McCarthy Wild and Historic Road as well as Management Units 25 through 30.)

- **Railroad Remnants**

Numerous remnants of former railroad days can be found along the road and are essential to the experience of driving the McCarthy Road. Most of these are being covered by soil or hidden by vegetation, removed, or simply deteriorating in place. Within a number of years all visible traces of railroad activity could disappear without active restoration efforts. (See the general discussion on Railroad Remnants, and Management Units 27, 29 and 30.)

- **Recreational Use of River Crossings**

As with most roads in Alaska, the road crossings of rivers are attractive areas for intensive recreational use and development. Along the McCarthy Road these activity nodes occur at the Copper, Kuskulana, Gilahina, Lakina and Kennicott River crossings. (See Management Units 25, 27, 29 and 30.)

- **Fireweed Mountain State Land Disposal**

The proposed Fireweed Mountain state land disposal, a residential subdivision, would be accessible from the McCarthy road. The potential visual impacts of this proposal needs to be evaluated as well as the desireability of additional state land disposals along the road corridor. (See the general discussion for the McCarthy Wild and Historic Road, as well as Management Unit 29.)

- **Land Use and Development**

While the McCarthy Road is nominally within the Wrangell-St. Elias National Park and Preserve, there are considerable roadside private landholdings throughout its length. New land use patterns brought about by individual developments will have an effect on visually sensitive roadside land. In addition, the large blocks of Native land may be subject to special development pressure in the future in order to generate corporate revenue. (See the general discussion on Land Use and Development and Greenbelts for the McCarthy Wild and Historic Road as well as those for Management Units 25 through 30.)

- **Right-of-Way Management**

Currently the road maintenance crews are engaged in extensive brush clearing of the road right-of-way along some portions of the McCarthy Road, resulting in considerable visual impacts. Other stretches of the road receive little maintenance--so there is poor visibility around

curves and overhanging branches impede traffic movement. Right-of-way management practices, particularly roadside brush clearing, can be more responsive to site specific conditions and reinforce scenic and recreational values, (See the general discussion on right-of-way management as well as that for Management Units 25 through 30.)

Findings & Recommendations

Summary of Scenic Resource Values

Along the road between Chitina and McCarthy scenic resource values are quite variable. The most dramatic views and experiences tend to be concentrated near the two ends - around the Copper and Chitina Rivers at the west end and the McCarthy-Kennicott area at the east end. There are several highlights in between - particularly the Kuskulana Bridge and gorge, the Gilahina railroad trestle and the Long Lake area. However, for the most part the landscape visible from the road between Chitina and McCarthy is typical of that found along major river valleys in southcentral Alaska. This is, to a large extent, the result of the position of the road in the landscape. It follows upper terraces on the north side of the Chitina River valley, through dense, predominantly spruce-hardwood forest. This location limits good views to the Chitina River itself and to the higher Wrangell Mountains to the north and east, which are either too distant or hidden by nearby lower mountains.

In spite of this, the McCarthy Wild and Historic Road does provide a visually interesting and, at times, memorable scenic driving experience due to a combination of factors which enhance and complement the inherent visual opportunities within the landscape. First, there is the spatial definition. The road, in passing through the predominantly dense forest landcover, offers an interesting range of spatial experiences - from "tunnels" created by unmaintained roadside vegetation completely enclosing the road, to places where natural and man-made openings offer opportunities for panoramic views, to numerous places where variations between these two extremes exist.

Second, the character of the road is a source of interest. It is narrow, generally unmaintained, with small bridges, potholes, wet spots and drainage channels crossing its surface. These tend to slow the traveler and are a constant focus of attention. The road is in many ways a challenge to drive, creating a unique experience not found on many other commonly traveled roads.

Third, land use and development adds to the visual interest. Since the scenery is oftentimes not particularly distinctive, the land uses along the road become an important addition, either opening up distant views across their clearings or by calling attention to picturesque homesteads or to remnants of the bygone railroad era. The railroad features are of special significance and visual interest even though some are being removed and the remainder are deteriorating or

becoming overgrown with vegetation and are not highly visible.

Fourth, there is a sense of destination associated with this road. Most people drive it to get to the McCarthy-Kennicott area, not to pause and spend time along the way. Thus there is a real sense of anticipation and a greater emphasis on the destination rather than the experience of getting there. While all roads to a certain degree instill this feeling of destination, it is particularly strong along this one because there are few intermediate stops.

These four conditions - spatial definition, road character, land use, and sense of destination - work together to make this 63 mile long road visually and experientially rich. The absence of any of these elements could significantly impact the scenic resource values. Management concepts should respond to these characteristics; retaining and reinforcing those which already work while attempting to sensitively manage and change those characteristics which could use improvement.

Management Theme

The Chitina to McCarthy road is recommended for official designation as the "McCarthy Wild and Historic Road." These three words - wild, historic and road-suggest the desired character and set the theme for scenic resource management goals and recommended actions.

Wild

This refers to the existing character of the road and suggests the type of driving or traveling experience which should be retained. The "wildness" comes both from the landscape, which is remote and relatively undeveloped, and from the road itself. For people who live along the road this wildness reinforces the image of being in a remote area, removed from easy contact with many of the generally available comforts, services and conveniences. For visitors, the wildness of the road becomes a challenge and an essential ingredient in the experience itself. The potholes, narrow bridges, railroad spikes and non-vehicular access into the McCarthy-Kennicott area, along with the minimal maintenance, are what make the drive exciting. While the scenery is often typical for southcentral Alaska, the wildness and remoteness of the road and landscape is fundamental to this as a recreational driving experience. It is a character which should be retained to the greatest degree possible.

Historic

In addition to its wild character, the road has historic significance. Most of the route follows the old Copper River and Northwestern Railroad alignment and grade. Two remaining structures from the railroad era - the Kuskulana River Bridge and the Gilahina Trestle are notable visual and experiential features.

Additionally, there are numerous other railroad era relics - partial trestles, buildings, railbeds, ties, rails and spikes scattered along the road. With the exception of the Kuskulana River Bridge, these features are in poor repair and it

is only a matter of time before road maintenance, firewood scavenging and vegetation growth will completely erase all visible traces of the railroad and its role in opening the Chitina River Valley. These historic railroad remnants significantly add to the road's visual interest and are a reminder of the era when mining trains, not cars, traveled this route. As an essential ingredient in the driving experience, these historic features should be retained and preserved.

Road

The distinction needs to be made that this is a "road" and not a "highway." The word highway has certain images, including those of a modern, paved, high speed travel route for moving large volumes of people and goods between various destinations. Such an image does not apply to the rugged route between Chitina and McCarthy, nor will it be appropriate in the forseeable future. The concept of a "highway" also conflicts with the road's wild and historic themes as outlined above. Thus it is recommended that this continue to be called a road and that road design standards, maintenance practices and roadside land use and development be scaled to such a designation.

Scenic Resource Management Goals

Five primary goals provide direction for the management recommendations that follow.

- To retain those qualities of the McCarthy Road which contribute to its wild character, both as a wild environment where the visual impact of human use and development is minimal and as a wild driving experience.
- To restore essential railroad remnants, particularly the Gilahina Trestle and the Kuskulana Bridge, which give the road its historic character, and protect other remaining railroad relics from further deterioration, removal or decay.
- To adopt appropriate road design standards and right-of-way management practices which support the image of this as a wild and historic road.
- To encourage land uses and roadside developments which are sensitive to the overall theme of the road and which enhance rather than detract from the scenic resource values and driving experience.
- To create an appropriate entrance experience into Wrangell-St. Elias National Park and Preserve and make roadway design and adjacent land use and development decisions which support the goals and objectives of the park.

Implementation: Land Ownership & Management Responsibility

There are three levels to scenic resource management actions and responsibilities along the McCarthy Wild and Historic Road depending upon how far the land is from the road centerline. First, there is the road and its right-of-way managed by the Alaska Department of Transportation and Public Facilities (DOTPF).

Although its responsibilities are carried out by separate divisions, which sometimes makes it difficult to coordinate policy and actions, overall the department has both the greatest responsibility and greatest opportunity for consistent and effective management of scenic resources along this road. Actions, policies and decisions regarding scenic resource management should be coordinated among the separate departmental divisions - ranging from the planners in Anchorage, to the engineers in Fairbanks, to the maintenance crews in Chitina. Right-of-way management decisions should be based upon an understanding and acceptance of the goals outlined here along with the general and specific management recommendations which follow. In addition to this intra-agency coordination, the DOTPF should encourage development and uses beyond the right-of-way to be consistent with plans, policies and practices adopted for the right-of-way.

The road and its right-of-way managed by the State Department of Transportation and Public Facilities offers the greatest opportunity for effective scenic resource management.

The second level of responsibility and influence on scenic resource management relates to lands adjacent to the right-of-way. Here, the AHTNA Regional and Chitina Village corporations own large blocks of land and numerous private individuals own other small parcels. Native-owned roadside land is concentrated along the western third of the road. Non-Native private lands tend to be concentrated at the east end of the road near McCarthy and around the Lakina River-Long Lake, Chokosna and Strelna areas. Interspersed are state lands, managed by the Department of Natural Resources (DNR) and a smaller amount of federal land managed by the National Park Service (NPS). Because these private lands are outside of organized boroughs or local governments scenic resource management recommendations are difficult to implement. This places the major responsibility on managers of public lands adjacent to the right-of-way to set appropriate examples with respect to land use and development.

These government agencies should explore methods for encouraging private landowners, particularly Native corporations, to include scenic resource management goals and development guidelines in their decisions related to the development and use of roadside lands. Here, the most critical actor is the state DNR. This agency's policies

and land management actions, particularly with respect to state land disposals in the area, could have a significant impact on whether or not goals related to maintaining this as a wild and historic road are realized. Further discussion of this may be found under the land use and development section that follows.

The National Park Service manages only a few parcels of land next to the road. NPS actions will affect the corridor primarily by how it decides to use this corridor as an entrance to the park and how it develops its roadside lands for park related facilities such as a visitor's center, campgrounds and trailheads.

The third level of responsibility and influence related to scenic resource management deals with land more distant from the road corridor itself. The National Park Service manages most of this land except for scattered mining claims. Because of the distance from the viewer and location within a national park, no real problems or conflicts with identified scenic resource management goals appear to exist.

Road Design & Alignment

The design and alignment of the road are two of the most important considerations for fulfilling the scenic resource management goals for the McCarthy Wild and Historic Road. This study compared the existing alignment with changes proposed in the Chitina-McCarthy Highway Environmental Impact Statement (1973). It was assumed that these realignment proposals still represent likely responses to the numerous problems associated with the existing alignment. In general they were proposed to avoid unstable slopes, wet areas, and other places with high road maintenance costs as well as to reduce the number and sharpness of curves and promote long straight tangents.

Based upon scenic resource values, the existing alignment is preferred to the proposed changes in every case but one. While it is clear that some actions need to be taken to alleviate the maintenance costs and hazards associated with the present alignment, present problems should be resolved through proper engineering and design responses within the existing alignment. The proposed realignments would unnecessarily "tame" the road and draw away from most of the historic features associated with the railroad. The road would then resemble a highway rather than a road.

Only in one area was it determined that a realignment might be desirable (Management Unit 28-Moose Lake area). Here, other alternatives would create even greater visual diversity and are preferable to both the existing alignment and the DOTPF proposal. (See Management Units 25 through 30 for more detailed discussions of each realignment proposal.)

In addition to alignment, the actual design of the road--its width, surfacing material, design speed, shoulder characteristics, drainage, etc. - merit attention. Overall, it is recommended that the McCarthy Road remain a gravel road open primarily during the summer, generally wide enough for two vehicles (18 to 22 feet) with a design speed of 25 to 30 m.p.h. Some difficult driving conditions should be acceptable. Road drainage should be primarily through the gravel and dirt surface rather than through roadside ditches

which require considerable grading and clearing. This would help retain the narrow visual appearance of the road and promote the wild roadside edges which are common along the road today.

Road design should include numerous small widenings to allow people to stop, turn around or permit other vehicles to pass, thus retaining the narrow, two lane character of the road. Any material sites or staging areas needed for construction or maintenance should be beyond the right-of-way and screened from view. All of these considerations are important to preserving the road's wild and historic character while maintaining it as public access for local residents and visitors.

It is possible to design and maintain the road for slightly higher speeds and greater volumes of traffic as far as Strelna in order to better accommodate the local residents and respond to the predominantly private land ownership pattern. Beyond this point, however, the road should conform to the standards outlined above.

Right-of-Way Management

After road design and alignment, right-of-way management and maintenance can have the greatest impact on scenic resource values. This is particularly true through areas of predominantly private ownership. At present, two extremes characterize right-of-way management along the McCarthy Road - over management and no management. Over management refers to the practice of indiscriminate tree and brush clearing from the road edge right up to the right-of-way edge. This commonly results in a visually wide road corridor, severe landscape disturbance, piles of slash and disturbed soil, increases in vehicle speeds, monotonous spatial experiences and dramatic contrasts between the character of the roadscape and the adjacent landscape. No management refers to those stretches of the roadway which are heavily overgrown to the degree that branches impede vehicle passage and create poor visibility around curves. What is needed and recommended are right-of-way maintenance practices which respond to the needs for safety, adequate visibility, cost effective procedures and roadbed protection, while at the same time being sensitive to and maintaining the road's wild and historic qualities.

Instituting more appropriate right-of-way management actions will require the DOTPF to adopt new policies and operating procedures as well as establish better coordination between departmental divisions. Some of these policy changes should include the following:

- Adoption of a policy and practice of varying roadside treatment and actions to respond to site specific situations and conditions rather than using the same techniques over large areas.
- Using a landscape architect working in the field with the maintenance station supervisor or foreman to develop a program for each year's field maintenance activities on roads identified for their scenic and recreational resource values.
- Development of procedures which use existing machinery in ways that are more conducive to variable and selective maintenance actions, and purchase and use of maintenance machinery that are versatile enough to allow for variable and selective maintenance actions.
- Acceptance that some right-of-way management practices may be more labor intensive and costly in order to achieve the desired effect and allocate funds to cover these costs.

Along the McCarthy Road right-of-way maintenance consists primarily of brush control. As a matter of standard policy brush control practices should not introduce visually disruptive elements but should create greater visual interest by opening more views and enhancing spatial variety. Existing management practices fail to do either of these. Presently brush clearing is done by machines which evenly cut off all brush between one and two feet above ground level, creating visually disturbing and monotonous roadside edges. Moreover, this machinery tends to tear the brush rather than evenly cut it, leaving broken stubs and stripped trees. Finally the slash is commonly left along the road. Such practices should not be acceptable for this road. The following guidelines can be used for more visually sensitive brush control:

- Adopt selective clearing and thinning practices This is preferred to "clear cutting," and all slash and clearing debris should be removed.

- Minimize disturbance of soil cover and existing grades. In some cases it may be beneficial to create bare soil and thus encourage the invasion of early successional stage plants such as lupines, fireweed and horsetails which add color and variety and can be visually distinctive. However, such practices need to be carefully designed and properly maintained.

- Phased clearing over time and over different areas. Roadside clearing can be phased and spaced so some areas are cleared one year and adjacent areas left until succeeding years. This would reduce the visual impact of wholesale right-of-way clearing.

- Imaginative use of existing machinery. Existing machinery which clips off everything at a given height could be used to clip areas at different heights and at variable distances from the road edge, creating a more natural appearing edge.

- Clean cutting of vegetation. Machinery should be kept sharp and properly operated to cut rather than tear brush.

- Irregular right-of-way clearing widths. Allow trees and shrubs to invade the cleared right-of-way so that there is not a severe break or delineation between the active management area near the road and the lands beyond. For better visibility, the inside of a curve can be cut lower and deeper than the outside edge of the curve.

- No clearing areas. In some areas thin only the overhanging branches that interfere with safe and easy vehicle movement and leave the dense trees and brush. This will create a vegetation "tunnel" effect which, when used in alternation with cleared or more intensively managed areas, can provide considerable visual interest and spatial variety.

- Management for desired species. Some visually striking effects can be obtained by selectively clearing a mixed spruce-hardwood forest so that all birch or aspen will predominate.

- Encouragement of right-of-way vegetation which blends in with surrounding vegetation. Constant clearing and management leads to an apparent change in the composition and nature of the right-of-way vegetation and that of the lands beyond. A prime example of this is where the gravelly road edge is invaded by willows and poplars while the land immediately beyond has completely different vegetation. In such cases clearing the poplars and willows results in a more natural appearing roadside environment.

McCarthy-Kennicott Access

For many travelers on this road, the McCarthy-Kennincott area is the prime destination. As already mentioned, the "wild" character of the road is essential to the trip; yet how one gets into McCarthy is a critical ingredient in this

overall experience. Presently (August, 1982) there is no vehicular access. The adventurous can walk across the glacier at the head of the Kennicott River; otherwise one must cross the two forks of the Kennicott River by two hand operated tram rides. Since both routes can be dangerous and are unacceptable to many people, determining the appropriate form of access into McCarthy is a key issue. If the road's scenic and recreational values are given priority, it is recommended that pedestrian-only access into McCarthy be retained. Just as the wild nature of the road and the existing historic features are vital to the overall driving experience, the challenge of crossing the two forks of the Kennicott River is part of the experience of entering McCarthy. Additionally, the scale and character of McCarthy would be lost if vehicular access were developed.

Though functional and of historic significance, the existing trams are neither safe nor convenient. While there are many ways of providing access into McCarthy, the following recommendations combining auto and pedestrian bridges provide for safe and convenient access and still maintain the scenic, wild and historic experience. A one lane vehicular bridge across the west fork of the Kennicott River would bring cars onto the large island. Parking and a rest area would be developed in the trees on the high ground above the floodplain. From here a pedestrian suspension bridge would take people across the east fork of the Kennicott River and on into McCarthy. A suspension bridge is recommended because it offers an exciting crossing experience while still being safe and accessible to everyone. A properly designed tram for hauling goods too heavy and bulky to take on the bridge should be included to reinforce the image of this as an important historic transport mode throughout the area. Finally, so as not to lose completely the experience and challenge of hand powered trams, it is recommended that a new tram be installed across McCarthy Creek. This would open up the areas beyond to pedestrian and recreation use. (See Management Unit 30.)

Railroad Remnants

Between Chitina and McCarthy-Kennicott the few remaining railroad remnants are the only features of both visual and historic significance. Two of these, the Kuskulana River bridge and the Gilahina River railroad trestle, are particularly important to the "historic" character of the McCarthy Wild and Historic Road. Additionally, there are numerous less prominant remnants found all along the road which add to the visual and historic interest of the driving experience. The following general recommendations are designed to retain these relics as an important part of the road's character:

- Research needs to be done regarding ownership and responsibility for the remaining railroad remnants, including the trestles, buildings and rails.
- As a high priority, restore and stabilize the Gilahina River railroad trestle and integrate it with a rest area visitors center developed at this location. (See Management Unit 27.)
- Retain the Kuskulana River bridge as a one-lane bridge with the existing approach experience from the west.

- For National Park facilities and other public buildings adjacent to the road, utilize the former railroad buildings where possible or construct new buildings which reflect the size, style, color and character of the old railroad buildings.

- Protect the remaining railroad remnants so they remain as visible features of historic interest for as long as possible. Scavenging for firewood should no longer be permitted. Some embankments should be cleared of invading vegetation and some standing trestle supports should be stabilized and kept standing. Rails, ties, spikes and roadbeds should all be left undisturbed whenever possible as these are continual reminders of the railroad era.

- Establish a place where railroad history can be interpreted for visitors. Such a display could form an integral part of the recommended Gilahina River rest area visitors center development as described in Management Unit 27.

Stabilization and possible restoration of the Gilahina River trestle should be considered a priority.

Greenbelts

Along the McCarthy Wild and Historic Road, greenbelts can be an effective scenic resource management tool for lands beyond the road right-of-way. In conjunction with appropriate right-of-way management, greenbelts can help to retain the natural appearance of the road corridor and reinforce the image of a "wild and historic" road. While the primary objective of greenbelts would be to set back and screen land uses and developments, they can also be used as a view management tool. Some clearing can be encouraged to open up views or to create filtered or framed views. Greenbelts can also help to retain a natural appearing foreground around turnouts, trailheads and rest areas.

On private lands adjacent to the roadway, greenbelts can buffer developments and users from the noise, dust and intrusion of the road and help maintain the image of living in a wild and remote area. The main limitation facing the use of greenbelts along the McCarthy Wild and Historic Road is that there presently is no mechanism to apply them to private lands outside of organized boroughs or local governments. With the significant amount of private land adjacent to the road it means that conformance to the recommended greenbelt guidelines would be voluntary in these areas.

Greenbelts recommended for the McCarthy road fall into two classes: 25 feet wide and 100 feet wide management strips beyond the right-of-way. Specific use and development guidelines for lands within these greenbelts are discussed within each management unit since they depend on the overall scenic resource management objectives specific to

the unit. The following considerations relate to the selection, management and implementation of the greenbelt concept for this road.

- Implement greenbelt resommendations on public lands and use these as an example for private landowners.
- Coordinate the DOTPF right-of-way management practices with greenbelt management so the two roadside management strips are used most effectively.
- Along any new road alignments through public land, establish a road right-of-way and a greenbelt strip beyond it--both of which would be managed jointly by the DOTPF and the adjacent land managing agency to meet scenic resource management goals and objectives.

The National Park Service, in conjunction with the Department of Natural Resources, should develop land use guidelines and performance standards for their own lands within the recommended greenbelts and encourage private landowners to adopt these on their roadside lands.

Public information programming is necessary to give private landowners and residents a better understanding of the greenbelt concept and how it works as a management tool. The fact that it is flexible and may include land use and development should be emphasized. Benefits to landowners adjacent to the road should be explained, including reducing impacts of road noise, dust and lack of privacy.

View Management

The McCarthy Wild and Historic Road passes, for the most part, through spruce-hardwood forest. While some natural openings do occur in bogs, around lakes and at river crossings, the forest is an effective barrier to middleground and distant views. It is one of the reasons that portions of the road received moderate scenic quality ratings. At the same time this dense vegetation is an extremely effective tool to create spatial diversity when traveling along the road. For example, a foreground "tunnel" of trees might open up to filtered views, then suddenly open completely to a panoramic vista and finally return to a highly enclosed space. It is this variety in the spatial experience which contributes significantly to scenic resource values along the road. Also, there are numerous places where views could be opened up, filtered, or framed through careful manipulation of the right-of-way and, in some cases, the lands beyond. Within each management unit specific locations for view management actions and the type of action recommended are identified. View management along this road needs to be an ongoing process, and it should be integrated into the annual right-of-way management field work plan developed by a landscape architect in conjunction with the maintenance foreman as noted previously.

Turnouts & Roadside Recreation

On the relatively narrow McCarthy Wild and Historic Road, turnouts are essential to allow travelers to stop safely outside of the moving traffic lanes. Presently roadside turnouts are highly inadequate for stopping or turning around. In response to this, as well as general traveler needs, three types of roadside turnouts have been recommended: an information turnout,

two rest areas which also provide interpretive information, and numerous small turnouts to allow the traveler to stop briefly to take advantage of views and points of interest along the road.

Roadway Information Turnout

Within the right-of-way adjacent to the existing state operated campground on the east side of the Copper River highway bridge, a roadway information turnout has been recommended. This would alert travelers to road conditions, emergency and commercial services, and recreation opportunities. Because of the area's remoteness such information is important for most travelers venturing beyond this point. Development would consist of space for two cars to pull out of moving traffic lanes and an information kiosk. (See Management Unit 25 for additional information.)

Rest Areas

Two rest area/interpretive centers are recommended for the McCarthy Wild and Historic Road. One is near the half-way point at the Gilahina River crossing and the other is near McCarthy.

- GILAHINA RIVER REST AREA

  This rest area would be a day use facility adjacent to the Gilahina River, located at the existing intensively used pullout. This would be part of a larger recreation facility complex recommended for this area including drive-in and tent campsites, trails, and a Wrangell-St. Elias National Park visitors center. The interpretive theme of the center would be the early railroad and mining activity in the area. As already mentioned, an essential prerequisite for development at this site is the restoration and stabilization of the railroad trestle. (See Management Unit 27 for additional information.)

- ROAD'S END REST AREA

  Since vehicular access into McCarthy is not recommended, a parking facility is needed for people visiting the McCarthy-Kennicott area. Besides parking, it is recommended that additional facilities be developed to respond to traveler's needs on the west side of the Kennicott River. These would include litter receptacles, rest rooms (out-houses), and an information kiosk with interpretive information related to the natural features visible from this site (Kennicott Glacier, Regal Mountain, Bonanza Ridge, etc.). In addition, a wooden lookout tower would be desirable to provide a better view of the setting of McCarthy and Kennicott and surrounding landscape features.

  Two options for this rest area development are presented so it will conform to the type of vehicle access provided to McCarthy. First, if a vehicle bridge across the west fork of the Kennicott River is constructed, then the rest area should be located on the east side of the island between the two river forks and within the forested area above the active floodplain. If only pedestrian access is provided across both forks of the Kennicott River, the rest area should be located above the active floodplain within the forested area. Overnight use should be encouraged at a campground recommended along the old materials site road approximately one mile west of the river. (See Management Unit 30 for additional information.)

Turnouts

Appropriate sites for turnout development along the road are also identified. These recommended sites are, for the most part, places where the traveler can view some of the beautiful natural features as well as historic sites associated

with the railroad. Recommended development consists primarily of small road widenings to accommodate two to three vehicles and some selective brush clearing to improve views. Turnout site development should be minimal to retain the wild and historic character of the road and keep the visual impact from the road low. Locations and descriptions of recommended turnouts are found within each management unit.

Land Use & Development

Because Wrangell-St. Elias National Park and Preserve begins at the east side of the Copper River, people traveling the McCarthy Wild and Historic Road have the expectation of being within a national park surrounded by spectacular high mountain scenery. Unfortunately these expectations may not be fulfilled. Along the road the scenery is generally typical of that found in many southcentral Alaskan river valleys with the most spectacular mountain views at the road's ends around Chitina and McCarthy-Kennicott. The extensive private landholdings all along the road coupled with several large blocks of state land mean that in only a relatively few places is the traveler actually surrounded by Wrangell-St. Elias National Park land while traveling on the road.

This suggests that land uses adjacent to the road will be an important factor in maintaining an experience appropriate to a major national park, retaining the road's wild and historic character, and retaining and enhancing existing scenic resource values.

This ownership pattern could be looked on as either an opportunity or a problem for scenic resource management. As an opportunity, land clearing which opened views and sensitively sited and developed residences that blended with and complemented the surroundings would add visual interest and diversity. In some places it could help provide desirable and necessary commercial services, particularly around Chitina and McCarthy.

However development could also compromise the wild and historic themes of the road and the impression of being within a national park. Numerous roadside commercial services would direct attention away from the landscape and disrupt the natural sequential experience so important to this road. Extensive residential development could result in demands for road upgrading and increased traffic, making this much like other southcentral Alaskan roads. Intensive resource development, particularly mining, could transform it into a truck haul road which would require widening and introduce considerable noise, dust and potential hazards, not to mention destroying its wild and historic character. Clearly, both sensitive road design and maintenance and appropriate adjacent land use and development are critical to meeting the scenic resource management goals identified for the McCarthy Road.

Residential Development

In general, large lot, homestead-style residential development is visually compatible with the goals and objectives for this road.

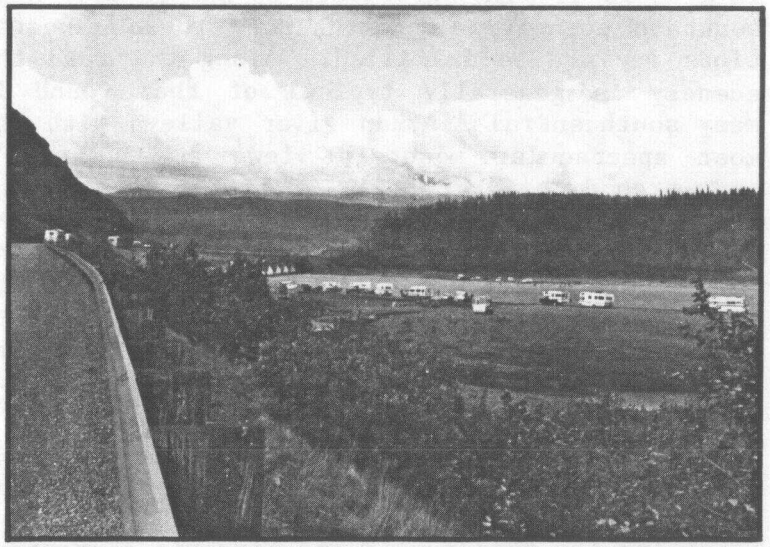
More intensive residential developments, such as subdivisions with relatively small lots (5 acres or less), should be encouraged only near Chitina and, to a lesser extent, near McCarthy. As a matter of policy, there should be no state land disposals accessible from or adjacent to this road. All private land developers should be encouraged to use the generally high visual absorption capability of roadside lands to reduce development visibility. Native village and regional corporations should incorporate the recommended greenbelt policies in the development of their roadside lands and emphasize recreational homesites and cabins as primary uses. As a general rule, development should be completely screened or dispersed and set back far enough from the road so as to not be visually prominent. Areas particularly sensitive to intrusion and where development is discouraged include the confluence of the Cooper and Chitina rivers (Management Unit 25), the Kuskulana and Gilahina rivers (Management Unit 27) and the entrance to McCarthy (Management Unit 30). Additional development around the Crystal Lake and Long Lake areas should not be encouraged beyond that which already exists.

Recreational Development

Commercial recreational facilities (lodges, hostels, campgrounds, stores, gas stations, and guide services) should continue to be concentrated around Chitina and the McCarthy-Kennicott area. Public recreation nodes are recommended at the Gilahina River crossing and the east end of the road near McCarthy. Some limited private recreational developments might occur around Chokosna. Other recommended recreational developments consist of numerous small turnouts and viewpoints all along the road where only restrooms or interpretive information should be provided.

Commercial Development

Roadside commercial development is visually incompatible with the goals of retaining this as a wild and historic road and should not be encouraged. Such development should occur as part of existing community growth in Chitina and within McCarthy and Kennicott.

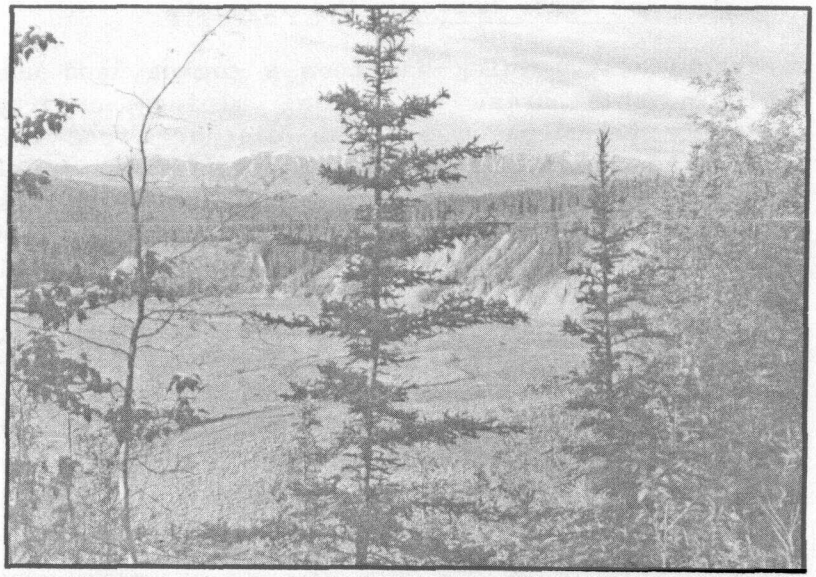


Recreational use is concentrated around the Copper River bridge during summer salmon runs.

Mining and Other Resource Developments

Historically, mining has been a common land use within this area. Actual mining activity usually takes place at some distance from the road and thus would not have a significant visual impact. The potential conflict lies with the increased use of the road to haul materials and ore. Road standards needed for a mining haul road would be incompatible with those recommended for a wild and historic road. Consequently, other access routes and alternative transportation modes for mining developments need to be considered when assessing the feasibility of increased mining activity in the area.

Gateway to McCarthy Wild & Historic Road



The Kotsina River floodplain as viewed from the McCarthy Road just east of the bridge over the Copper River. Views such as this contribute to the high scenic resource values within this management unit.

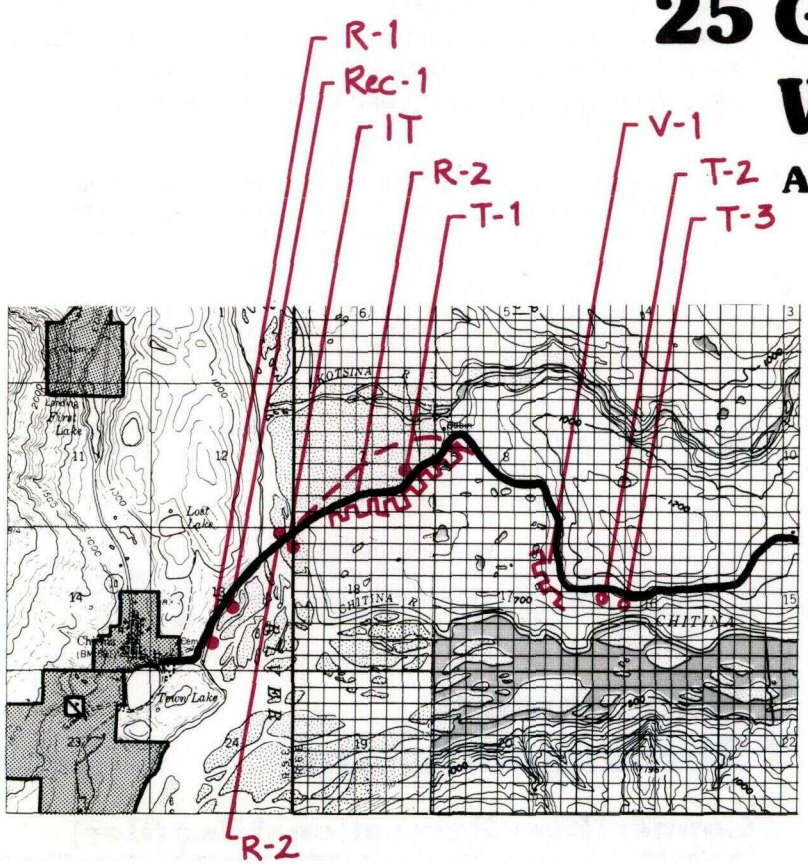
General Description

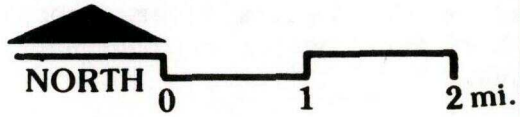
Management Unit 25 follows the old Copper River and Northwest Railroad alignment out of Chitina, crosses the Copper River and winds through the upper terrace between the Chitina and Kotsina Rivers. It is approximately 6.5 miles long. The broad, gravelly floodplains at the confluence of the Copper, Chitina and Kotsina Rivers, the steep walled cliffs and rolling, forested uplands, and the nearby Chugach Mountains are primary features of visual interest within this unit. The Chugach Mountains dominate the horizon to the south and west, while the more distant Wrangell Mountains, particularly Mt. Wrangell, are visible to the north. The existing road alignment provides a continually changing view of all of these features, resulting in a highly scenic driving experience.

Land use and development activities visible within this unit are limited to seasonal recreational and subsistence fishing, a former dump site and a campground. During the early summer the Copper River's barren floodplains are transformed into a bustling community of motor homes, cars and people dip netting for red salmon.

25 Gateway to McCarthy Wild & Historic Road

Assessment Units M1 – M4





KEY

R - Reclamation

Rec - Recreation

T - Turnout

V - View Management

IT - Information Turnout

D.O.T.P.F. Realignment Proposals (1973)

State Owned Land

Native Corp. Land

Federal Land

Private Land

Within Unit 25, the road itself becomes a strong visual element, primarily due to the considerable cutting required to locate it on the variable topography, as well as the unstable nature of many of these cut banks. This results in landslides and steep, unvegetated slopes immediately adjacent to the road. A realignemnt proposal intended to solve some of these landslide and erosional problems calls for relocating a portion of the road on the Kotsina River floodplain on a long bank of fill, posing an important land management issue.

Land Ownership & Management Responsibility

The DOTPF manages a 200 foot wide right-of-way along the former railroad alignment throughout this unit. Lands adjacent to this right-of-way are predominantly under private ownership, with large blocks of land selected by AHTNA Regional Corporation and Chitina Village Corporation. Land beyond these existing private landholdings and native selections is within the Wrangell-St. Elias National Park, administered by the National Park Service. This management unit is, in essence, the gateway or entrance to the west end of the park, even though actual Park ownership begins considerably beyond the road right-of-way.

Visual Resource Management Objectives

The overiding character of this management unit is one of diversity - a diversity of visual experiences from the road coupled with a diversity of existing and potential activities and uses. Visual resource management objectives in this context should respond to four general themes: entry, retention, sensitive land development and use, and appropriate roadside management.

Entry: To maintain this area - particularly the Copper River crossing - as a dramatic and appropriate entrance into the Wrangell-St. Elias National Park.

Retention: To retain those qualities and experiences which make this portion of the McCarthy Road a particularly diverse and visually rich driving experience.

Sensitive Development and Use: To encourage land development and use on private lands adjacent to the road which are sensitive to the significant scenic resource values found in this landscape.

Appropriate Roadside Management: To take full advantage of the road right-of-way, to respond to the above mentioned objectives and to reduce the visual impact of locating a road through particularly fragile terrain.

Management Recommendations

Copper River Recreational Use (Rec)

The Copper River floodplain receives considerable use for recreational and subsistence fishing during the summer salmon runs. While the river floodplains can absorb considerable use during this time, the area is extremely exposed visually. Given the prevalence of self-contained camping units today the actual river floodplains offer the opportunity to camp next to the river; however, due to the strong wind channeling and the exposed, unvegetated nature of this area, only day use should be encouraged. Overnight use

should be directed towards the more protected uplands, either the existing sites around Chitina or newly developed public and private camping facilities. The one small campground on the east bank of the Copper River can meet the needs of some who desire to be close to the river; however, it should not be expanded.

An important recreational accommodation needed for this area is more convenient access to the river floodplains - in this way relieving some of the congestion and visual disturbance resulting from vehicles parking on the roadside and the bridge. The road is wide with more than adequate space to allow for stopping and watching the activity and enjoying the scenery; however, longer term use should be encouraged off the road itself.

Two specific sites should be considered for their potential to provide recreational access:

Rec-1 This short, narrow road allows auto access to the west bank of the Copper River. However, the road is very steep, has numerous ruts and holes, and has poor entry and exit visibility. The road needs regrading with a level area at the top large enough for two vehicles to pass. Signage should be provided to point out the entry location.

Further site analysis is recommended to determine if this road is suitable as the primary river access on the west side of the Copper River or if a more suitable route can be developed.

Rec-2 This short road provides relatively good access to the east bank of the Copper River and should be maintained as the primary access to this side. Signage should be provided to locate the point of entry.

Information Turnouts (IT)

A road information turnout should be located in this unit since it represents the entrance to the McCarthy Wild and Historic Road. The information provided the traveler would include recreation opportunities and facilities.

IT The right-of-way adjacent to the campground could be developed as a two-vehicle information turnout. Development would require filling to widen the road so vehicles can stop outside of traffic lanes. Care should be taken to retain as much of the existing vegetation as possible between the road and the campground, as it provides necessary visual screening.

Land Use & Development

Due to private ownership, easy access, and the proximity of this area to Chitina, roadside lands within this management unit will very likely be subject to development pressures. In the near future development will most likely consist of residential and recreational homesites, with prime sites having view orientations to the surrounding rivers and mountains rather than to the road. Because of the distinctive views and the role of this road segment as an entrance experience into the national park, it is desirable to minimize the visual impact of new development. This can be accomplished through three means. First, right-of-way management could take advantage of the generally forested nature of the area to screen adjacent developments, particularly around some of the more important vistas. Second, Native corporations could adopt greenbelt and other appropriate management guidelines for their lands adjacent to the road. Third, individual land-

owners could choose to retain as much of the natural landcover as possible and site their structures such that they are not strongly visible from the road.

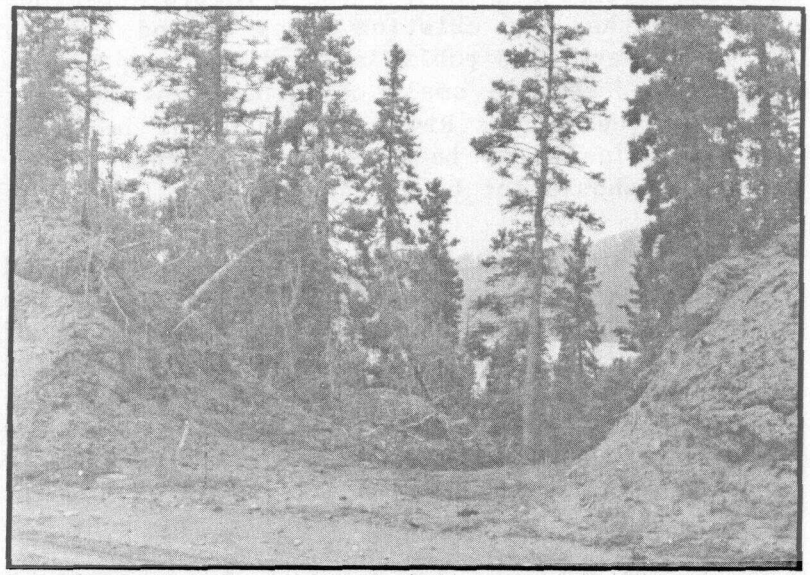
Right-of-Way Management

Within this management unit, the right-of-way plays an important role in scenic resource values, and will undoubtedly continue to do so as use of this portion of the McCarthy Wild and Historic Road intensifies. The DOTPF is faced with the difficult task of providing safe and convenient access while at the same time creating and maintaining a somewhat distinctive and unique road as a primary visitor entrance to a national park. Right-of-way management within this unit should take into account the following considerations in addition to those already outlined under the general discussion for the McCarthy Road.

Roadcut Visual Impact Reduction: Throughout this unit there exist numerous places where narrow cuts were made through low moraines and other small hills. These are, for the most part, steep slopes, resulting in continued erosion and difficulty in establishing vegetation cover - particularly on the north facing cuts. Measures should be taken to reduce steepness, and blend these cuts into adjacent landforms by rounding off tops and minimizing the amount of the cut retained as a flat plane. Revegetation should be prompted initially by seeding, and subsequently by encouraging natural revegetation.

View Maintenance Around Curves: In several places, sharp curves and tall brush block the visibility of oncoming traffic. In such instances, the area along the inside radius of the curve should be cleared of trees and tall shrubs to open the view around the curve.

Vegetation Clearing in Right-of-Way: Roadside clearing of vegetation should include the removal of all remaining slash.



Development of turnouts with panoramic views of the Copper and Chitina Rivers would require landform modification and selective clearing of trees.

Greenbelts (G)

Within the western portion of this management unit where the topography is steep, vegetation sparse and views expansive, greenbelts would not be an effective or appropriate management tool. However, once the road climbs to the higher forested terrace between the Kotsina and Chitina Rivers, greenbelts could be effective in retaining the natural character of the corridor,and at the same time insulate development from the negative impacts of the road itself, such as dust and noise. This is particularly significant because of the relatively narrow road right-of-way (200 feet) and the potential for realignments and road

widening. Due to the generally high visual absorption capability of this area, a 25 foot wide greenbelt strip, within which vegetation and landform modifications would conform to specific guidelines, is recommended.

Because of the predominantly private land ownership pattern and the location outside of organized local governments, no effective greenbelt implementation procedures exist. However, because Native regional and village corporations are the primary landholders, the opportunity exists for them to adopt greenbelt recommendations and appropriate management guidelines for their lands adjacent to the road. This would provide mutual benefits for both landowners and roadway users.

Proposed Road Realignments

In the 1973 DOTPF Chitina to McCarthy Highway (McCarthy Road) Environmental Impact Statement, an alignment along the Kotsina River floodplain was proposed to replace the existing alignment which follows the edge of the upper terrace. This realignment was proposed to avoid considerable maintenance problems currently associated with the existing extremely unstable banks. The new alignment would place the road on extensive fill resulting in a nearly straight ramp up from the Copper River Bridge, over the Kotsina River floodplain, returning to the existing grade on the northeast face of the upper terrace.

From a visual quality perspective, the existing road would be preferable to the proposed realignment. While the proposed alignment would provide panoramic views, its nearly straight alignment and complete removal from the surrounding topography would make the driving experience much less memorable than on the existing road.

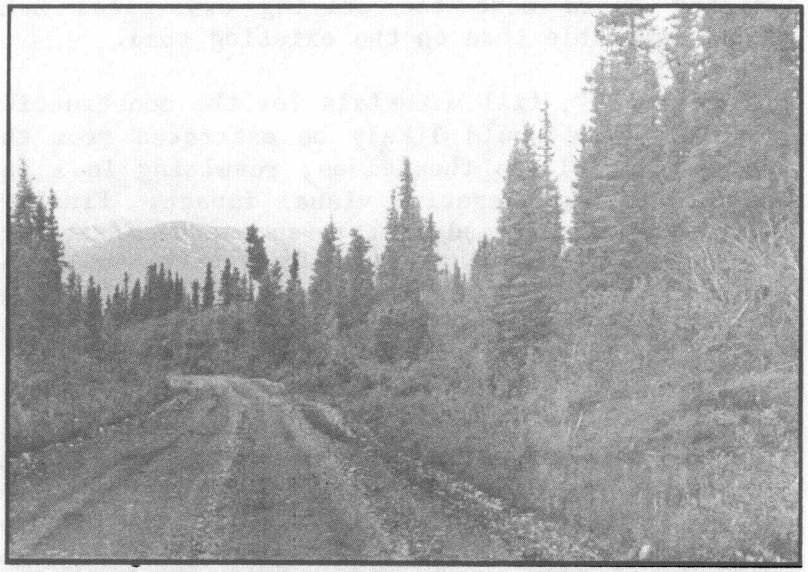
Additionally, fill materials for the construction of this road would likely be extracted from the river floodplains themselves, resulting in a potentially high negative visual impact. Finally, this stretch of road creates an entrance into the Wrangell-St. Elias National Park. The realignment proposed seems less appropriate and less sensitive to such an entry experience than does the existing alignment.

While the existing alignment would require considerable work to stabilize the slopes and reduce possible hazards and maintenance costs, it is recommended that this be done rather than abandon the road and construct a new one. Due to the intensive use this part of the McCarthy Road receives, some upgrading would be necessary to provide safer access. However it must strive to respond to the overall goals of this as a wild and historic road. Additional guidelines for maintaining the special character of Unit 25 can be found in the the Section on Road Realignments and Upgrading in Unit 26.

Turnouts (T)

Because of the panoramic views possible throughout this area, its high use, and the narrow road, several turnouts should be developed to give travelers the opportunity to safely stop and enjoy the views. The following are recommended.

T-1 Provided that this stretch of roadway is improved, rather than being replaced by the proposed realignment, at least two small turnouts should be created here. Selective thinning of roadside vegetation may be necessary to open up views.



The roadside trees and brush invading the right-of-way play a significant role in keeping the visual impact of the road low and retaining the wild, undeveloped character of the landscape.

T-2 Remove the mound of soil between the two small cuts through the right-of-way bank to provide one four-car turnout with extended views of the Chitina River valley. Regrading and revegetation should take place to stabilize the soil. Safety devices such as curbs or guard rails can be installed to keep vehicles away from the edge and to help control slope erosion.

T-3 This small existing turnout occurs at the edge of a sharp curve with a steep drop off on a fairly unstable slope. The views of the Chitina River valley are magnificent, and the point of view breathtaking, but potentially dangerous. The location of the turnout should be retained; however, the safety problems must be addressed.

ALTERNATIVE ONE: A substantial guardrail, most visually appropriate if constructed of railroad ties, should be installed around the outer edge of the turnout. It should be located far enough from the edge to keep vehicles from disturbing the already unstable soil. A distinction between the road surface and the turnout surface would be helpful to direct westbound through traffic. A sign could be posted on the east end directing traffic to keep right as they round the curve. Additional widening in this location would be difficult due to the steep drop off on the outside of the curve and the steep rock wall on the inside.

ALTERNATIVE TWO: The road could be realigned slightly through cutting into the rock wall on the uphill side such that a safer curve results. Then the existing road and turnout area could be developed and safe entry and exit provided. This would eliminate the hazards and development constraints associated with the existing alignment and turnout.

View Management (V)

The following site is recommended for specific view management attention:

V-1 Selective tree thinning at these locations could reveal views of the Chugach Mountains and the Chitina River. Trees and brush should be cleared carefully, and all slash removed. Low shrubs and ground covers should be encouraged.

Reclamation (R)

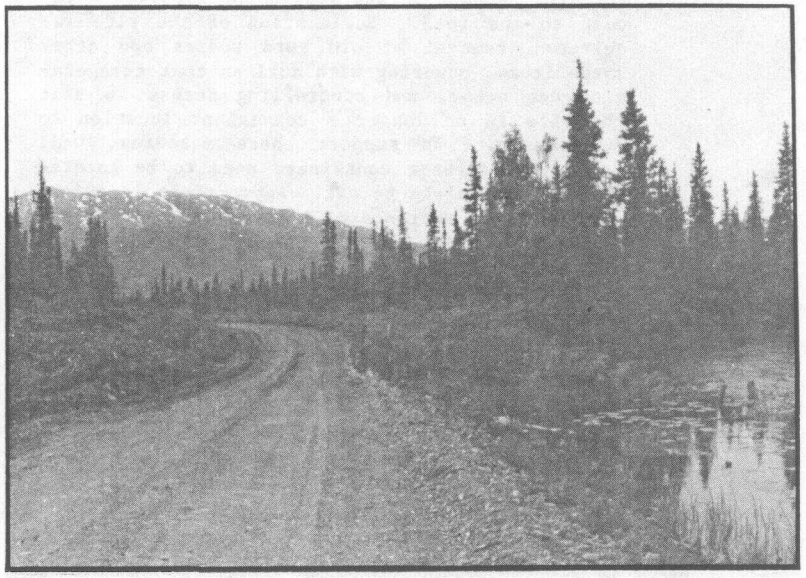
Reclamation should be encouraged at the following two sites:

R-1 This former dump site adds an extremely unsightly element to the otherwise natural beauty of the broad Copper River Valley. While no longer officially in use, recreationists evidently still use

the site because of its convenient location adjacent to the road. Reclamation of the site requires: removal of old auto bodies and other large items, covering with soil so that revegetation can occur, and controlling access so that the site is no longer a convenient location to dump trash. To support these measures, well maintained garbage containers need to be located for recreationists to use. Appropriate locations may be at the entrance of the access roads to the river floodplain. Efforts should be made to see that these containers do not detract from area's visual quality. This may be accomplished by three measures: container design, container location and container area maintenance.

R-2 Slopes adjacent to the road in this area should be stabilized in view of road realignment. See the discussion on the proposed road alignment for this unit for a full explanation of reclamation of this road segment.

Silver Lake - Strelna



Views such as this with spruce forests dominating the foreground and distant mountains in the background are typical within this management unit. Though numerous large lakes are present, the level to gently rolling topography and forested land-cover generally limit views of these water features.

General Description

Management Unit 26 begins approximately 5 1/2 miles east of the Copper River bridge and continues for 11 miles to the approach to the Kuskulana River bridge. Here the McCarthy Wild and Historic Road follows the old Copper River and Northwestern Railroad alignment as it moves away from the Chitina River and begins to follow the glaciated uplands. The road passes through a forested landscape of gently rolling moraines and numerous bogs and small and large lakes. The most notable natural features include Silver Lake, Strelna Lake and the Chitina River valley, none of which are visible from the road from within this unit.

While a variety of land uses and developments can be found in this area they tend to be scattered and, for the most part, not highly visible. The bar and lodge at Silver Lake receives considerable use; however its visibility is limited to a small wooden sign marking the entrance road. A few homestead style residences have resulted in large land clearings which open up views to surrounding mountains. Residential development around Strelna is not visible from the road. Visual impacts associated with human use are primarily the result of road construction and maintenance.

26 Silver Lake - Strelna

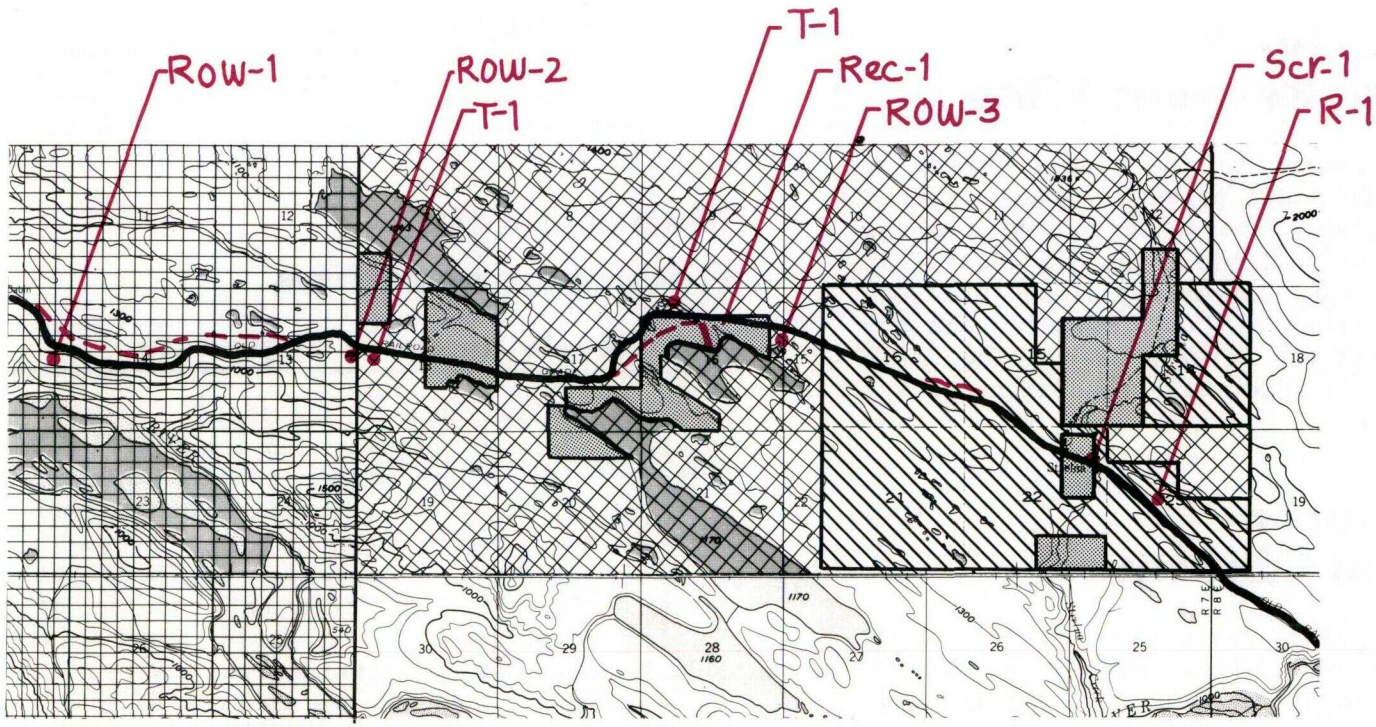
Assessment Units M5 — M8

KEY

- ROW – Right of Way Mgt.
- T – Turnout
- Rec – Recreation
- Scr – Screening
- R – Reclamation
- D.O.T.P.F. Realignment Proposals (1973)

- State Owned Land
- Native Corp. Land
- Native Selected Land
- Federal Land
- Private Land

NORTH 0 1 2 mi.



Scenic resource values are moderate to low for this area. The forested, gently rolling topography limits views to the foreground adjacent to the road and the upper portions of the more distant mountains. Visually distinctive features such as large lakes and the Chitina River remain hidden from view. The driving experience lacks enough change in direction and variation in the character of the roadside landscape to make it an interesting drive. Right-of-way clearing has further reduced any spatial variety along this portion of the road and has tended to increase the lack of visual and experiential variety.

Land Ownership & Management Responsibility

Land ownership adjacent to the road consists of numerous relatively small privately owned parcels surrounded by Native corporation conveyances and selections. Public roadside lands are restricted to large blocks of University land and one section of State patented land, all of which are concentrated around the Strelna area. The State DOTPF manages the 200 foot wide road right-of-way through this area.

Visual Resource Management Objectives

Management of scenic resources in this unit should respond to objectives related to the following themes: sensitive land use and development, appropriate road design and right-of-way management, enhancement and impact mitigation.

Sensitive Land Use and Development: Encourage land uses and developments which are sensitive to visual resource values and are compatible with the desired character of this as a wild and historic road.

Appropriate Road Design and Richt-of-Way Management: To adopt policies and practices for the design, construction and maintenance of the road and its right-of-way which retain and reinforce its charcter as a "wild" driving experience as well as the primary access road to a national park.

Enhancement: To employ suitable landscape modification measures which reinforce the existing experience while opening up new and complimentary ones which provide a stronger visual awareness, understanding and appreciation of this landscape.

Impact Mitigation: To take appropriate action to mitigate the visual impacts on visual resource values which are associated with road construction and maintenance as well as roadside land uses.

Management Recommendations

Road Realignment & Upgrading

Road realignments proposed in the Chitina-McCarthy Highway Environmental Impact Statement (1973) are mostly changes which eliminate or reduce the severity of curves and increase the lengths of tangents or straight sections of roadway. In every case these realignments would not significantly increase distant viewing opportunities nor would they allow for additional views to distinctive nearby features such as Silver Lake or the Chitina River. Additionally they would tend to alter the nature of the driving experience, replacing the narrow,

winding road with one which would be straighter and wider. Such changes would conflict with the desired "wild" character of the road as recommended in this study. Consequently it is recommended that the existing alignment be retained and that any needs for upgrading or change strive to conform to this alignment as much as possible.

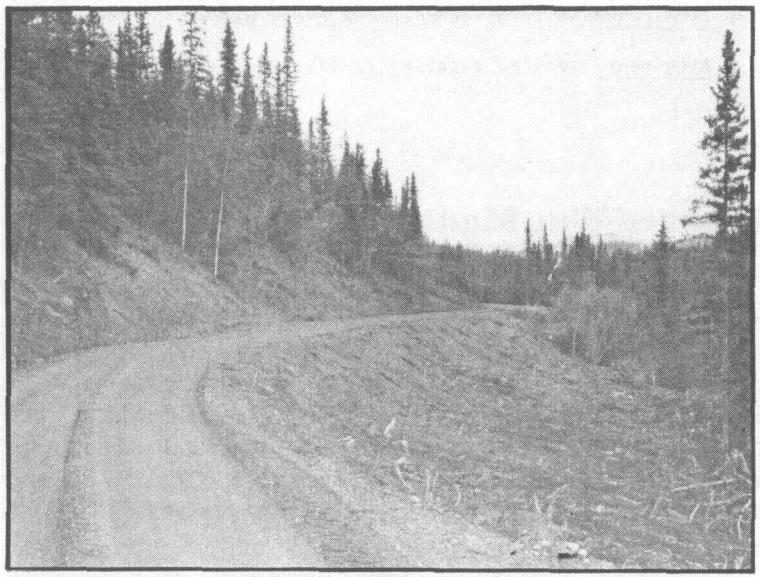
This portion of the McCarthy Wild and Historic Road passes through lands predominantly under private ownership. Presently the portion of the road to Strelna receives a significant amount of local use and it appears that use and consequently the needs for road improvement, will increase in the future. To respond to this it is recommended that this portion of the road, from Chitina to approximately 1/4 mile west of the Kuskulana River bridge, be designed and maintained somewhat differently than the remainder of the road to the east. This portion of the road, up to the Kuskulana bridge, would be more intensively used and managed as both a local access road and part of the McCarthy Wild and Historic Road. East of the Kuskulana bridge the primary use would be recreational and the overall character would be "wild" and "historic". Thus the Kuskulana bridge becomes a second gateway in this experience (the first being at the Copper River bridge). The following recommendations apply to the design and upgrading of the road within this management unit. Right-of-way management is discussed in the following section.

- Design speed: 30-35 mph.
- Surface: All weather, gravel
- Width: 20-24 feet including shoulder (2 traffic lanes)
- Drainage: Shallow swales, vegetated
- Turnarounds: Turnaround spaces every mile
- Alignment: Follow existing (railroad) alignment

Right-of-Way Management (ROW)

In addition to the actual design of the road, the management of the right-of-way can play a significant role in meeting the goals and objectives recommended. The relatively narrow road and the 200 foot wide right-of-way provide adequate room to meet the needs for maintenance and visibility while at the same time retaining a "wild" appearing roadscape and creating an interesting driving experience.

Present right-of-way management consists of clearing all tree and shrub vegetation back an even distance on both sides of the road, often to the right-of-way edge. Commonly, slash from clearing is left within view and the soil is severely disturbed. Furthermore, larger trees are often simply pushed over and left leaning along the right-of-way edge. Such management practices are unacceptable and inappropriate for this road. The vegetation and landscape disturbance results in a severe visual impact. The extensive clearing makes the road appear wider and tends to increase driving speeds. The uniform clearing width decreases the spatial variety of the driving experience and contributes to the general erosion of this as a "wild" driving experience through a "wild" landscape. (Refer to the general discussion for the McCarthy Wild and Historic Road for information related to appropriate and visually sensitive right-of-way management practices).



Extensive roadside clearing such as this is found throughout this management unit and has resulted in significant visual impacts. It will take many years for natural revegetation to establish a roadside landcover more compatible with scenic resource management objectives outlined here.

Several considerations are particularly important for this road. Appropriate action should be taken to mitigate the visual impacts of existing right-of-way clearing. Throughout this unit, the right-of-way vegetation and soil have been severely disturbed. Efforts need to be directed at encouraging revegetation of these areas including removal of all slash and debris, especially trees which have been partially overturned. Areas where the soil and topography have been severely disturbed should be regraded to conform to previous grades. Roadcuts and sloped banks should be reseeded with clover or other soil building annuals to help prevent erosion and facilitate revegetation. Finally these areas should not be disturbed until they have been successfully reinvaded by adjacent trees and shrubs, at which time further maintenance activities should be directed by a landscape architect working with the DOTPF crew supervisor. Once these areas have been reclaimed they should be managed with the following considerations in mind.

- Respond to site specific conditions. Roadside clearing should respond to opportunities to open up lateral views - either to nearby natural and in some cases man-made features or to glimpses of more distant mountains. There may also be places where adjacent land uses or developments should be screened from view and any clearing should be discouraged, or where clearing around a turn is done on the inside of the curve to allow for visibility while the outside is left uncut.

- Retain and enhance "the wild" character of the roadscape. Necessary right-of-way clearing should occur in a fashion which leaves the visual impression that the landscape is unmanaged or wild. Consequently, selective removal of trees and brush should be standard operating procedure for this road, and no large areas should have all tree and shrub vegetation removed at one time.

- Use the right-of-way to create visual interest. Since, in general, visual resource values are relatively low for this management unit, the right-of-way itself needs to be manipulated to create visual interest. Within a forested, nearly level landscape such as this, considerable interest can be added by creating spatical variety such as completely enclosed spaces leading up to places open on one side to places that are completely open. This variety can be created by manipulating the right-of-way vegetation and responding to conditions beyond the right-of-way. Numerous small lakes and bogs, as well as man made clearings, offer considerable opportunity to make this a spatially and visually

rich driving experience - it only requires careful attention to right-of-way management practices.

Three sites merit specific attention:

ROW-1 The opportunity exists at this location to open up views south and east to the Chitina River and Chugach Mountains through right-of-way clearing. Some vegetation management (selective thinning) within the greenbelt management strip would enhance views.

ROW-2 Careful and selective tree thinning could open up views of small lakes on the south side of the road.

ROW-3 Clearing of some of the willow at the roadside could open up views south to the Chugach Mountains.

Land Use & Development

Extensive private ownership, relatively good access, readily developable lands and some existing development all suggest that this area should continue to be a focus for residential and recreational developments along the McCarthy Road. From a scenic and recreational resource management perspective, land use and development would be preferable here, rather than to the west (Management Unit 25) or further east (Management Units 27, 28, 29, 30). This area has relatively low intrinsic visual quality ratings and it could benefit from clearings to open up views as well as some visually sensitive developments such as homesteads and cabins. Morover, the roadside lands typically have high visual absorption capability ratings - meaning that land uses can readily be screened from view when desired. Consequently this management unit is one where roadside land uses and developments can be compatible with the general goals for the McCarthy Wild and Historic Road and this unit's objectives. Land developments and uses should take the following into consideration in order to be sensitive to scenic resource concerns:

- Homesteads, large lot residence and recreational homesites are the types of land developments that should be encouraged adjacent to the road within this management unit. Agriculture related uses would in general be compatible with scenic resource values - particularly if the resultant clearings allowed for better views towards surrounding mountains. Resource developments, such as mining and timber harvesting, should not be located near the road nor should they be visible from it.

- Roadside commercial developments (gas stations, stores, restaurants) should not be encouraged here. Commercial nodes should remain at Chitina and McCarthy. Recreation related commercial activities (lodges, campgrounds, etc.) should follow the development pattern already established, with the site located at a distance from the road and not visible. Small, discreet signage such as that marking the Silver Lake Lodge entrance road should be encouraged. Neon, flashing or oversized signs should not be permitted.

- Access roads from the McCarthy Road to adjacent lots should be kept to a minimum. Adequately spaced (1/8 to 1/4 mile) feeder roads should be developed to provide necessary access. Vegetation clearing for these roads should be kept to a minimum and they should be maintained as one lane roads whenever possible. Finally, roads which curve and follow the topography rather than run perpendicular to the McCarthy Road are visually and experientially more attractive.

- All roadside development should take advantage of the generally high visual absorption capability to reduce the visual impacts of clearings, roads, and buildings associated with the particular use. In addition, landowners adjacent to the road should adopt the greenbelt recommendations outlined below.

Greenbelts (G)

While the design and management of the road and its right-of-way clearly are the most important factors on ensuring that scenic resource management responds to the goals recommended for the McCarthy Wild and Historic Road and this unit, the use and development of adjacent lands also requires attention. Greenbelt management strips are the most commonly employed tool for management of scenic resources along roads. However, due to the extensive private landholdings and the fact that this area is outside an organized borough or local government, no implementation mechanism for greenbelt recommendations exists. Consequently, greenbelt implementation should be considered voluntary on private land. At the same time, concerted efforts would need to be made by public agencies (DNR and NPS) to communicate to private landowners the benefits of such greenbelt areas and ways to use greenbelts to help meet specific goals and objectives. In this respect, the Native corporations who will own large blocks of roadside land should be encouraged to take the lead and adopt greenbelt recommendations for their lands, thus serving as an example of visually sensitive management and development practices for adjacent private landowners.

Greenbelt recommendations consist of two parts - a management strip width and guidelines for the use of this area. Two types of greenbelts are recommended for this management unit.

25 Foot Greenbelts. These relatively narrow management strips are recommended for existing private landholdings other than large blocks of Native corporation land. Within this area vegetation clearing would not be encouraged except for some selective clearing around residences and as needed for access roads. Clearings for agricultural use would be acceptable, and generally desirable. No new permanent structures would be allowed within this area. The primary objective of such a greenbelt is to screen the visibility of uses and developments from the road and to retain a natural, undeveloped character to the area. In some cases, the greenbelt is used for view management - where selective clearing in the right-of-way and greenbelt opens up more distant views.

100 Foot Greenbelts. These management strips beyond the right-of-way are recommended for lands owned by Native corporations as well as for State and University lands. The wider strip allows for more effective scenic resource management. Within this area management guidelines would be the same as those outlined for the 25 foot wide greenbelts. These should be formally adopted for State owned lands and University lands. The Native corporations should be encouraged to adopt these and include them as conditions for future uses of these lands as well as conditions of sales and leases made of these lands.

Road Related Recreational Facilities

Road related recreational facilities for this management unit consist of turnouts (T) and a recreational access road (Rec). Considerably more roadside recreational development is recommended in Management Unit 25 to the west and Management Unit 27 to the east as these areas have much greater potential for such developments.

Rec-1 Recreation Access Road: Access to the large lake north of Silver Lake may be developed along the existing right-of-way. Facilities for some day use recreational activities such as picnicking and boating should be provided at the lake if enough land can be obtained. Otherwise, a boat launch, turn around and parking area should be provided at the lake edge. This access road would require adequate signage to indicate its location.

T-1 This is a series of small turnouts recommended to allow vehicles to pull off the road and turn around. In order to retain the relatively narrow character of the road, it is necessary to provide adequate turnout-turn around opportunities. These two sites also allow for viewing waterfowl and wildlife since they are adjacent to small lakes and wetlands. Other turnout-turn around sites need to be identified in order to provide one such site every mile.

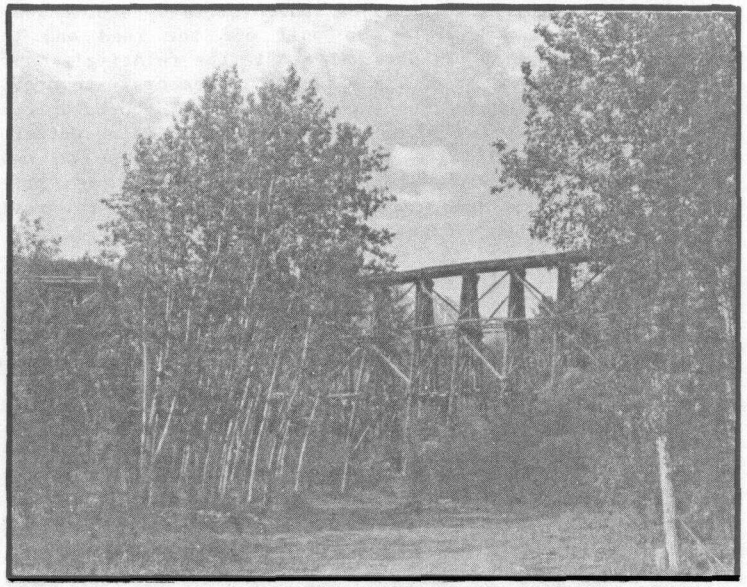
Impact Mitigation (M)

Visual impacts requiring mitigation for this management unit are almost exclusively the result of right-of-way management practices and have been discussed above. Two additional sites need reclamation (R) or screening (Scr) attention.

R-1 This materials site has moderate visual impact. Some regrading and revegetation is recommended.

Scr-1 The visibility of culverts at Strelna Creek needs to be reduced. Large rocks for partial screening and painting of culverts to reduce contrast is recommended.

Kuskulana & Gilahina



The Gilahina trestle, viewed from the small parking area near the road crossing of the Gilahina River. This is an important visual and historical landmark which needs restorative work.

General Description

Management unit number 27 is defined by the area around the road crossing of the Kuskulana River to the west and the Gilahina River to the east. Both of these places are of major significance with respect to scenic resources along the McCarthy Road. The Kuskulana crossing, developed for railroad use, is a one lane bridge over a spectacular 300 foot river gorge. This single lane steel span bridge is an important visual remnant of the old Copper River and Northwestern Railroad days and is a particularly memorable and unique driving experience. The Gilahina River area is equally significant because it contains the last major remnants of the old railroad trestles which were used to maintain grade over the numerous rivers and creeks along the route. This structure is visually impressive and, from an engineering perspective is extremely interesting in that it is a super-curved, all wood structure reportedly constructed in six weeks. Between these two places there are a number of other sites of particular visual significance - most importantly Chakitna Slough and Chokosna Lake.

Scenic resource values for this management unit are very high. Views across the numerous sloughs, picturesque lakes and some man-made openings provide interesting panoramas of the Chugach Mountains to the south and west, the Wrangell mountains, including Mt. Blackburn, to the north, and the broad Copper River lowlands to the northwest. Coupled with this is the fact

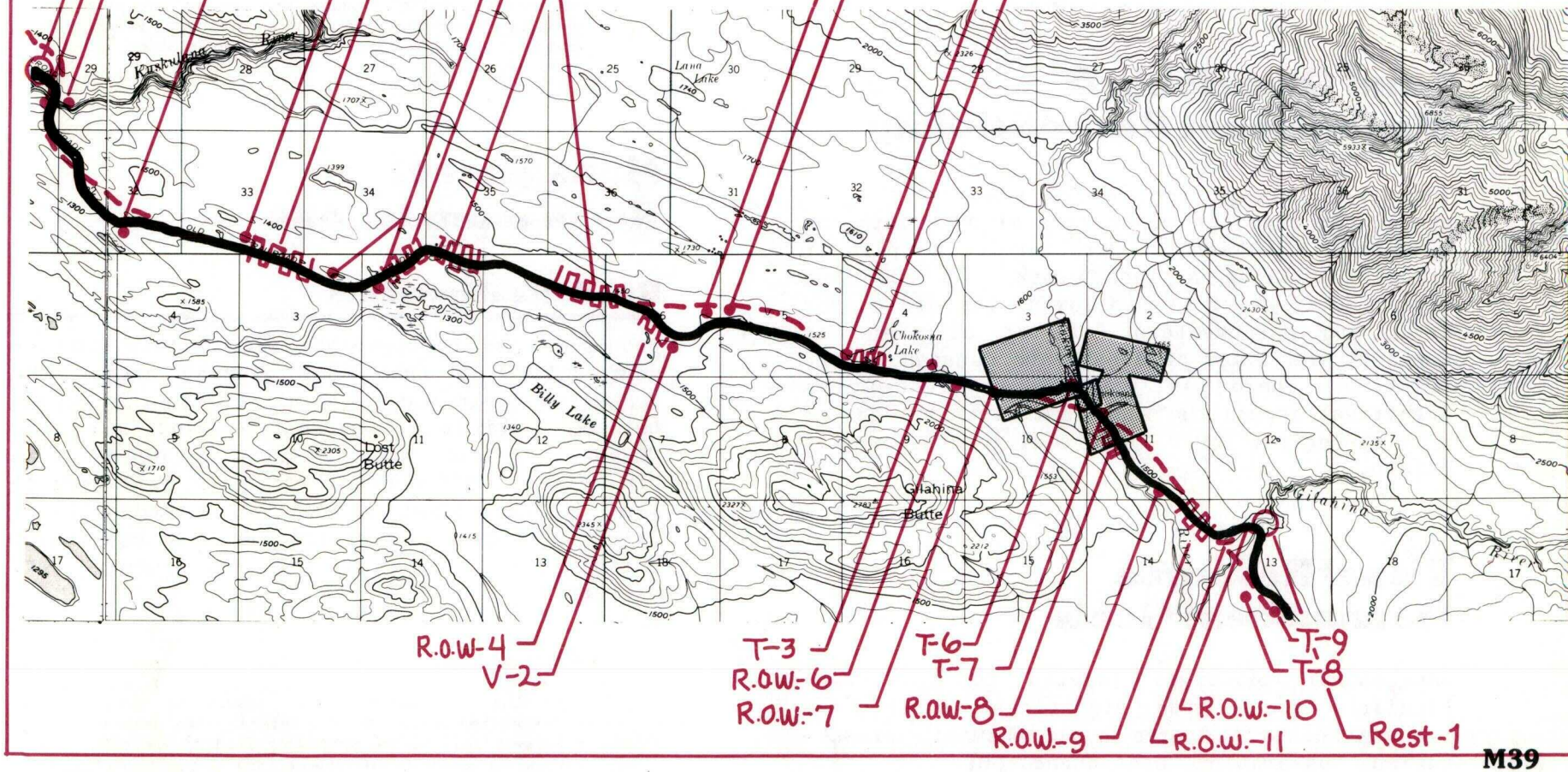
27 Kuskulana & Gilahina

Assessment Units M9-M14

R– Reclamation
V– View Management
Rest– Rest Area
ROW– Right of Way Mgt.
T– Turnout

D.O.T.P.F. Realignment Proposals (1973)
Federal Land
Private Land

NORTH 0 1 2 mi.



that most of the road alignment winds pleasingly through the level to gently rolling topography, offering an ever changing point-of-view to the traveler.

Current Land development is only visible around the area known as Chokosna. Here one homestead provides interesting views across open, cleared areas. A nearby airstrip and for sale signs indicate the presence of private land and suggest the potential for additional development.

Land Ownership & Management Responsibility

This area, except for approximately 700 acres around Chokosna, is under federal ownership and managed by the National Park Service as part of Wrangell-St.Elias National Park. A 200 foot wide road right-of way following the old Copper River and Northwestern Railroad alignment is owned by the State of Alaska and managed by the DOTPF. There is, also, a right-of-way withdrawal around the Kuskulana River bridge and a hydroelectric power withdrawal just below this bridge.

Visual Resource Management Goals

Management objectives related to this particularly scenic and significant stretch of roadway relate to three broad themes: preservation, restoration, and enhancement.

Preservation: To preserve those elements which make this portion of the McCarthy Road a distinctive and memorable recreational driving experience.

Restoration: To reclaim those areas which have been severely disturbed due to road construction and maintenance and to restore those features or structures which have significantly deteriorated yet play an important role in the scenic and historic resource values characteristic to this landscape.

Enhancement: To employ suitable landscape modification measures which reinforce the existing experiences while opening up new and complementary ones that provide a stronger visual awareness, understanding and appreciation of this landscape.

Management Recommendations

Road Realignments

Proposed road realignments within this management unit fall into four general areas: the Kuskulana River crossing, elimination of curves between Chakitna Slough and Chokosna Lake, the Chokosna by-pass, and the crossing of the Gilahina River. After study of these 1973 Department of Transportation realignment proposals it is clear that from a scenic resource management perspective the existing alignments are preferred.

- **Kuskulana River**

  Here the realignment would result in long, straight approaches to the bridge. The present alignment follows the slopes, providing a series of changing views of the bridge itself which

create a dramatic sense of anticipation for crossing the river. Within this alignment a nice series of small turnouts are possible to take advantage of these views. The proposed realignment would completely eliminate this experience. In addition, it is recommended that as long as recreation remains as the primary use of this area that the one lane bridge not be upgraded to a two lane bridge through the addition of a concrete deck.

- **Chakitna Slough to Chokosna Lake**

This proposed realignment would eliminate a series of short radius curves along the road and replace them with large radius curves and long, straight tangents. The existing alignment provides an interesting and continually changing visual experience which would become somewhat monotonous following the proposed alignments.

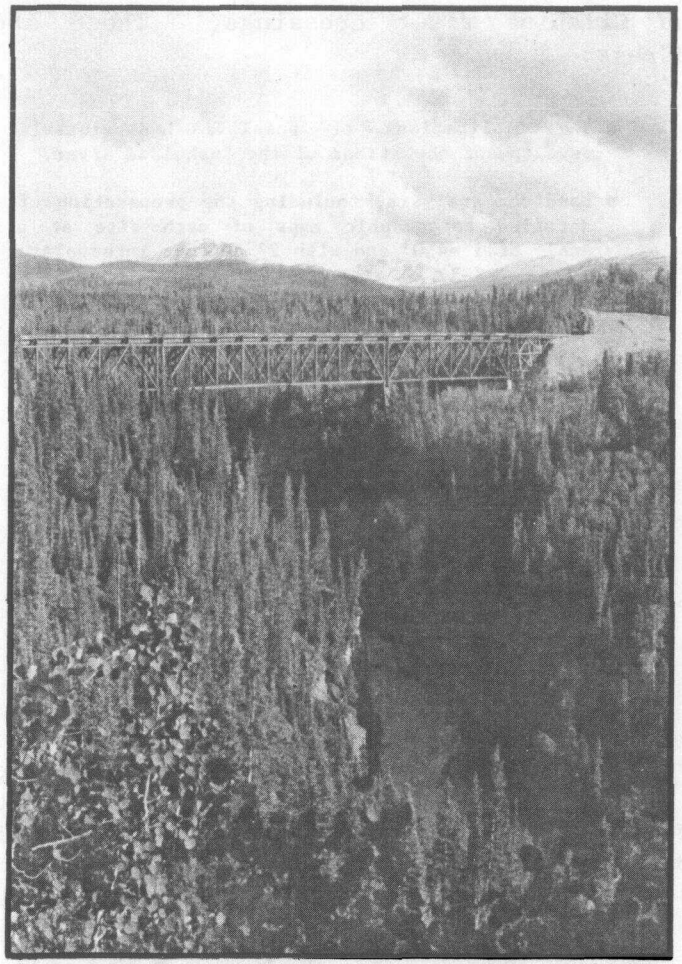
- **Chokosna By-pass**

This realignment would bypass the existing bridge and the limited development around Chokosna. The primary reason stated for this realignment was to move the road away from the airstrip west of Chokosna. This airstrip clearing opens up the view and adds visual interest. Its proximity to the road is a real opportunity rather than a problem. Additionally, the potential land development around the Chokosna River crossing could significantly add to the visual interest of the area if set back properly from the road.

The proposed realignment continues east for some distance north of the Chokosna River and the present road. The very pleasing views out across the small Chokosna River valley would be lost if the new alignment were followed.

- **Gilahina Crossing**

This realignment proposal would replace the existing road which winds down to the Gilahina River with a straight alignment running directly across the valley. Such a route would require considerable cutting and filling and would be a visually dominant feature on the landscape. It would also eliminate the striking views of the Gilahina River railroad trestle and would make this area nothing more than a separate turnout rather than an integral and significant part of the driving experience.



The Kuskulana bridge as viewed from the approach from the west. This existing approach offers dramatic views of the steel span structure and instills a strong sense of anticipation on the part of the traveler.

Additional Study Areas

More detailed site specific study and analysis needs to be conducted around both the Kuskulana and Gilahina river crossings. These should address:

- The implications of possible hydroelectric development downstream of the Kuskulana River.
- Landform analysis, including the preparation of detailed topographic maps of each site at a scale of 1"=400' and with 2' contour intervals.
- Historic information, with photographs, regarding the construction and maintenance of the bridges, trestles and the operation of the Copper River and Northwestern Railroad through this area.
- Material site locations, conditions and plans for future use.
- Soil stability conditions.
- Water quality and availability for human use, particularly at the Gilahina River area.
- Microclimatic variations.
- Natural history of the area.

These two places are presently, and should continue to be, focuses for travelers on this road. The information requirements outlined above are essential in order to plan for the use, appreciation and preservation of these resources.

Gilahina Railroad Trestle Restoration

The Gilahina trestle is, at the moment, the only highly visible feature recalling the former use of the road alignment by the Copper River and Northwestern Railroad. Few other railroad buildings, partial trestles, grades and embankments can still be seen by the careful observer. Additionally, it is a highly sculptural structure and visually striking as it is viewed from numerous distances and vantage points. It would indeed be a significant loss if it were no longer there. Therefore it is recommended that the restoration of this trestle be given immediate and highest priority. Today it is deteriorating rapidly and it will not be long before it might be completely lost.

Restoration may include dismantling and replacing rotted components or preserving old and new wood. Its future use and character, either as a purely visual element or as a structure to be used by pedestrians, also needs to be determined. Since this structure is already on the National Historic Register, special funding may be available to initiate this task. As already mentioned, ownership and management responsibility of the trestle needs clarification.

Greenbelts

Since all but a small portion of this management unit is under federal ownership and National Park Service management no greenbelt designations are necessary except for the area around Chokosna. Here it is recommended that a 25' greenbelt beyond the road right-of-way be adopted by local landowners to help buffer them from the road and to retain the natural character. Within this area, no land clearing or structures should be allowed. Some clearing could be done if it conforms with visual

resource management goals such as opening up distant views across meadows, airstrips and other clearings.

Land Use & Development

Because of ownership patterns, land development would only occur in the Chokosna area where private land presently exists. Development there, if set back from the road, could add visual diversity to the driving experience. Some limited commercial services would be welcomed by many visitors and travelers as the Park receives more use. However, special considerations need to be given to signs, setbacks, amount of land clearing, access roads and right-of-way management. It could be in the interest of the National Park Service and the State of Alaska to provide development tax breaks or financial incentives so that professional designers (architects, landscape architects etc.) are consulted by people interested in developing existing private land holdings, particularly for commercial or residential developments.

Other development may be initiated by the National Park Service, with a focus on the Kuskulana and Gilahina rivers. Minimum facilties development is recommended at the Kuskulana Bridge site, day-use facilities around the bridge and some overnight camping facilities at some of the material sites is all that is recommended. At the Gilahina, a rest area-interpretive center should be developed as a major use focus between Chitina and McCarthy. This could be the site of the park headquarters. Additional site and program analysis needs to be done to determine actual development requirements for this facility as well as appropriate use of the site. It should be noted that any development around the Gilahina River is contingent upon trestle restoration and stabilization. Without the trestle the site loses its scenic and recreational interest and would need to be re-evaluated as to its role and significance on the McCarthy road.

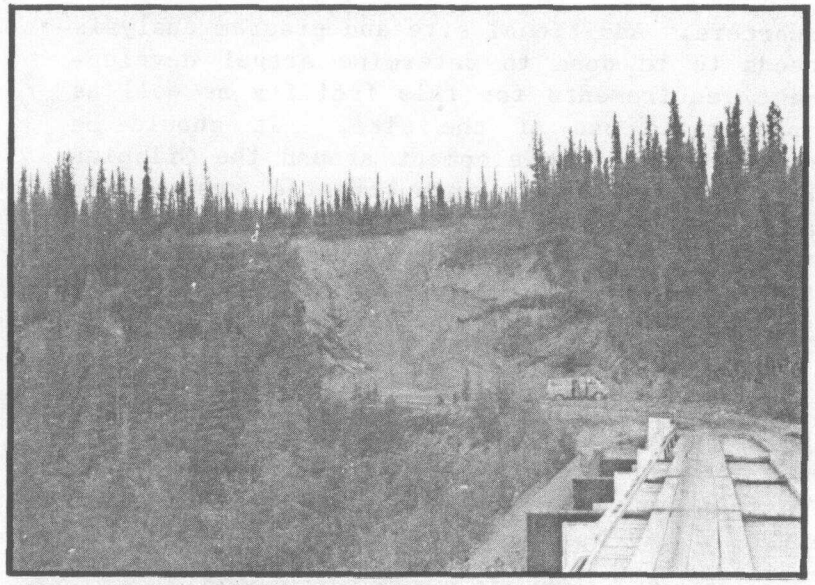
View Management (V)

The following recommendations outline ways that existing views and experiences might be preserved and some potential views opened up. Refer to the management unit map for the general location of each recommended action.

V - 1 Retain the experience of brief and changing views of the Kuskulana River bridge while traveling east. This can best be accomplished by slight alterations of existing landforms and vegetation management to open, close and frame views. As mentioned below under turnouts, viewpoints should be developed where space permits.

V - 2 The opportunity exists to open up brief but significant views of the Chugach Mountains while traveling east. This would require right-of-way clearing and some selective clearing beyond.

V - 3 Retain this view sequence. While traveling west, brief glimpses of Chokosna Lake are possible which increase in duration until finally the entire lake is visible. Right-of-way management should preserve this experience through carefully controlling roadside vegetation along this stretch of roadway.



The Kuskulana bridge, shown here in the foreground, is one of the most notable features along the McCarthy Road. The areas at both ends of the bridge have been subject to extensive landscape disturbance, requiring reclamation measures.

Reclamation (R)

Landscape reclamation efforts within this management unit should focus on the following two sites around the Kuskuklana River crossing:

R - 1 Large roadcuts and unstable embankments at the north end of the Kuskulana River crossing need to be regraded and erosion control planting established. This area is highly visible. The landscape modifications are out of scale and result in significant contrasts of color and texture with the surrounding landforms and vegetation. This work should be considered a high priority since the crossing is an important focus. The site should be reclaimed as a turnout permitting people to park and experience the area on foot.

R - 2 Roadcuts and gravel extraction sites at the south end of the Kuskulana River Bridge are also highly visible, requiring grading and revegetation to stablilize slopes and reduce visual impacts. This area should also be reclaimed as a day use turnout. Some landform modification and grading could open up better views of the bridge and river gorge. Interpretive signage could be included at both of these bridge crossing reclamation sites. It is recommended that actual work be begun only after a complete analysis of this area has been done and a long range master plan has been prepared and adopted.

Turnouts

Numerous small turnouts are necessary along the McCarthy Wild and Historic Road because of its narrow width and the few places to get out of moving traffic. The following recommended turnouts help to meet this need and are generally places with opportunities for pleasing views:

T - 1 Potential for turnout development on the south side of the road. There is a view over a long, narrow lake which could be opened up through foreground vegetation management. A small 1-2 car) turnout is suggested.

T - 2 Interpretive turnout at Chakitna Slough. Two small pull out areas for 2-3 cars to stop are recommended within the forested areas at each end of the slough. For travelers heading east, the turnout should be on the south side of the road at the east end of the slough. This allows people to drive through the entire slough area first, experience its beauty and then stop and return on foot for a closer look if desired. The existing road should not be widened. At the moment it is wide enough for two cars to pass and it is visually subordinate to the landscape. The existing width encourages people to drive slowly and discourages vehicular

parking within the open slough area itself. Invading willow and poplar vegetation along the road edge should be removed so as to make the slough area appear to come up to the edge of the road. Some interpretive signage may be developed at the two turnout sites beyond the slough.

T - 3 A small turnout (1-2 cars) is recommended on the south side of the road to permit stopping and viewing of waterfowl and the surrounding mountains. Development would require gravel fill over boggy soils.

T - 4 Potential exists for a scenic turnout-day use area. This site provides excellent views across the lake towards the higher Wrangell Mountains (Mt. Blackburn). Entry and exit visibility is good and there appears to be enough higher ground to provide limited day use of the site (eg. picnicking, wildlife observation).

T - 5 Turnout at existing materials site. This site is flat without significant views and amenities. However, it could be reclaimed, revegetated and used for periodic overnight use, as well as a turnaround. Trails to higher view-points are possible. Entry and exit visibility is not good since the site occurs on a hill and a curve.

T - 6 Existing turnouts at Chokosna River bridge. No turnout development is recommended here. The river edges should be encouraged to revegetate and vehicular use of the banks should be discouraged since this site is very close to private land and much better sites exist nearby.

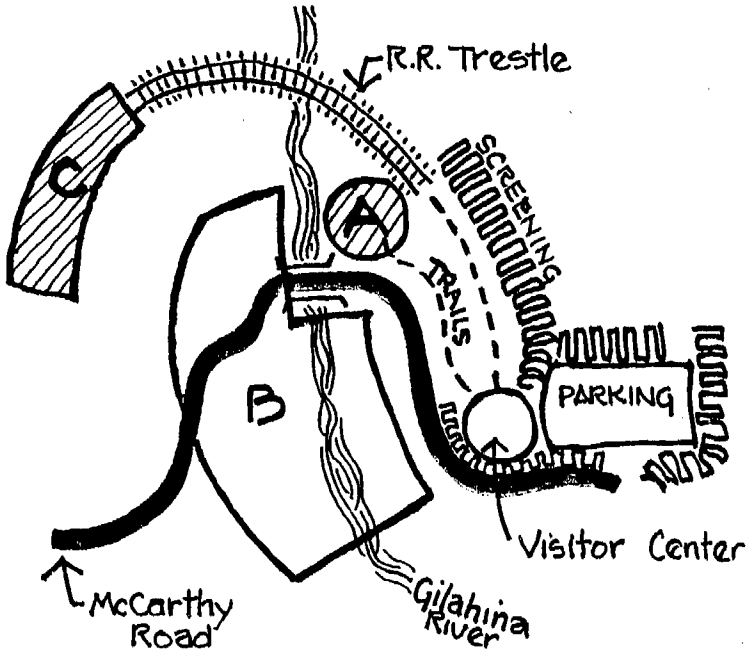
T - 7 This site provides good views over the Chokosna River and includes the opportunity for a short trail along the former railroad grade to an overlook of a small creek and remnants of a small railroad trestle. Trails down to the Chokosna River itself could also be developed. Selective clearing and careful right-of-way vegetation management could open up views. Private land ownership adjacent to the site may limit turnout development here.

T - 8 This small knoll covered by a nice aspen grove could be developed into a sunny, day use (picnic) site with views across the Chitina River valley. Some selective clearing is needed to open up views. This site could be used in conjunction with the recommended rest area - visitor center at the Gilahina River.

T - 9 This small existing turnout without good views, is recommended to be used for stopping and turning around only.

Rest Area (Rest)

A rest area-visitors center is recommended for the Gilahina River area (Rest-1). As already mentioned, this site need additional field study and definition of its functions with respect to



A schematic diagram of possible rest area development at the Gilahina River crossing. (See text on following page)

Wrangell-St. Elias National Park (eg. a headquarters site) and the status of the Gilahina River Railroad trestle. The following observations relate to some of the potentials of this site for redevelopment into a rest area-visitors center as well as an intensive use area on the McCarthy Wild and Historic Road.

- **Area A: Day use with interpretive information. Facilities would include picnic tables, restrooms, information signage; trash receptacles and parking for up to ten vehicles. These facilities and uses are best accommodated at the existing intensively used area by the river.**

- **Overnight vehicle use could be accommodated along the river lowlands (Area B) and walk-in tent camping along the old railroad grade to the northwest (Area C).**

- **Park headquarters and visitor information center would best be located amongst the trees on a high point near the railroad grade. From this point trails to the day use area, trestle overlook and other viewpoints could be developed. Parking and access could be via the former railroad alignment where it meets the existing road alignment.**

Right-of-Way Management (ROW)

Within the road right-of-way the following actions are recommended to help retain the wild and historic character of the road and maintain views and desired driving experiences:

ROW-1 Opportunity to open views north to the Wrangell Mountains with selective removal of willows along the right-of-way.

ROW-2 The dramatic visual impact of the Chakitna Slough, a large open area, is highly dependent upon the generally enclosed nature of the approaches to it. Retain this enclosed "tunnel" feeling by allowing shrubs and trees to grow as close to the road as possible while still allowing for adequate visibility and safe vehicle passage.

ROW-3 Clearing invading brush (willows and poplars) along the roadside could open up good lateral views and create a more "natural" appearing relationship of the road to the adjacent landscape.

ROW-4 Open up filtered lateral views through selective right-of-way clearing.

ROW-5 Large bare roadcuts need revegetation to soften visual impacts and stabilize slopes.

ROW-6 Selective clearing in this area could open up better views towards a small lake.

ROW-7 Clear out invading willow and alder vegetation along roadside gravel edge.

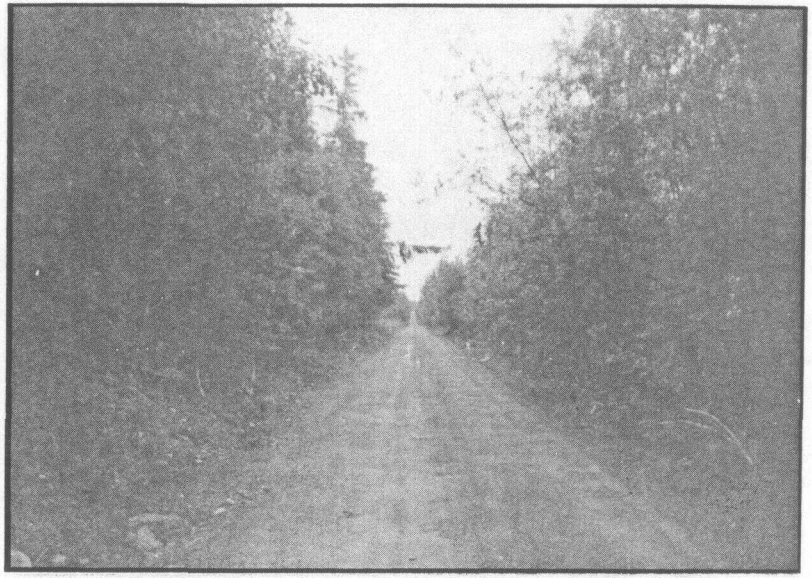
ROW-8 Selectively clear poplars along the side of the road next to a creek. This will open up nice lateral views towards the small Chokosna River valley.

ROW-9 Lateral views in both directions could be opened up through selective clearing and thinning of right-of-way and more distant vegetation.

ROW-10 Retain all roadside vegetation to frame views of the railroad trestle as travelers descends the hill.

ROW-11 Careful selective clearing within the right-of-way could open up dramatic views across the Gilahina River valley for eastbound travelers and lateral views for travelers going west.

Moose Lake



Dense stands of cottonwood, willow and spruce vegetation limits views beyond the road and the long straight alignments contribute to the relatively low scenic resource values typical of this management unit.

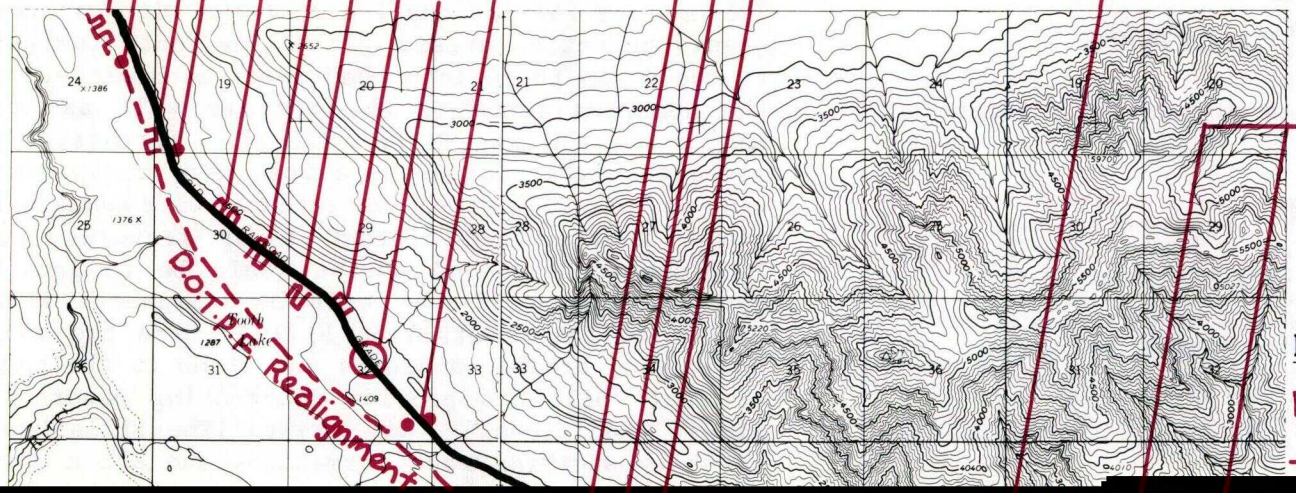
General Description

Management Unit 28 begins about one mile east of the Gilahina River crossing and ends just west of Ruth Lake. It is approximately 11 miles long. The only notable landscape feature near the road within this entire unit is Moose Lake. The road follows the former railroad alignment along a terrace near the Crystalline Hills which are located immediately to the north. Vegetation is predominantly high brush, spruce bog, and cottonwood dominated spruce/hardwood forest. Topography is, for the most part, level. No development or use is evident other than a few small material sites, intermittent roadside camping at Moose Lake, and one small railroad building which appears to be in the process of being moved.

The general feeling is one of enclosure with few distant views, and of monotony due to the minimal change in landcover and the absence of views to water features, near and distant mountains and other desirable elements. As a consequence, scenic resource values are the lowest here for the entire McCarthy Road.

28 Moose Lake

Assessment Units M15 – M19



KEY

ROW- Right of Way Mgt.

T- Turnout

Rec-

Land Ownership & Management Responsibility

Roadside land for this entire management unit is within the Wrangell-St. Elias National Park administered by the National Park Service. The 200 foot wide right-of-way is under the jurisdiction of the State DOTPF.

Visual Resource Management Objectives

Visual resource management objectives recommended for this unit relate to the theme of enhancement.

> Enhancement: To take advantage of opportunities to enhance the viewing and driving experience within this management unit. This can be accomplished in two ways. First, by altering the road right-of-way and in some cases the lands and vegetation beyond it, greater visual variety may be introduced. Second, by changing the location of this portion of the road, the traveler could be taken through a visually more diverse landscape that offers greater variation in viewer position and increased awareness of near and distant landscape features.

Management Recommendations

Road Realignment & Upgrading

Realignments were proposed for this portion of the road in the 1973 Chitina-McCarthy Highway Environmental Impact Statement to avoid some of the areas suffering from poor drainage and mudflows and to create straighter alignments. A major realignment is proposed approximately 1/2 mile south of the existing road passing on the south side of Moose Lake over a small hill. Such a route could offer better views of Moose Lake and possibly other near and distant landscape features. However, its long, straight alignment would offer little experiential diversity and, overall this routing would not be significantly better than that which already exists. It is recommended that other alternative routes be explored - both to avoid the mudflow and drainage problems associated with the existing road and to create a more interesting driving experience.

Two options for alternative routings with greater scenic potential exist. First, a route further to the south could take the viewer much closer to the numerous lakes in the area as well as the Lakina and Chitina River valleys. If carefully sited on higher moraines, a road here could provide a visually rich experience with numerous views to near and distant water features and landforms. A second option would be to locate the road north of the existing alignment much closer to the Crystalline Hills. Here the road could wind around landforms and climb to the tops of small hills to provide interesting panoramic views. Additionally, the Crystalline Hills have visually striking rock formations and are a good place to watch Dall sheep. Routings which explore each of these areas should be given further consideration.

Whatever routing is finally chosen, it is important that the overall character of the road be in keeping with the wild and historic nature of the remainder of the McCarthy Road. Thus it should be a gravel and dirt surfaced, narrow (20 feet), seasonal road with careful attention given to roadside vegetation management. (See the general discussion for the McCarthy Wild and Historic Road on road design and upgrading.)

Land Use & Development

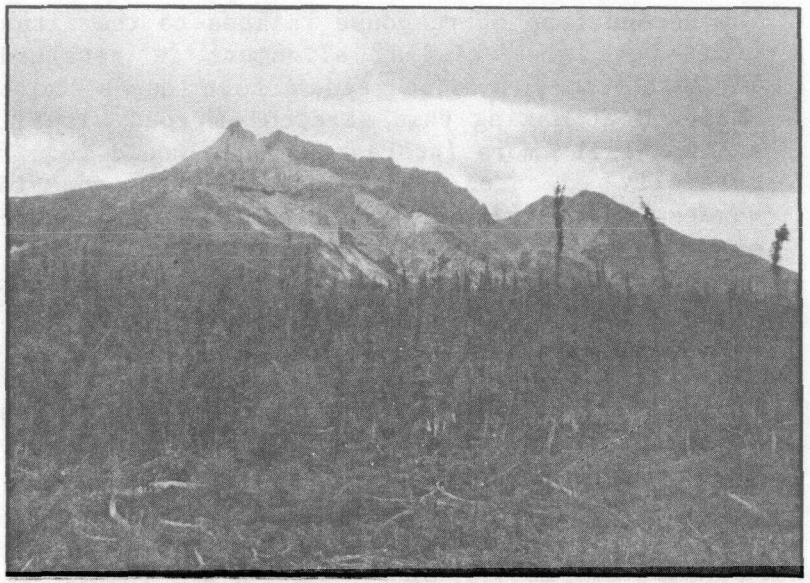
Since this management unit is apparently entirely within the Wrangell-St. Elias National Park and Preserve, land use and development should not be a significant issue. Dispersed recreational use would be compatible with the scenic resource management goals and objectives recommended in this report. Since particularly attractive recreational amenities are uncommon along this portion of the road, it is recommended that the National Park Service play an active role in identifying alternative routings which augment desirable recreational opportunities for visitors and are compatible with the overall park use plan.

Greenbelts

Specific greenbelt management strip recommendations are not made for this unit because the lands beyond the right-of-way are under management by the National Park Service. It is assumed that NPS management activities would be compatible with the scenic resource management goals and objectives identified here. It is recommended that the NPS work closely with the State DOTPF so that the road right-of-way and adjacent lands are both managed in a fashion which is responsive to each agency's responsibilities and sensitive to the overall character of the road. This is one of the few areas where scenic resource management recommendations can most readily be implemented, since only two public agencies would be involved.

Right-of-Way Management (ROW)

Road alignment and right-of-way management offer the most significant opportunities for enhancing the driving experience within this management unit. Two responses are possible. First, if a new alignment is identified and constructed, it would be essential that the right-of-way management be sensitive to the site specific opportunities of this route. A right-of-way management plan should be developed along with the road construction plans so construction activity minimizes the impacts on the land beyond the road and clearings, staging areas and material sites are located to open up views or provide turnouts or recreation use facilities. Also, such a plan should outline general right-of-way management guidelines for post-road construction.



Natural and manmade clearings can open up views to the nearby Crystelline Hills shown here. These low mountains have visually distinctive rock formations and colors and are good places to view mountain sheep.

The second type of response relates to the situation where the existing alignment is retained. In this case, a concerted effort needs to be directed at making this stretch of road visually and spatially more interesting. It would require carefully executed management of the roadside vegetation, consistently performed over a number of years. The following site specific recommendations outline ways to improve the existing alignment. The general discussion on right-of-way management for the entire McCarthy Wild and Historic Road outlines additional recommendations and guidelines which are of particular interest to this unit in order to respond to the "enhancement" management objective.

Row-1 Filtered views towards the Chitina River valley could be improved with careful right-of-way clearing.

Row-2 Clearing right-of-way shrub and tree vegetation could open up views towards the Chugach Mountains and Rock Lake and across the Chitina River valley.

Row-3 Remove roadside willows to open up better views to the Crystalline Hills. Retain black spruce and other plants characteristic of the adjacent bog to create a roadside edge which blends in better with the adjacent lands.

Row-4 Right-of-way clearing could open up lateral views towards the nearby Crystalline Hills for eastbound travellers.

Row-5 The opportunity exists here to open up views on both sides of the road through vegetation management. This area is too wet for any turnout development to take advantage of these views.

Row-6 Existing brush clearing has resulted in good lateral views towards the Crystalline Hills. While this is a good example of using right-of-way management to open up views, the uniform cutting height and highly visible slash which remains has resulted in negative visual impacts.

Row-7 Although the road passes close to Moose Lake no views of it are possible. Selective right-of-way and lakeside clearing and thinning could create filtered as well as open views to the lake. This should be considered a priority since this lake is one of the only strong visual amenities close to the road within this management unit.

Row-8 Clearing poplar and willow roadside vegetation could open up views across the valley towards the Chugach Mountains as well as some very nice views towards the Wrangell Mountains southeast of McCarthy.

Road Related Recreational Facilities

Recreational amenities are few within this management unit and much more desirable locations for both day use and overnight use have been identified in management units to the east and west. Road related recreational facilities (Rec) identified here are an overflow camping area within an old material site, day use facilities near Moose Lake, and three turnouts (T) which provide opportunities for scenic views. Additional turnout-turn around sites need to be identified so they are spaced at approximately every mile to meet traveler needs.

Rec-1 These two existing material sites are immediately adjacent to the road and are separated by a seasonal creek which opens up nice views to the nearby Crystalline Hills. These sites could use some regrading and revegetation to better screen them from the road and to function as small, undeveloped, overnight camping areas. Both sites could be developed, each one oriented to travelers going in a particular direction. These sites should also be used to meet traveler turnout-turn around needs.

Rec-2 This small clearing adjacent to the road is used for parking and access to Moose Lake. Considerable selective vegetation clearing is needed to

provide better visual access to the lake and invite more day use. Because of its proximity to the road, overnight use should not be encouraged. Intensive development is not recommended because of generally boggy soil conditions and lake banks which make access to the water difficult. If the road alignment remains unchanged, the Moose Lake area should be more carefully evaluated with respect to its recreational potential since it is the only potential activity node between the Gilahina and Lakina rivers.

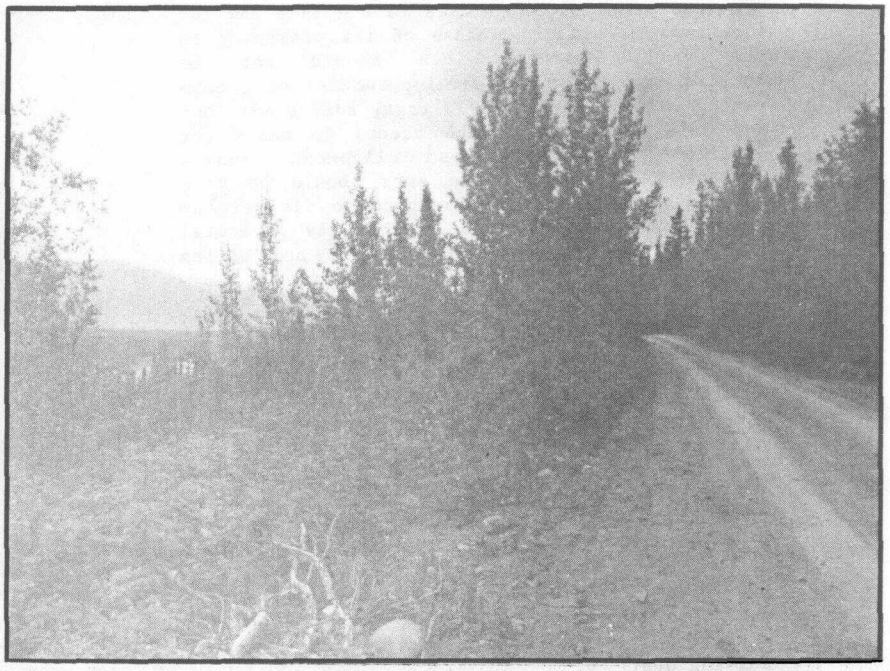
T-1 This area where the road has been widened could be converted into a turn around-turnout. Some foreground vegetation management could open up views towards the Chugach Mountains and Rock Lake.

T-2 A small (2 car) turnout is recommended at this site. There are potentially good lateral views towards the Crystalline Hills as well as the opportunity for viewing Dall sheep. Debris in the creek needs to be cleaned up. Turnouts should be provided on both sides of the road (though staggered) since there also exists opportunities for views to the Chugach Mountains for travelers heading west.

T-3 This is a recommended turnout with views towards the Crystalline Hills and some interesting rock features. For travelers heading west this is a "new" view of these hills and, therefore, of particular visual interest.

Moose Lake, seen here from the road, is the only significant water feature readily accessible from the road within this management unit. The boggy terrain and dense vegetation make recreational use difficult.

Lakina River & Long Lake



Numerous filtered views of the Lakina River, shown here, and Long Lake are possible within this management unit.

General Description

Management Unit 29 consists of 13.5 miles of the McCarthy Road from near Ruth Lake to just beyond Tractor Creek about 6 miles from McCarthy. The road follows the old Copper River and Northwestern Railroad Alignment along the lower slopes of the Crystalline Hills and Fireweed Mountain. The Chitina and Nizina rivers are to the south though not visible. Major water features visible in this unit are Long Lake and the Lakina River. Landcover is predominately spruce-hardwood forest with poplar-willow communities dominating the river lowland and disturbed sites. Numerous wet tundra and black spruce dominated bogs can also be seen.

This is one of the few areas along the McCarthy road where residential development, particularly homestead style development is visible. These are for the most part in scale and visual harmony with the surrounding landscape. The few man-made clearings associated with these developments open up views and the grass cover is a visually distinctive feature during the spring and summer.

Views are dominated by nearby Fireweed Mountain and the Crystalline Hills to the north. The Chugach Mountains on the south side of the Chitina River are visible, though not as strong a visual feature. In the eastern part of the unit

29 Lakina River & Long Lake

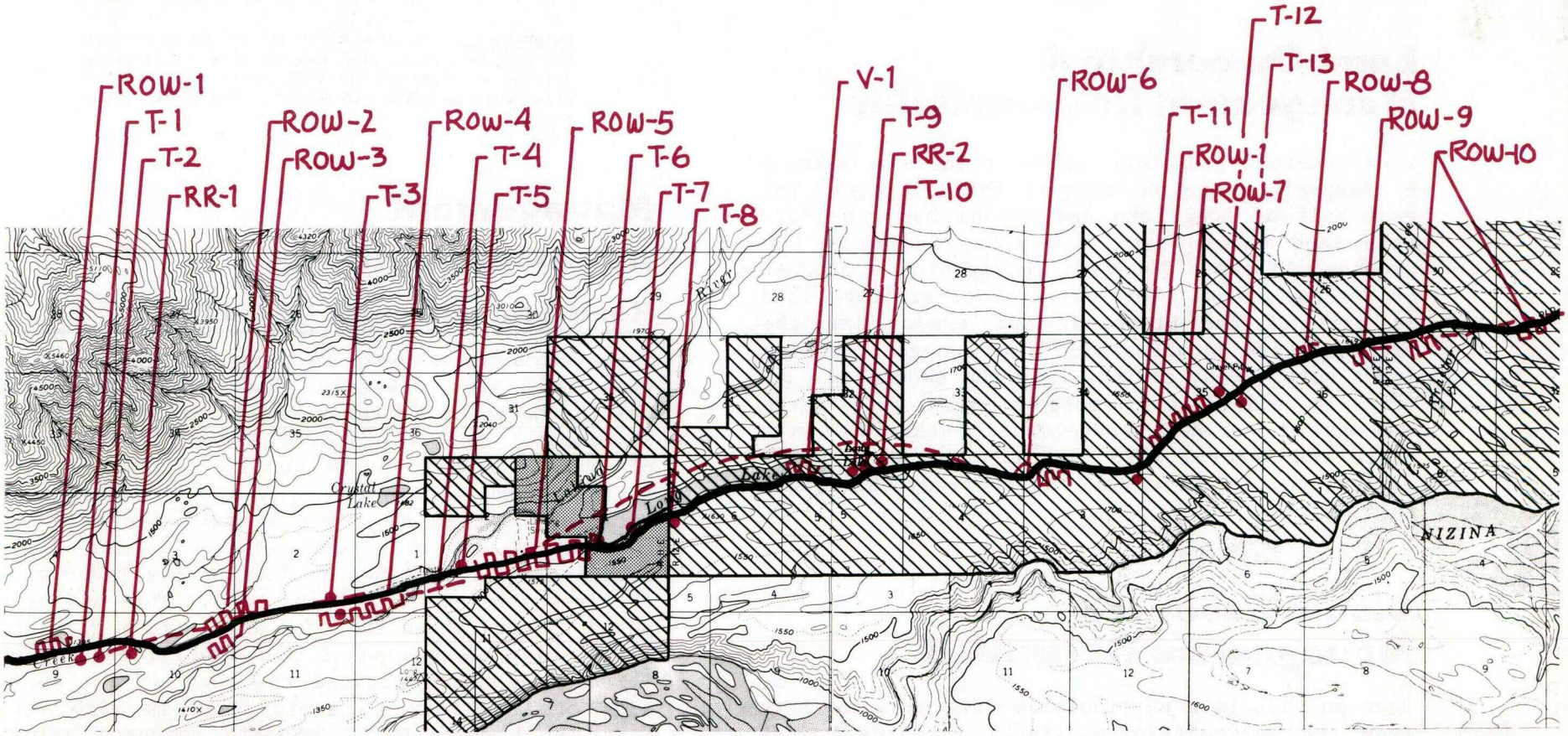
Assessment Units M20 – M26

KEY

ROW – Right of Way Mgt.
T – Turnout
RR – Railroad Remnants
V – View Management
D.O.T.P.F. Realignment Proposals (1973)

State Owned Land
Federal Land
Private Land

NORTH 0 1 2 mi.



the higher ridges and mountains above McCarthy are visible (Bonanza Ridge, Sourdough Peak) however the traveler is generally unaware of their proximity to McCarthy. In only a few places are there views of the higher Wrangell Mountains to the north.

Scenic resource values are quite variable, with relatively low ratings around Tractor Creek and east of Long Lake and high ratings around Long Lake and the Lakina River.

Land Ownership & Management Responsibility

Land ownership adjacent to the road is a mixture of federal, state and private landholdings. The east half of Long Lake and beyond has considerable land under State ownership, including the proposed Fireweed Mountain subdivision southwest of Tractor Creek. This large block of State land is part of the proposed land trade with the National Park Service which also manages roadside lands here. West of Long Lake the ownership pattern is considerably more complex with large amounts of private landholdings intermixed with State and Federal (NPS) lands. The State DOTPF manages the 200 foot wide right-of-way throughout this unit.

Visual Resource Management Objectives

Because this is a particularly diverse area, both from the perspective of visual resource values and ownership and land use patterns, it is recommended that management objectives relate to the following three themes: sensitive land use and development, retention and enhancement.

> **Sensitive Land Use and Development:** To encourage land uses and developments which are sensitive to scenic resource values and to the character of this as a wild and historic driving experience within a national park.
>
> **Retention:** To retain those characteristics which contribute to making this a particularly rich and memorable viewing and driving experience.
>
> **Enhancement:** To take advantage of opportunities to increase views and create more interesting driving experiences, as well as to enhance traveler understanding and appreciation of the landscape.

Management Recommendations

Road Realignment & Upgrading

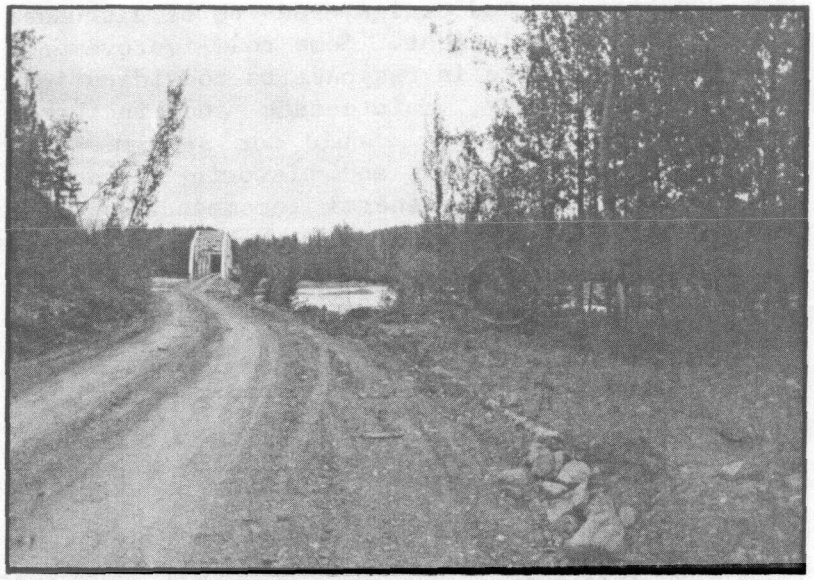
Three realignments were recommended for this portion of the McCarthy Road in the 1973 Chitina-McCarthy Highway Environmental Impact Statement. One relocates the road to the north of Crystal Lake to avoid conflicts with an airstrip expansion proposal. A second realignment locates the road on a bench above the existing road about one mile west of the Lakina River crossing and then takes it down onto a lower river terrace below the present road. This was proposed to straighten the road and avoid a glaciering problem along some of the sidehill cuts. The third realignment locates the road on the north side of Long Lake to avoid problems with wet, silty soil conditions. Scenic resource values

and driving experiences were compared for the present road and the proposed alignments. Based upon this analysis, as well as considering the wild and historic character of the road, it is recommended that the existing alignment be retained in every case within this management unit.

The Crystal Lake realigmnent would not increase viewing opportunities to the lake or more distant landscape features. It would also replace a series of curves with a long, nearly straight alignment, reducing the potential for changes in viewer orientation.

The realignments west of the Lakina River would have variable results. Where the road would be on a bench above the existing road the opportunity for distant views would increase. However, the road then drops down onto the lower Lakina River terrace where the tall vegetation and nearly flat topography limit views. Coupled with this, the new alignment would create a nearly two mile long straight road with some significant road cutting and filling. The existing road offers numerous lateral views and enough changes in direction to result in a visually pleasing experience. The present alignment comes closest to retaining the "wild" and "historic" character of this road.

The Long Lake realignment would definitely offer the potential for an increase in distant views since the road would follow the top of a series of linear ridges along the north side of the lake. However, once again it would result in a continuous straight alignment for over two miles, with minimal change in viewer orientation and a poor relationship to the topograhy. Additionally, this route would bypass the old railroad



The Lakina River crossing shown here, could become a focus for day use recreational activities (picnicking, fishing, rafting). The present one lane steel bridge is a visually distinctive feature which supports the wild and historic character of the road.

trestle at the east end of Long Lake which, though fallen down and being dismantled for firewood, still has some visual significance. The existing alignment, as it winds along the hills on the south side of Long Lake, offers a constantly changing driving experience and some of the more memorable views along the McCarthy Road. The wet soil conditions along this route do not appear to be severe enough to warrant rerouting. Indeed they may be considered an "amenity" if they can help to maintain the wild character of the road.

The question of road design needs to be discussed in addition to alignment. Some road improvements may need to be done in response to considerations related to safety, maintenance and increased use. However, changes should not significantly erode the desired wild and historic character. As discussed in the general recommendatons for road design and upgrading for the McCarthy Wild and Historic Road, the following guidelines should be followed:

- Retain this segment as a relatively narrow (18-20 foot) two lane, gravel and dirt surfaced road.
- Follow former railroad alignments and grades and retain evidence of the railroad whenever possible.
- Design and maintain the road for a maximum speed of 25 to 30 mph.
- Bridges should be kept to one lane.
- Roadside brush control should be kept to a minimum.
- Some difficult driving conditions should be acceptable.

Land Use & Development

Residential development is the most common land use within this unit. Existing patterns range from recreational subdivisions around Crystal Lake (where only one lot has been developed) to large, picturesque homesteads complete with private landing strips. It seems likely that this range of land uses will continue within this area as there is considerable private land which could be developed. There is also some pressure for more land to be made available, as evidenced by the proposed Fireweed Mountain state land disposal. Existing development either does not have a strong visual impact, as is the case with most homesites which tend to be set back from the road and screened by trees, or it has a strong positive impact, such as the neatly maintained homestead nestled amongst the trees and visible at the end of a long grassy airstrip.

The densely forested landscape and variable topography offer the opportunity to screen development, and if the landscape is used properly, future residential developments could continue to have only minimal visual impacts. However, the impact of such development would be expressed in the changing character of the road itself. Increased local use of the road would likely lead to pressures for road widening and other improvements which could be incompatible with the desired character of this as a "wild" road within a "wild" landscape and national park. As a consequence, the following recommendations are made:

- Further development in this area should not be encouraged. The primary land use should be "no use," with some scattered, large lot recreational cabins and "homestead" style residences. Further small lot residential subdivisions should not be encouraged.
- The State should avoid further land disposal activity within this area.
- Developments should be encouraged to continue to use air access to help reduce the use and dependence on the road.
- Roadside commercial activity should be discouraged. Any recreational related commercial developments (campgrounds, lodges, etc.) should be located away from the road and not visible from it. Signage should be visually subordinate to the surrounding landscape.

- The number of access roads from the McCarthy Road to adjacent developments and parcels should be kept to a minimum. Such access roads should be narrow, adequately screened from view, and service as many parcels as possible.

- Greenbelts with associated management guidelines should be adopted for all lands adjacent to the road in order to keep visual impacts of uses and developments low.

Greenbelts

Two types of greenbelt management strips and associated use guidelines are recommended for roadside lands within this management unit: a 50 foot wide greenbelt for privately owned lands and a 100 foot greenbelt for public lands. It should be noted that since this area is outside of an organized borough or local government, no implementation mechanism exists and consequently greenbelts on private lands must be considered voluntary. As a consequence public agencies (DOTPF, DNR, NPS) have a responsibility to inform private landowners as to the benefits and uses of greenbelts and to encourage them to adopt land use and development practices which conform to greenbelt recommendations.

The following guidelines apply to the 50 foot greenbelt management strip beyond the road right-of-way:

- Apply to private lands

- Limit permanent structures within this area

- Encourage retention of existing landcover within the first 25 feet next to the right-of-way, and selective clearing within the remaining 25 feet

- In some areas, encourage clearing and other actions which respond to specific opportunities or problems. For example, clearing may be encouraged where near or distant views may be increased. In other cases, intensive replanting may be needed to screen a view of a former material site.

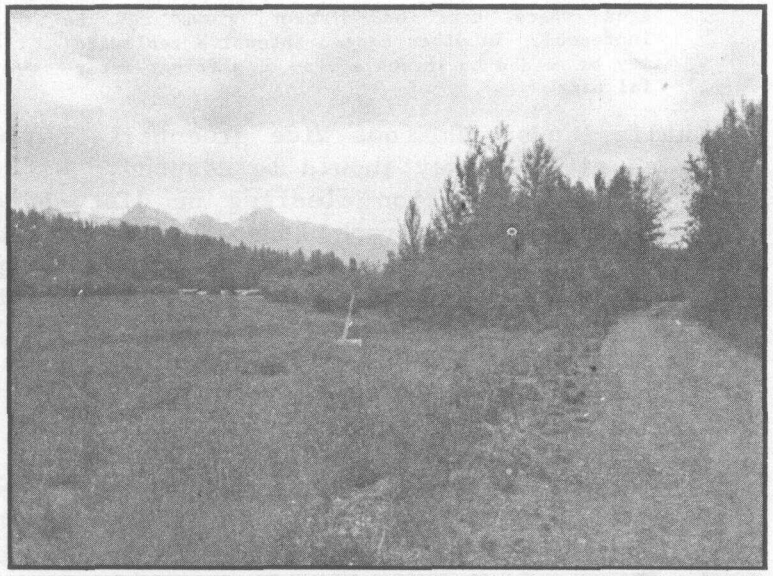
On public lands, 100 foot wide greenbelts beyond the road right-of-way should be adopted. Within this area no vegetation clearing or disturbance to the existing topography should be permitted except for access roads crossing this strip. (See also the general discussion for the McCarthy Wild and Historic Road, for additional greenbelt information.)

Railroad Remnants (RR)

This unit contains numerous remaining remnants (trestles, rails, ties, spikes) of the former Copper River and Northwestern Railroad which used to follow this road alignment. As pointed out in the general discussion for the McCarthy Wild and Historic Road, these features are important visually as well as historically. While it is not recommended that actual restoration take place, it is recommended that every effort be made to maintain visibility, prevent removal, and extend their effective life as important roadside features for as long as possible.

RR-1 This former trestle over Crystal Creek still has some portions standing. Visually it functions almost like a piece of sculpture. Research should be done to explore ways to stabilize the remaining portions. Timbers should not be removed for building materials or firewood.

RR-2 This very large trestle at the east end of Long Lake only recently collapsed and is presently being scavenged for firewood and building materials. Further removal of rails and timbers should not be permitted - the remaining portions should be allowed to deteriorate naturally. (This is also a recommended site for turnouts, See T-9 and T-10.)



Between the Lakina River bridge and Long Lake the road follows a straight alignment through a dense tunnel of trees. This experience is enriched by occasional lateral views to clearings associated with homestead like development such as that shown here.

Right-of-Way Management (ROW)

Next to road alignment and design, the actual management of the right-of-way corridor can have the greatest impact on scenic resource management along roads. Within this unit, right-of-way vegetation management is presently minimal and contributes significantly to the character and quality of the driving experience. The dense vegetation close to the road creates interesting and variable spaces and plays a fundamental role in minimizing the visual impact of the road and maintaining low driving speeds.

In keeping with the recommended "wild" character of the road, right-of-way management actions, and particularly roadside brush control, should continue to be minimal and respond to specific opportunities and problems. Guidelines for right-of-way management can be found in the general discussion for the McCarthy Wild and Historic Road. The following recommendations identify site specific right-of-way management actions:

ROW-1 Selective clearing of poplars which are invading the road's gravel edge recommended to open views and retain a more natural visual transition from the road to the adjacent bog-lake environment.

ROW-2 Filtered lateral views towards the Crystalline Hills could be opened up through selective roadside right-of-way clearing. This could provide a welcome change of viewer orientation while traveling west.

ROW-3 Retain the roadside strip of poplars to screen existing land clearing activity associated with the airstrip.

ROW-4 Selective clearing is needed to open up views to the Lakina River and beyond for travelers heading west.

ROW-5 The dense poplar-willow vegetation is important as a screen-filter for adjacent private land and to create a dramatic spatial experience. Selectively trim the trees to maintain clearance, focusing on the willows. Avoid the removal of large trees.

ROW-6 Clear roadside vegetation on the <u>inside</u> of the turn to provide better visibility around the curve.

ROW-7 Selective clearing within the right-of-way could open up filtered lateral views towards the higher Wrangell Mountains (Castle Mountain, Mt. Blackburn).

ROW-8 Selectively clear some of the roadside shrub and tree vegetation to provide better views of the Crystalline Hills.

ROW-9 Selective clearing on the south side of the road could open up a dramatic view for travelers as they round the curve.

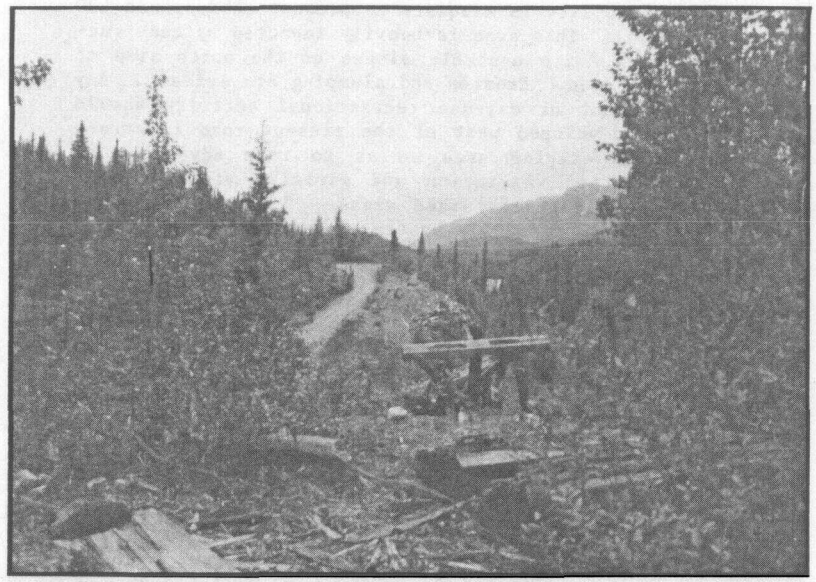
ROW-10 Lateral views towards near and distant mountains could be increased if selective clearing were done.

V-1 (View Management) Clearing and thinning of vegetation within and beyond the right-of-way could open up excellent lateral views across Long Lake and up the Lakina River valley towards the higher Wrangell Mountains.

Road Related Recreational Facilities

Within this management unit, numerous small turnout sites have been identified. Most of these allow the traveler to pull off the road and take advantage of desirable viewing opportunities. They can also be used as places to turn around since this road should remain relatively narrow. Some sites are suitable for day use activities such as picnicking and wildlife viewing and some are recommended for orientation information such as signs naming important landscape features. Overall development should be kept to a minimum and only day use should be encouraged. Overnight use areas and rest areas have been identified to the west at the Gilahina River crossing and at "roads end" near McCarthy to meet traveler needs.

T-1 This recommended turnout (2-3 vehicles) offers good views to the nearby Crystalline Hills and the opportunity to view Dall sheep. There is good visibility for safe entry-exit. Turnout development, which would require some fill, should take place on the south side of the road so as not to encroach on the lake and wetlands. The potential exists for trail development and for opening views to the south and east.



Former railroad trestle embankments have potential for developmemt into small turnouts or walk-on viewpoints. This photograph shows the view from the east embankment of the old trestle over the small valley east of Long Lake.

T-2 This recommended turnout for 1-2 cars is above Crystal Creek with a northeast view and orientation towards the distant Chugach and Wrangell mountains.

T-3 Space for a small turnout (1-2 cars) exists on both sides of the road. This site has good views towards the Lakina River and more distant Wrangells to the east, as well as good visibility for safe vehicle access.

T-4 This site is along the Lakina River near the bridge. It is an area which has been widened and used for construction and maintenance activities associated with the bridge. This site offers good access to the river for fishing and picnicking. Views are not exceptional, the primary attraction is the Lakina River. Turnout entrance

visibility is adequate at present road speeds (30 mph). This area is heavily impacted by construction, with unstable slopes on the north side of the road. Erosion and slumping are evident. Any turnout or day-use recreational activity should be developed west of the present road construction staging area so as to take advantage of existing vegetation and minimize visibility of the highly disturbed areas. This turnout would be used primarily by travelers heading east.

T-5 This site is on the northeast bank of the Lakina River bridge. It has good access and orientation to the river and good views both up and down the river. It would be a preferred site to T-4 for day use recreational activities such as picnicking and fishing. The major problem is the presence of private ownership.

T-6 This one lane bridge over a small creek fed from Long Lake is an excellent viewpoint with views across Long Lake and towards a particularly picturesque homestead. Red salmon may be seen from this bridge during the summer. This is a particularly sensitive area due to the adjacent private land and the presence of the salmon. No turnout development is recommended. The bridge should be kept narrow to allow people to stop briefly and enjoy the views without encouraging extended use of the area.

T-7 This existing small turnout (1-2 vehicles) has nice lateral views across Long Lake to a picturesque homestead and its associated land clearing. It should be retained as is with only periodic vegetation management to maintain the views.

T-8 This is the best place for a Long Lake viewpoint and access from the existing road. Visibility is good for safe entry-exit. Development would require roadside clearing on the south side to allow for 2-4 vehicle parallel parking. A viewing platform is recommended over the lake. Road widening should be restricted to the uphill side to minimize disturbance to lake edge vegetation and slopes.

T-9 Long Lake Overlook (second choice). This site is located at the west end of the old railroad trestle embankment. Site development would require clearing and grading. Trails up to a slightly higher viewpoint as well as down to the lake could be developed. This site does offer good views of the remains of the railroad trestle which used to span this small creek valley. The primary problem facing development is poor entrance-exit visibility, since the site is on a hill and in the middle of a turn.

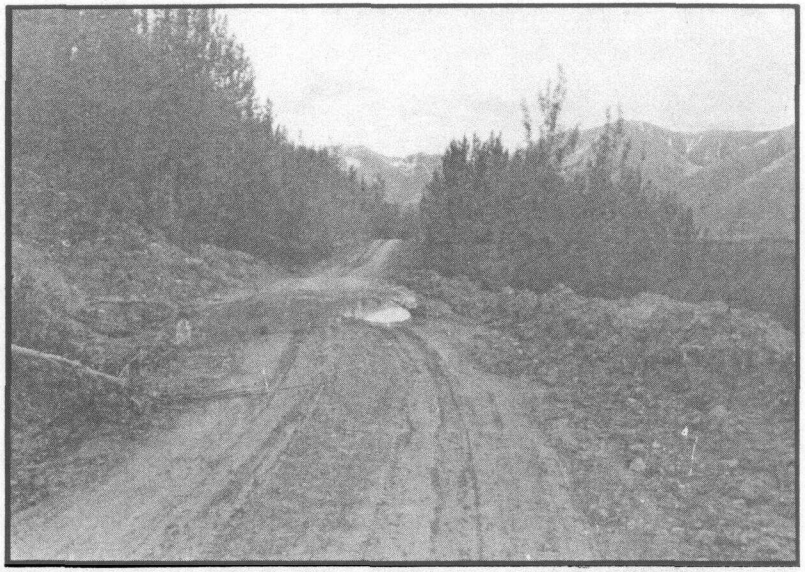
T-10 Long Lake Overlook (first choice). This site is located at the east end of the railroad trestle embankment. It provides a finer vantage point for views of Long Lake and the Crystalline Hills and has a nice setting within an aspen grove. Access could be along the old railroad grade which would require some clearing and regrading, as well as signs to direct travelers to it. Vehicles should be kept back near the road and only pedestrian travel should be permitted to the viewpoint above the former railroad trestle.

T-11 This site is recommended for development into a small (2-3 cars) turnout. It would be developed primarily for eastbound travelers and offers views to the more distant Wrangell mountains to the east (University, Bona, Churchill). Clearing nearby vegetation would be necessary to open up the views. Raising the viewer position 2-3 feet on fill would help to improve the viewing opportunities.

T-12 This small existing turnout offers good views over the lake and, on clear days, towards the higher Wrangell Mountains (Blackburn, Castle Peak). This site is somewhat more protected than nearby T-13 described below.

T-13 This recommended scenic turnout offers panoramic views across the lake to the Wrangell Mountains (Blackburn, Castle Peak), Fireweed Mountain and the Crystalline Hills. It is a very open, exposed site. Turnout development should consist of a widening on the south side of the road so as not to encroach any further upon the wetlands and lake. A wooden viewing platform taking people out away from the road and above the wetlands is recommended for development.

Roads End - McCarthy



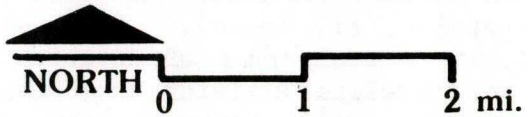
The railroad needed to follow side slopes above the Kennicott River lower terrace in order to maintain grade. This alignment has resulted in some severe mudslide problem areas such as that shown here. At the same time it allows for numerous views out over the Kennicott River Valley towards McCarthy and creates a dramatic arrival experience.

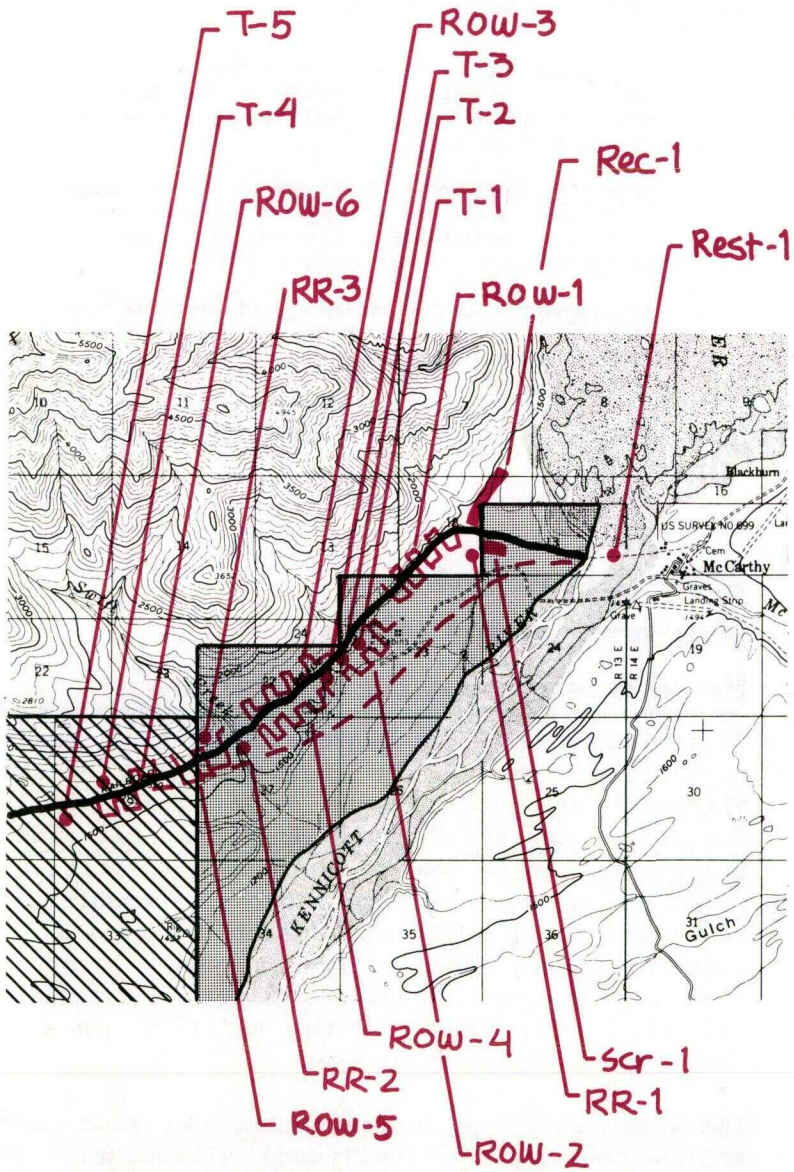
General Description

Management Unit 30 consists of the last six miles of the McCarthy Road, ending at the West Fork Kennicott River bridge site. (The West Fork Kennicott River bridge washed out in 1981 and as of July 1982 had not been replaced. As a consequence, crossing this fork was limited to a 1940's vintage hand-operated cable tram. Crossing the East Fork of the Kennicott River has been possible only by tram since the bridge over this fork washed out in the 1970s). The road follows the Old Copper River and Northwestern Railroad alignment along the lower side slopes of Fireweed Mountain and drops down onto the terraces of the Kennicott River. Roadside vegetation is predominantly dense stands of poplars and willows. Land development in the area is sparse and virtually not visible from the road except for distant views of McCarthy. Most of the negative visual impacts are the result of road maintenance activities, where a number of areas with poor, clayey soils and unstable slopes have necessitated frequent bank cutting, filling and debris clearing.

30 Roads End - McCarthy

Assessment Units M27 – M29





KEY

ROW - Right of Way Mgt.
T - Turnout
Rec - Recreation
Rest - Rest Area
Scr - Screening
RR - Railroad Remnants
D.O.T.P.F. Realignment Proposals (1973)
Federal Land
Private Land
State Owned Land

Scenic resource values are high within this unit, primarily because of near and distant views and the driving experience. In spite of being within a forested landscape, the traveler is presented with numerous opportunities for filtered and open views to nearby landscape features (Fireweed Mountain, Bonanza Ridge, Regal Mountain, and the Kennicott River and Glacier) as well as more distant mountains (University Peak, Chugach Mountains, Mt. Logan). Brief views of McCarthy create a real sense of anticipation on the part of travelers arriving from the west. The narrow winding road alignment next to Fireweed Mountain which then drops down onto the Kennicott River floodplains provides a constantly changing point of view and sense of spatial enclosure which contributes to the interest of the driving experience.

Land Ownership & Management Responsibility

Roadside land ownership within this management unit is predominantly private with large blocks of State land in the west part of the unit. This State land is presently being considered as part of a land trade with the National Park Service, who manages the federal land surrounding the state and private landholdings. The State DOTPF manages the 200 foot wide right-of-way centered on the former railroad alignment.

Visual Resource Management Objectives

Objectives related to the themes of retention, sensitive land use and development, enhancement, and arrival-entry are recommended to guide land use and development plans, policies and actions within this management unit.

> **Retention:** To retain those qualities which contribute to making this portion of the McCarthy Wild and Historic Road a particularly scenic and memorable experience.
>
> **Sensitive Land Use and Development:** To encourage roadside land use and development which is sensitive to the area's visual resource values and its character as a wild and historic road.
>
> **Enhancement:** To take advantage of opportunities to enhance the quality of this as a recreational driving experience and to encourage a better understanding of the landscape and its history.
>
> **Arrival-Entry:** To create an appropriate arrival experience into the Kennicott-McCarthy area and entrance into the heart of the Wrangell-St. Elias National Park.

Management Recommendations

Road Realignment & Upgrading

Comparisons from a scenic-experiential quality perspective were made between the existing alignment and realignments outlined in the 1973 Chitina McCarthy Highway Environmental Impact Statement. These realignments were identified in response to continual maintenance problems in areas with poor soils and unstable slopes on the existing route. The realignment would locate the road on the lower Kennicott River Terrace about 1/2 to 1 mile south of the existing route and thus bypass the problem areas.

The study findings indicate that the road should follow the present (railroad) alignment. This routing offers an exceptional entrance experience

into the McCarthy Kennicott area. The periodic views towards McCarthy and the narrow, winding road which provides continual changes in viewer position and orientation are all integral to this experience and would be lost if the new alignment was constructed. The unstable areas can be engineered to reduce hazards and the frequency of slope movement. Views in these places can readily be oriented towards the Kennicott River valley, further reducing the potential visual impacts of any needed slope cutting or bank stabilization structures.

As pointed out in the general discussion for the entire McCarthy Wild and Historic Road, only minimal road upgrading should take place in order to retain the "wild" character of the road and surrounding landscape. It should continue to be a seasonal, relatively narrow (18 to 20 foot wide) dirt road designed and maintained for driving speeds of 25 to 30 mph. Some difficult driving experiences such as potholes and water in the road should be acceptable and indeed, may be desirable. Roadside maintenance beyond the road edge should strive to minimize vegetation disturbance. Turnout-turn around spaces should be provided every mile in order to meet traveler's needs to stop and turn around while keeping the road just wide enough so two vehicles can safely pass. More detailed discussions related to right-of-way management and turnouts follow.

McCarthy Kennicott Access

Upon their arrival at the West Fork Kennicott River bridge, travelers are faced with the choice of hiking the glacier or taking the hand operated trams in order to get to McCarthy or Kennicott. Both of these are dangerous and unacceptable to most people. The question of access into McCarthy and Kennicott is an important and controversial one; some people want to keep vehicles out of the area and others demand convenient vehicular access. Four possible alternatives exist. First, two vehicle bridges could be installed, permitting travelers to drive into McCarthy and nearby Kennicott. (Further vehicular access south of McCarthy would depend on the installation of a bridge over McCarthy Creek.) Second, one bridge over the West Fork of the Kennicott River could be installed, permitting vehicular access to the island between the two forks, with a pedestrian bridge over the east fork. Third, pedestrian bridges across both forks of the Kennicott River could be installed, keeping vehicles off the island and out of McCarthy-Kennicott. Finally, the Kennicott River could be crossed by a single bridge and a new road alignment to the south of the island. This would still necessitate either a vehicle or pedestrian bridge across McCarthy Creek to provide access into McCarthy itself. Based upon the goals and objectives recommended for this road the second alternative, a vehicle bridge-pedestrian bridge combination, is the best solution.

As discussed in the general recommendations for the McCarthy Wild and Historic Road, how one gets into McCarthy is an important consideration in the overall quality of this road as a recreational experience. Driving into McCarthy would be "too easy" and the sense of arrival would be anticlimactic. Vehicles would also destroy the scale and character of both McCarthy and Kennicott. This is a case where the cliche'- "getting there is half the fun"- really applies and it is critical that the challange be

maintained - even if it is walking across a pedestrian bridge into McCarthy.

This recommended combination of a vehicle bridge across the West Fork of the Kennicott River and pedestrian bridge across the East Fork provides safe, reasonably and convenient access, yet maintains the challenge and character of this as part of the overall scenic, wild and historic experience. A one lane vehicular bridge across the West Fork of the Kennicott River would allow access to the large island. Here, parking and a rest area would be developed in the trees on the higher ground above the floodplain. From here a pedestrian suspension bridge would take people across the East Fork and on into McCarthy. A suspension bridge is recommended because it offers an exciting crossing experience while still being safe and accessible to everyone. A properly designed tram for hauling goods too heavy and bulky to take on the bridge should be included to reinforce the image of this as an important historic transport means in the area and to meet local resident's needs.

Finally, so as not to lose completely the experience and challenge of hand-powered trams, it is recommended that a new tram be installed across McCarthy Creek. This would open up the areas beyond to pedestrian and recreational access.

Land Use & Development

Even though this area is distant from existing population concentrations and access is difficult, the spectacular scenery, readily developable land and the location within a major national park make it attractive to many for residences and recreational homesites. There exists considerable private land in the area which could be used in this fashion. Present development is scattered and hidden from view due to the dense vegetation that is characteristic of the area. While it is not desirable to encourage intensive development and land use in the area, it would be possible for some growth to occur without significant visual impacts. The following guidelines are presented to help encourage land uses and developments which are sensitive to scenic resource values and the desired character of the road corridor.

- No commercial development should occur adjacent to the road. Commercial activity should continue to be concentrated in McCarthy and Kennicott. Privately developed campgrounds and lodges could locate outside these centers, but they should not be visible from the road.

- Residential development should continue to be dispersed and for the most part not visible from the road. Landowners of parcels adjacent to the road should be encouraged to adopt the greenbelt management recommendations to help keep the visual impacts of development to a minimum.

- Land intensive resource developments, such as mining and timber harvesting, should not be encouraged in this area. Use of the road for mining or logging related activities would not be compatible with its primary uses for local access and as a recreational corridor. Small scale agriculture, like that associated with homesteads and subsistence, would be compatible with visual resource management objectives if it is not visually prominant.

- Public lands should remain under public ownership. Already there exist considerable private landholdings adjacent to the road throughout the road corridor. Public land should be retained to help buffer some of the possible development on these lands and to meet needs for public access and use. The proposed State land trade with the National Park Service would be compatible with the visual resource management objectives recommended here.

- Access roads from the McCarthy Road to private developments should be kept to a minimum. Collector or feeder roads servicing several, rather than individual parcels, should be encouraged in order to help reduce the number and frequency of such roads. Every effort should be made to reduce their visual intrusion by keeping these roads narrow, with minimal vegetation clearing.

Greenbelts

A greenbelt management strip can be an effective tool for visual resource management beyond the road right-of-way. Greenbelt recommendations have two componants - the width of the management strip, and the guidelines for how the area should be used in order to achieve certain ends. In this unit, greenbelt management recommendations relate to the visual resource management goals and objectives suggested for the entire McCarthy Wild and Historic Road. But implementation of the recommendations will be a problem because of the extensive private landholdings, coupled with the fact that this area is outside an organized borough or local government. Consequently on private lands, conformance with these recommendations is voluntary. On public lands, they should be formally adopted and every effort should be made to get local landowners to understand and adopt them. (See also the general discussion on greenbelts for the McCarthy Wild and Historic Road.)

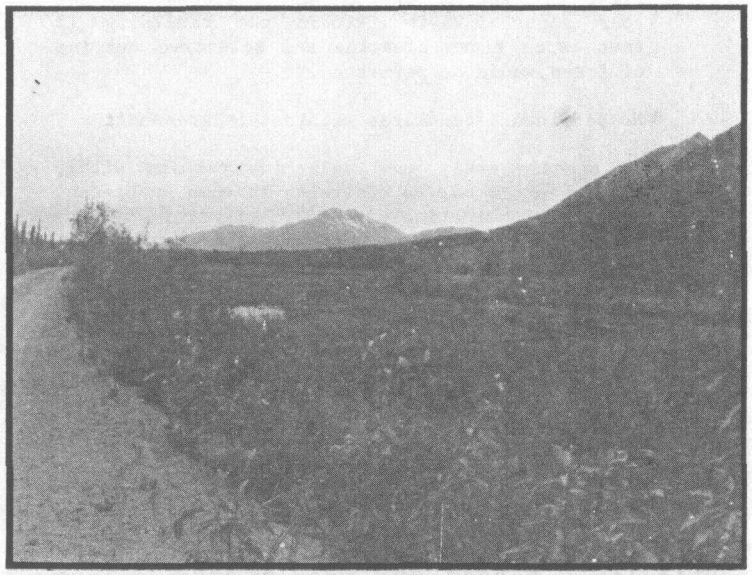
It is recommended that a 50 foot wide greenbelt management strip be established beyond the highway right-of-way within this management unit. Within this area the following specific guidelines should be adopted.

- Except for that which is required for access roads, no vegetation clearing should occur in the first 25 feet of the greenbelt closest to the road right-of-way. Within the remaining 25 feet, some brush clearing and selective cutting of trees would be permitted.
- No permanent structures within this greenbelt
- In certain areas some selective cutting within the greenbelt may be desirable to open up distant views in combination with DOTPF right-of-way management plans.

Right-of-Way Management (ROW)

An important aspect of this road as a unique driving experience and exciting entrance into the McCarthy-Kennicott area and the heart of Wrangell-St. Elias National Park is its wild character. This wild character stems, to a large extent, from the absence of road maintenance - particularly beyond the road's edge. Thus, the road appears narrower and in scale and harmony with the surrounding landscape. This also effectively controls driving speed and increases driver caution, resulting in a relatively safe road in spite of the fact that it is narrow and one lane. These characteristics are desirable, and future right-of-way management activities should strive to retain these qualities as much as possible.

Right-of-way management does not mean that everything should be left alone. On the contrary, considerable management is needed here, but it needs to be controlled and directed. Visibility around some curves should be improved. In some cases views could be improved with selective clearing. Turnout spaces need to be graded and maintained. Disturbed banks and creek edges need to be revegetated. All this needs to be done while at the same time retaining the wild, unmanaged qualities characteristic of this road.



Fireweed Mountain on the right and the Crystelline Hills in the distance are prominant landforms visible throughout the eastern half of the McCarthy Road. This photo illustrates how invading willows create an unnatural roadside edge and often impair views.

Visually appropriate right-of-way management guidelines and techniques are discussed in the general discussion for the McCarthy Wild and Historic Road. Specific applications of some of these concepts follow:

ROW-1 No clearing of vegetation should occur beyond the roadway edge at this location in order to retain the enclosed feeling and limit views out.

ROW-2 Selective clearing is recommended here to provide periodic framed views over the valley below.

ROW-3 Selective clearing would establish stronger views towards Fireweed Mountain.

ROW-4 Retain dense vegetation adjacent to the road to act as a visual barrier and to orient views toward Fireweed Mountain.

Row-5 Retain the dense vegetation on both sides of the road up to the road's edge within the right-of-way to create an enclosed feeling.

ROW-6 Clear the willows which are invading the road edge through this wetland area in order to open up views and to create a more natural appearing boundary between the road and adjacent wetlands.

SC-1 Retain the invading poplars adjacent to the road in order to continue to screen the adjacent gravel pit.

Railroad Remnants (RR)

The few remaining remnants of the Copper River and Northwestern Railroad are important visual features and essential to the historic character of the road. Within this management unit the following recommendations are made with respect to these railroad remnants:

RR-1 This earth fill paralleling the road was the former railroad grade. Invading vegetation should be controlled so that it is a more visible reminder of the days when the railroad was the sole means of access to McCarthy.

RR-2 These remnants of a small railroad trestle are still standing, however they appear to be in very poor condition and in danger of falling down. Efforts should be directed at stabilizing the standing portion and protecting those portions which have fallen down from being removed for firewood and use in local building. Because of the climate, these features can remain as visually significant elements for at least another 25 years if left alone.

RR-3 A portion of the old railbed with ties is visible paralleling the road. Invading vegetation should be cleared to permit views of this feature and to reduce its rate of deterioration.

Road crossings of small streams often result in considerable landscape disturbances such as that shown here. The gravelly glacial materials and steep slopes mean that natural revegetation takes a long time to soften visual impact.

Road Related Recreational Facilities

Within this management unit three types of road related recreational facilities are recommended to respond to traveler needs. A rest area (Rest) is recommended at the "roads end" as a place to park vehicles while going into the McCarthy-Kennicott area as well as provide an information-orientation point for the area. A site for a public campground (Rec) was identified to meet the needs of travelers wishing to camp in or around their vehicles. A series of turnouts (T), primarily to provide travelers with places to pull off the road and take advantage of views have also been identified. See the management unit map for locations of sites described below.

Rest-1 "Roads End" Rest Area. The actual location of this rest area is dependent upon the decision regarding access into McCarthy. This rest area recommendation relates to the vehicle bridge over the West Fork of the Kennicott River and pedestrian suspension bridge over the East Fork as discussed earlier. In this case, a rest area should be developed on the island between the two forks on its east side and above the active floodplain. It should be kept back within this forested upper terrace to take advantage of the existing vegetation and to reduce the visual impacts associated with vehicle parking and rest area development. Here the rest area could be developed within the existing road right-of-way with the presently cleared areas used for vehicle movement and parking. This rest area would also contain outhouses, trash receptacles and some picnic tables, as well as a ramp to the pedestrian suspension bridge. A wooden lookout within the trees would also be desirable to allow people to get high enough to begin to see the relationships between the glacier, rivers, McCarthy and other landscape features. Finally an information board should be provided which orients visitors to surrounding mountains, and includes information related to the recreational opportunities in the area.

If a different access scheme into McCarthy is chosen then further field research needs to be done to determine the best location for this type of facility. Only if vehicular access into McCarthy is provided would a "roads end" rest area not be necessary.

Rec-1 Campground Site. Approximately one mile west of the West Fork of the Kennicott River crossing is a road following the base of the hills to a material site. This offers the best opportunity for vehicle oriented campground development near McCarthy. Development could consist of sites strung out along the road, providing privacy and dispersing use while getting people away from the main road. Potential problems with this site would be access to fresh water, limited views towards the Kennicott River and Glacier, and

private land ownership. In addition, it is reported to be frequented by bears. It has opportunities for a trail to the glacier and up the Fireweed Mountains to viewpoints and could encourage some recreational activity on the west side of the Kennicott River. At the moment little more than road improvement, signage, trash receptacles and outhouses would be required to make it into a usable campground. Further investigation needs to be made with respect to land ownership along this road.

T-1 This is a small existing turnout constructed on fill above the creek. There are good distant views of the McCarthy area as well as a nice orientation to the creek. However, it is immediately adjacent to the roadcut slump areas and considerable landform disturbance is evident. This should remain as a small, turnout-turn around space with no further improvement.

T-2 This is a recommended turnout site near a roadcut through a small hill. Site development would require additional cutting of adjacent slopes to provide adequate space to pull off the road. There are good views towards McCarthy and out across the valley of the Kennicott and Chitina Rivers from a short walk up the hill next to the road.

T-3 This recommended turnout site is similar to T-2 described above except that there presently is adequate room for parking one to two vehicles and consequently less landform modification would be required.

T-4 This recommended turnout overlooks an open lake and bog area with good visibility of the mountains above McCarthy (Bonanza Ridge, Sourdough Peak). A small turnout (2 cars) on the north side of the road should be developed. It would be used primarily by travelers heading west.

T-5 This is a recommended small (2 car) turnout for travelers heading east, with good views of the lake and distant mountains.