



U.S. Department of the Interior
Bureau of Land Management

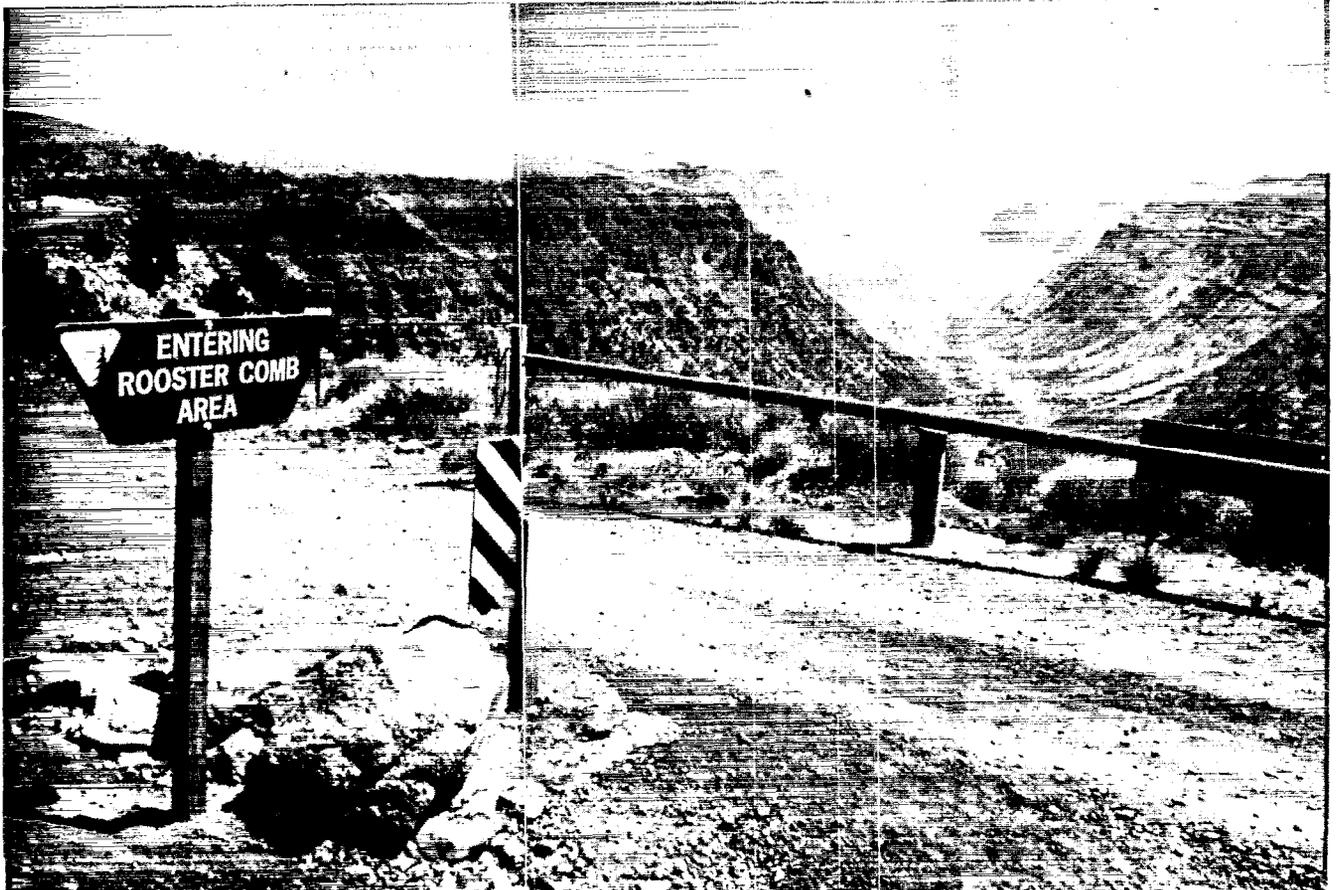
Burns District Office
HC-74, 12533 Highway 20 West
Hines, Oregon 97738

June 1993



Andrews Plan Amendment for Recreation Access Surrounding the Steens Mountain Loop Road

Environmental Assessment to the Proposed Plan
Amendment for the Andrews Management
Framework Plan



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PL-93/30+1792

Cover Photo-View looking up Big Indian Gorge from the gate on the Loop Road just below the Rooster Comb. The road shown in the foreground and in the upper left hand portion of the picture is part of the 7.5 miles identified for closure in the Andrews Management Framework Plan. The roadway through the Rooster Comb has been carved out of rock.

United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Bums District Office
HC 74, 12533 Highway 20 West
Hines., Oregon 97738

June 30, 1993

Dear Concerned Citizen:

Enclosed for your review is the proposed Andrewrr Management Framework Plan amendment and Environmental Assessment for the Steens Mountain Loop Road recreation access planning area. The planning area is a portion of the Andrews Resource Area of the Bums District. The Bureau of Land Management has prepared this document to address proposed changes in the maintenance and management of roads, trails, overlooks, and campgrounds and other associated facilities. The proposed Plan Amendment focuses on broad categories of land and resource uses, provides for site specific actions in the management of resources, and complies with Bureau guidelines for planning and environmental analysis.

The proposed Plan Amendment is based on the draft published in December, 1992; and upon which public comments were received until January 29, 1993. Eighty (80) comments were received during this period from individuals, groups, and governmental agencies. The District Multiple-Use Advisory Council was presented with the draft Plan Amendment and the Council members responded with a comment letter signed by all members.

Differences between the draft and this proposed Plan Amendment are based on comments and recommendations received during the public comment period. Even though substantial differences exist between the draft and proposed Plan Amendments, these differences have been analyzed and this proposed Plan Amendment is designed to stand as an independent document without references to the draft. Decisions in the proposed Plan Amendment are based on the analyses contained in the Environmental Assessment, which considered additional data provided during review of the draft, public comments received, management feasibility, policy, and legal constraints. A new preferred alternative was developed from portions of several alternatives analyzed in the draft. Approval of this Plan Amendment will be documented in a Decision Record which will be mailed to known interested parties and to the public.

The proposed Plan Amendment cannot be approved and implemented until the Governor of Oregon has had an opportunity to review it. Approval of the Plan Amendment will also be subject to the final action on any protests which may be filed. Only those persons or organizations who participated in our planning process leading to this proposed plan amendment may protest. If our records do not indicate you had any involvement in any stage in the preparation of the amendment, your protest will be dismissed without further review. A protest may raise only those issues which were submitted for the record during the planning process and should be filed with the Director (760), Bureau of Land Management, 1849 C Street, NW, Washington, D.C. 20240 within the official protest period ending on July 30, 1993. There is no provision for any extension of time. To be considered "timely," your protest must be postmarked no later than the last day of the protest period. Also, although not a requirement, we suggest you send your protest by certified mail, return receipt requested. Protests must contain the following information:

- The name, mailing address, telephone number, and interest of the person filing the protest;
- A statement of the issue or issues being protested;
- A statement of the part or parts of the Plan Amendment being protested. To the extent possible, this should be done by reference to specific pages, paragraphs, sections, tables, maps, etc. included in the document;
- A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting part, or an indication of the date that the issue or issues were discussed for the record;
- A concise statement explaining why the proposed decision is believed to be incorrect. This is a critical part of your protest. Take care to document all relevant facts. As much as possible, reference or cite planning documents, environmental analyses, and available planning records. A protest which merely expresses disagreement with the proposed decision, without any data will not provide us with the benefit of your insight. In this case, the Director's review will be based on the existing analysis and supporting data.

Thank you for your continued participation in the land use planning process.

Sincerely yours,



Michael T. Green
District Manager

Finding of No Significant Impact
for the Andrews Plan Amendment
for Recreation Access Surrounding the Steens Mountain Loop Road

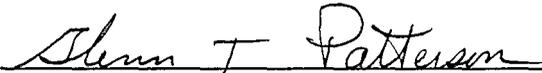
The Bureau of Land Management, Burns District, has analyzed various alternatives for providing recreation access and management of recreational use along the Steens Mountain Loop Road. The alternatives and associated analysis are described in the attached proposed Plan Amendment and Environmental Assessment. This environmental assessment is hereby incorporated by reference and attached. The options for management direction identified in the attached environmental assessment would assure that no significant adverse impacts would occur to the human environment.

Under the preferred alternative in this proposed amendment to the Andrews Management Framework Plan, significant impacts on the quality of the human environment would not occur based on the following considerations:

- Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality.
- Public health or safety would not be significantly affected.
- There are no prime or unique farmlands, or known paleontological resources on public land within the area.
- Flood plains, wetlands, and designated wild and scenic rivers would be protected and enhanced.
- The preferred alternative along with other previous actions will not result in significant cumulative impacts to the important and relevant resource values of the area involved.
- Cultural resources on or eligible for the National Register of Historic Places, especially the Riddle Brothers Ranch Historic District, would be protected. Native American religious sites would not be affected and there are no known Native American traditional activities practiced in the area by contemporary Indian tribes.
- The preferred alternative would not significantly affect endangered or threatened species or their habitat determined to be critical under the Endangered Species Act of 1973.
- None of the alternatives violate federal, state, and local law requirements imposed for environmental protection. There are no known inconsistencies with officially approved or adopted federal, state, or local natural resource related plans, policies, or programs.
- Adverse impacts identified are minimal. Continued resource monitoring would ensure that no significant adverse impacts occur. As needed, appropriate management would be instituted to protect important natural and cultural resource values. Impacts to threatened or endangered species habitat or cultural resources, which could not be mitigated, would trigger modification or cancellation of affected portions of federally approved or permitted actions.

- Decisions tied to actions in the preferred alternative would not significantly alter other approved land use allocations or resource management direction in the existing Management Framework Plan, except as described in Chapter 2 of this document.

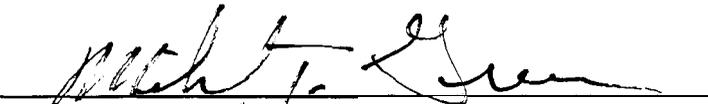
On the basis of the information contained in this Environmental Assessment and all other information available to me as summarized above, it is my determination that recommendation or approval of the preferred alternative in this proposed Plan Amendment and short-term actions do not constitute a major federal action significantly affecting the quality of the human environment (a finding of no significant action). Therefore, an environmental impact statement is unnecessary and will not be prepared. In addition, the amendments to the Andrews Management Framework Plan do not substantially affect other resource programs to the extent that the district would need to immediately initiate a Resource Management Plan/Environmental Impact Statement.



Glenn T. Patterson, Andrews Resource Area Manager

6/3/93

Date



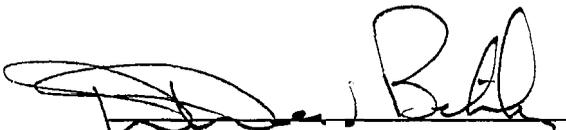
Michael T. Green, District Manager

6/4/93

Date

State Director Approval:

I approve the proposed decisions in the preferred alternative in the proposed amendment to the Andrews Management Framework Plan, as outlined in the attached Environmental Assessment and Finding of No Significant Impact. This document meets the requirement for agency decision making as provided in 40 CFR 1505.



D. Dean Bibles, State Director, Oregon

6/4/93

Date

Table of Contents

Finding of No Significant Impact	ii
Executive Summary	vi
 Chapter 1: Introduction	 1
Purpose and Need	1
Location	2
Planning Process and Public Involvement	2
Figure 1 Map of Steens Mountain Recreation Lands	3
Conformance with Land Use Plans	4
Relationship to Statutes and Regulations	4
Issues	4
Decision Making	5
General Objectives of the Proposed Action	5
 Chapter 2: Proposed Alternatives	 6
Table I Comparison of Proposed Actions by Alternative	6
Present Situation: Maintain Present Situation - No Action	8
Alternative No. 1: Emphasis on Resource Protection with Low Development of Public Facilities and Allowance of Motorized Winter Sports	10
Alternative No. 2: Emphasis on Resource Protection with a Moderate Level of Education/Information Facilities	12
Alternative No. 3: Primary Emphasis on Resource Protection Through Road Closure	15
Alternative No. 4: Emphasis on Resource Protection, Controlled Resource Use, and Education/Information Facilities (Preferred Alternative)	17
Figure 2 Kiger Gorge Overlook Site Plan	20
Figure 3 East Rim Overlook Site Plan	21
Figure 4 Big Indian Overlook Site Plan	22
Figure 5 South Steens Campground Site Plan	(Insert in Back)
Figure 6 Construction of the Loop Road Across the Rooster Comb	25
Figure 7 Loop Road Nearing Completion	26
 Chapter 3: Affected Environment	 27
Climate	27
Air	27
Water	27
Geology	27
Minerals	28
Vegetation	29
Wildlife	29
Recreation	30
Figure 8 Hikers at the Wildhorse Canyon Trail Head	31
Figure 9 Participants in the Steens Rim Run	31

Chapter 3: Affected Environment (Continued)

Wilderness	32
Wild and Scenic Rivers	32
Cultural	33
Wild Horses	34
Livestock Grazing	34
Table 2 Grazing Allotment Information Within the Steens Mountain Recreation Area	34
Private and State Land	35
Table 3 Land Ownership Within the Steens Mountain Recreation Area	35
Figure 10 Cattle Being Herded on Steens Mountain	35
Figure 11 Land Status Map	36

Chapter 4: Environmental Consequences, 37

Table 4 Summary of Impacts by Alternative	37
Impacts to Air Quality	40
Impacts to Water Quality	40
Impacts to Recreation	40
Impacts to Wilderness	43
Impacts to Wild and Scenic Rivers	44
Impacts to Wildlife	45
Impacts to Cultural Resources	47
Impacts to Vegetation	48
Impacts to Geology	49
Impacts to Minerals	50
Impacts to Wild Horses	51
Impacts to Livestock Grazing	51
Impacts to Private Land and Community of Frenchglen	52
Mitigating Measures	52
Cumulative Impacts	53
Residual Impacts	53

Chapter 5: Consultation and Coordination 54

List of Preparers	54
Consultation, Coordination, and Distribution	54

Glossary 55

Appendices 56

Appendix 1: Special Status Plant and Animal Species	56
Appendix 2: Limits of Acceptable Change	57
Appendix 3: Bibliography	58
Appendix 4: Public Comments and BLM Responses	59

Executive Summary

The preferred alternative outlines a comprehensive plan for management of recreation on, and provides for access to, public lands in the vicinity of the Loop Road on Steens Mountain. Issues to guide the planning effort were identified through public comments and focused on concerns and needs, as well as opportunities for resource use, development, and protection.

The following are proposed actions in the preferred alternative:

- Continue to keep the Steens Mountain Loop Road open to allow motorized access to the major scenic attractions on Steens Mountain.
- Cover the roadway with a gravel layer four to six inches thick to provide a roadbed which would hold up under the present levels of traffic and reduce maintenance costs.
- Protect the Loop Road and secondary access roads to overlooks and campgrounds from the effects of heavy vehicle traffic and severe weather by application of bentonite clay as a binding agent to hold gravel on the roadway.
- Maintain the road to protect persons and property from undue damage which can be caused by a deteriorated roadbed.
- Develop sources of rock to provide gravel for the Loop Road.
- Continue the Steens Mountain Loop Road National Back Country Byway.
- Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.
- Provide improved campground facilities along the southern segment of the Loop Road for increased public enjoyment, health, and safety and to protect soil and vegetative resources.
- Provide facilities at overlooks to improve education/information opportunities as well as reduce impacts on the natural environment and improve public safety.
- Allow limited access for motorized and non-motorized winter sports along the north segment of the Loop Road.
- Provide parking for a trailhead on newly acquired property near the mouth of Wildhorse Canyon.

Chapter 1 INTRODUCTION

Purpose and Need

Steens Mountain has been recognized for many years for its outstanding scenery and unique geologic and biological features. The mountain provides opportunities for the public to enjoy solitude and recreation activities associated with a relatively undisturbed, natural and scenic environment. The Steens Mountain Loop Road is unique, because it ascends one of the highest mountains in the Basin and Range Province and provides vistas of some of the most spectacular geography in the country.

The Loop Road had its beginnings in 1930 when the Civilian Conservation Corps (CCC) built a road from Frenchglen up to Fish Lake. The onset of World War II delayed plans for the construction of the remaining portion of the road until the early 1960's. Since the late 1950's public demand for recreational use on the mountain has been translated into Congressional action. In 1960 the BLM obtained funds to construct the remainder of the Loop Road across Steens Mountain. The road was completed in 1962. The BLM has continued routine road maintenance every year since, including adding gravel to fill in holes, breaking up large rocks with a vibrating grid roller, and upgrading the roadway with gravel in 1975 and 1991.

The BLM has followed a common theme in its management of and planning for Steens Mountain by emphasizing open space and natural resource values and de-emphasizing facility-dependent recreation activities. The objective has been to retain the existing character of the landscape by approving subordinate structural features that will not attract attention, i.e., blend in with the natural environment, and still provide for continued compatible multiple use activities, including recreation.

As Steens Mountain has increased in popularity with recreationists, the multiple use component dealing with recreation has received special attention. The planning emphasis has been to recognize and provide for current and increased #appropriate uses by developing facilities in an orderly manner. While the need to provide for some level of increased recreation use has been generally accepted by the public, a recurring sentiment often expressed in regard to the management of Steens Mountain is to "keep it like it is".

Growing use of the Steens Mountain Loop Road has resulted in increased dispersed camping along the road, loss of road base material, and the need for more interpretation of natural resources for the public. The proposed actions would serve to help protect persons, property, and public and private lands and resources.

The Andrews Management Framework Plan was approved in 1982. It made land use allocations and provided management direction in the Andrews Resource Area. One decision was to close a 7.5-mile stretch of the south segment of the Loop Road which crosses the Rooster Comb. This decision has never been implemented in response to overwhelming public sentiment to keep it open. The existing guidance in the Management Framework Plan does not assess significant program changes addressed in this proposed plan amendment and environmental assessment.

In fiscal year 1992 the Bureau of Land Management (BLM) attempted to apply additional gravel to the Steens Mountain Loop Road using funds appropriated solely for this purpose by Congress. Use of these funds would have allowed for maintenance of the first 15 to 18 miles of the north segment of the Loop Road from Page Springs campground to Fish Lake. Since maintenance of an existing roadway is categorically excluded, an environmental assessment was prepared addressing only

potential rock sources. An appeal was filed challenging the environmental assessment for a rock source and maintenance of the road. This stayed BLM's decision to place additional rock on a portion of the north Loop Road. This document incorporates maintenance of this first 15 to 18 miles of the north segment of the Loop Road.

The purpose and need for this document is to analyze a proposed amendment to the Andrews Management Framework Plan and to propose several changes in the way recreational visitor use in the region is managed. This document is in response to the issues identified in two studies conducted for BLM by Oregon State University in 1982 and 1988. The Preferred Alternative is designed to meet the needs of present and reasonably foreseeable levels of visitor use and provide for public safety, and visitor information while protecting important visual, cultural, and natural resources. Visitation to Steens Mountain, although modest compared to other popular recreation sites, has grown from 20,456 in 1983 to 48,520 in 1992.

The amendment addresses (1) closing portions of the Steens Mountain Loop Road versus keeping the entire Loop Road open, (2) whether or not a binding agent would be used on the road, (3) designating generally or specifically where rock would be obtained for construction or reconstruction and maintenance of roads and parking areas, (4) whether or not one or two new campgrounds would be constructed along the south segment of the Loop Road, (5) what facilities should be established to accomplish an environmental education and interpretative program for the public visiting the region, (6) whether or not a small parking and staging area should be established at the mouth of Wildhorse Canyon, (7) whether or not motorized winter sports would be permitted, and (8) limiting where mountain bikes may be used.

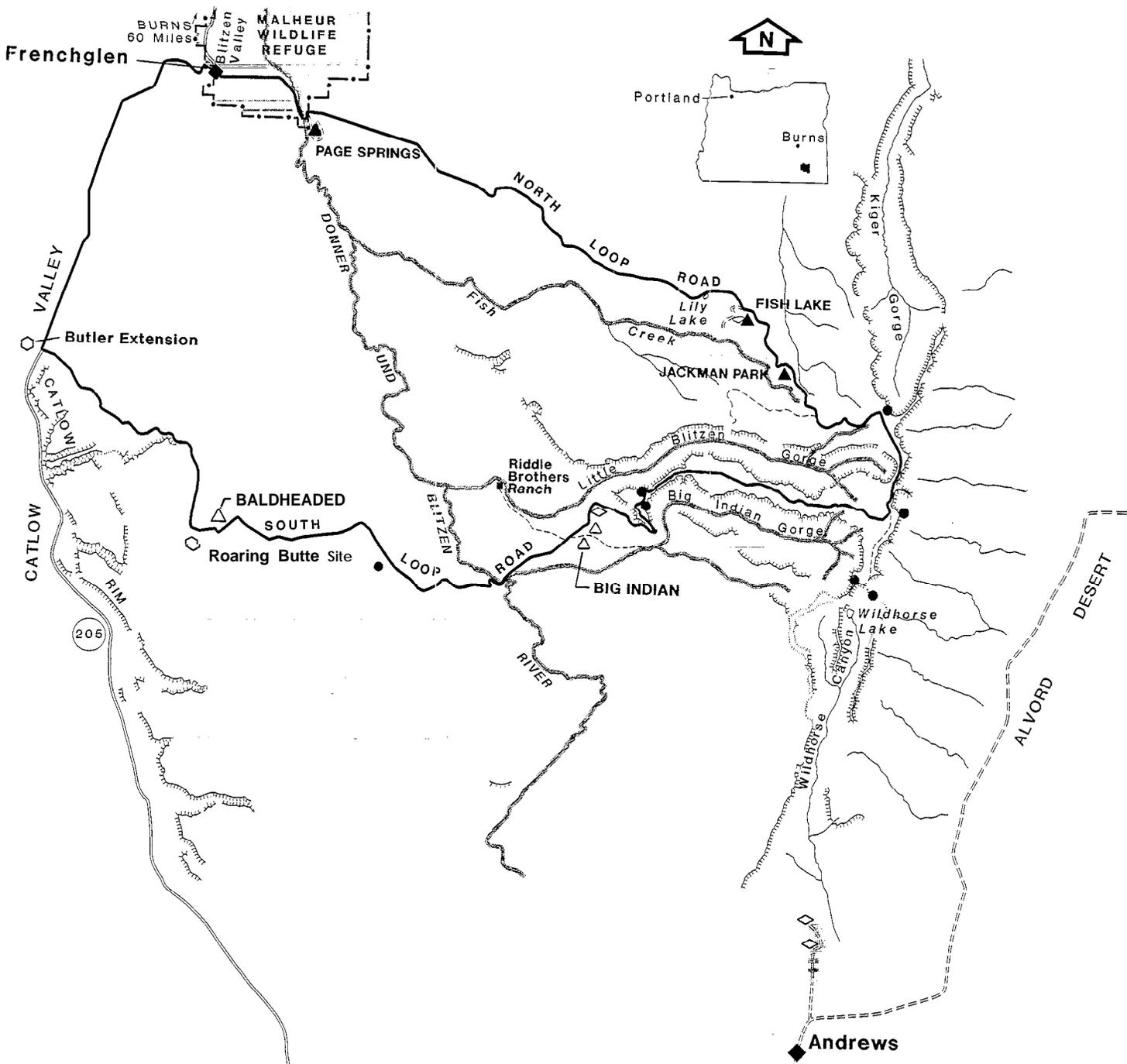
Under all alternatives, the open portions of the Loop Road would be maintained regularly and reconstruction would be done as necessary to promote and improve public safety. Under all alternatives, previously approved access roads off of open portions of the Loop Road would be maintained in their present condition to keep them safe and open for high-clearance vehicles. The plan amendment also reaffirms the back country byway status of the Loop Road.

Location

The plan amendment specifically addresses the region in the vicinity of the Steens Mountain Loop Road. The Loop Road begins at Page Springs campground, 2.8 miles east of Frenchglen, goes east past Fish Lake and Jackman Park campgrounds up to the ridge of Steens Mountain, south along the ridge-line, and then back to the west down the mountain to a junction with State Highway 205, approximately eight miles south of Frenchglen. The entire Loop Road on public land covers a distance of 52.9 miles. The map in Figure 1 shows the location of the Loop Road, secondary access roads, existing and proposed campgrounds, proposed rock sources, and overlooks.

Planning Process and Public Involvement

This document presents and analyzes associated environmental consequences of three alternative amendments to the Andrews Management Framework Plan for the Burns District and a no-action alternative. The analysis has been prepared using the BLM planning system. Initial steps in the planning process include identification of issues and development of planning criteria. Issues were identified through public comments and focused on concerns and needs, as well as opportunities for resource use, development, and protection. Planning criteria were based on BLM's policy and



LEGEND

- | | | | |
|--|-------------------------|--|--|
| | Malheur Wildlife Refuge | | Interpretive Overlooks |
| | Paved Road | | Potential Gravel Sites |
| | Gravel Road | | Proposed Staging Areas |
| | Primitive Road | | Donner und Blitzen
National Wild and Scenic River |
| | Proposed Road | | Steens Mountain National
Back Country Byway |
| | Rims and Ledges | | |
| | Existing Campgrounds | | |
| | Alternative Campgrounds | | |

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**STEENS MOUNTAIN
RECREATION LANDS**

Burns District

1993



Figure 1

guidance, applicable laws, the results of public participation, interdisciplinary team input, and coordination with other federal and state agencies and local governments.

In August 1992, a scoping document was sent to the public for review and comment. Public scoping meetings were held in Burns on September 16, 1992, in Bend on September 17, 1992, and in Frenchglen on September 18, 1992. The Draft Plan Amendment and Environmental Assessment was sent to the public for their review in December 1992 and a 45-day comment period followed. This proposed Plan Amendment and Environmental Assessment contains the Finding of No Significant Impact. Once any protests are resolved a Record of Decision will be signed and proposed actions can then be implemented.

Detailed information on the development of the Plan Amendment, including records of public involvement opportunities, are available for inspection at the Burns District Office during normal business hours.

Conformance with Land Use Plans

The Andrews Management Framework Plan adopted in 1982 was developed to provide direction and guidance for specific management actions associated with the public lands within the Resource Area. Some of the decisions in the 1982 plan are in need of review, change, or modification. Other special management considerations analyzed in the amendment address issues associated with recent land acquisitions and resource protection measures that could be implemented at popular access intersections and routes. All the issues analyzed in the plan amendment and environmental assessment, except leaving the entire Loop Road open, are compatible with or conform to actions in the existing Management Framework Plan, the 1980 Steens Mountain Off-Road Vehicle Plan, the 1985 Steens Mountain Recreation Area Management Plan, the Riddle Brothers Ranch Cultural Resource Management Plan, and the 1993 Donner und Blitzen Wild and Scenic River Plan.

The Steens Mountain Loop Road was dedicated as a National Back Country Byway (Type II) on June 29, 1989. Type II byways are roads which by virtue of curves, road surface, and maintenance can be negotiated with a two-wheel drive vehicle without undue difficulty. These roads are usually not paved, but may have some type of surfacing. The amendment is consistent with this designation. This plan amendment is consistent, insofar as is possible, with resource-related plans officially approved or adopted by state, county, local, and other federal agencies. Proposed actions are compatible with guidelines in the Harney County land use plan.

Relationship to Statutes, Regulations and Policy

The proposed actions are in conformance with Section 202(a) of the Federal Land Policy and Management Act of 1976, Section 1501.2(c) of the National Environmental Policy Act of 1969, as amended, BLM Manual 1601.08, and Wilderness Study Area Interim Management Policy guidelines. The proposed actions would be carried out in accordance with applicable federal, state, and county regulations.

Issues

Major issues identified through Bureau review and the public scoping process include:

Decision to keep open or close a 7.5-mile stretch of the Loop Road along the Rooster Comb on the ridge between Big Indian and Little Blitzen gorges

Determination of what level of road reconstruction and maintenance is appropriate on the Loop Road, including access to existing and proposed recreation and interpretive sites

Use of a binding agent on the Loop Road surface to keep gravel in place, to reduce dust pollution, and extend the life of the road

Determination of the appropriate level of improvement and/or maintenance for access roads off of the Loop Road to historic sites, overlooks, campgrounds, and private land for use by sight-seers, campers, ranchers, hunters, and BLM administrative activities

Reaffirmation of the existing National Back Country Byway designation

Location of rock (gravel) sources for reconstruction and maintenance of the Loop Road

Determination of the appropriate level of winter activities along the north segment of the Loop Road and adjacent access roads

Determination of where off-road vehicles and mountain bikes may be used

Determination of the need for and location of additional campground facilities adjacent to the south segment of the Loop Road

Determination of the need for a small parking and staging area to facilitate access to Wildhorse Canyon

Decision Making

The decision-making process considers public views and concerns, present and potential uses of the public lands in the vicinity of the Steens Mountain Loop Road, long-term benefits to the public as opposed to short-term benefits, and State and local plans and goals. Consequently, the final decision could accept any alternative as presented in the draft plan, or a combination of the alternatives analyzed.

The decision, when implemented, will provide specific guidelines for recreation access related uses and the location of rock sources for the Steens Mountain Loop Road.

General Objectives of the Proposed Action

1. Ensure that management actions preserve, protect and enhance open space/back country character and natural resources of the mountain.
2. Provide for all mandated and compatible uses at appropriate levels.
3. Provide for current and anticipated levels of use by the public while preventing conflicts related to uncontrolled visitor use.
4. Promote public understanding of Steens Mountain's resource values and opportunities to provide for many uses.

5. Provide for public safety and enjoyment of the natural scenic wonders provided by Steens Mountain.
6. Respect the rights of private property owners and work cooperatively with them to manage for public and private interests.

Chapter 2 Proposed Alternatives

The following alternatives present a range of management opportunities in the area surrounding the Steens Mountain Loop Road in the Andrews Resource Area. The baseline alternative, which is the present situation, represents the continuation of current management direction. Alternatives 1, 2, 3, and 4 present opportunities to emphasize particular resource elements. Each alternative is designed to enhance one or more resources within the planning area relative to the potential and productivity of the area, while protecting other resources and the environment.

Table 1 outlines how proposed actions would deal with each of the issues in each of the alternatives.

Table 1. Comparison of Proposed Actions by Alternative

Management Issue	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4 Preferred
Status of 7.5 mile segment of Loop Road along Rooster Comb	Open	Open	Open	Closed	Open
Status of Loop Road from Jackman Park to Big Indian turnout	Open	Open	Open	Closed	Open
Loop Road maintenance frequency and level	Once per year	Regularly maintained throughout	Same as Alternative 1	Same as Alternative 1 on roads left open	Same as Alternative 1
Level of road reconstruction	Undefined	To improve safety	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Use of binding agent	None used	None used	Bentonite and resin-based product	Asphalt	2 percent bentonite clay
Access road maintenance standards	Maintain for high-clearance vehicles	Sufficient to keep roads safe and open	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Parking areas and foot-trails	None constructed	Constructed at seven overlooks	Same as Alternative 1	One at wild horse/wildlife viewing area	Same as Alternative 1
Back country byway status	Reaffirmed	Reaffirmed	Reaffirmed	Modified	Reaffirmed

Management Issue	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4 Preferred
Interpretive panels and kiosks	None specified	None	Panels at overlooks and kiosks at Loop Road entrances and campgrounds	Same as Alt. 2, but for fewer overlooks	Small panels at campgrounds and overlooks
Rock sources	Any suitable source	Same as Present Situation	Two proposed sites outside the Recreation Lands	Same as Alternative 2	Anywhere outside of the Recreation Lands including two proposed sites
Riddle Brothers Ranch	Improved access and a parking area, self-guided tour and river trail	Same as Present Situation	Same as Present Situation, except regularly scheduled tours also provided	Road not improved, no parking provided, access to buildings by foot only, tours provided on a case-by-case basis	Same as Alternative 2
Winter sports on north Loop Road and secondary access roads	Non-motorized allowed, motorized permitted only on a case-by-case basis	Motorized and non-motorized allowed on existing open roads and ways on north Loop Road above 6,000 feet elevation	Non-motorized allowed	Same as Alternative 2	Motorized and non-motorized allowed on open roads and ways and adjacent non-WSA public lands on north Loop Road above 5,600 feet elevation up to Kiger overlook
Off-road vehicle access	Outside WSAs and within Recreation Lands motorized vehicles limited to open roads and ways, mtn bikes not limited except in Wild and Scenic Rivers	Same as Present Situation, except mountain bikes limited to open roads and ways	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Need for additional campgrounds	None specified	One new campground along south Loop Road	Two new campgrounds along south Loop Road	Same as Alternative 2	Same as Alternative 1
Parking and staging area near the mouth of Wiidhorse Canyon	No	Yes, with a road up to a parking/staging area in Sec. 10	Same as Alternative 1	No	Parking and staging area in Sec. 14 with a foot trail up to sec. 10

Maintain Present Situation - No Action

Goal

Continue to follow the objectives and actions for vehicle access and recreation management outlined in existing plans and public opinion.

Objectives

1. Reverse the Management Framework Plan decision to close the 7.5-mile stretch of the southern segment of the Loop Road which crosses the Rooster Comb.
2. Maintain current recreation opportunities within the area.
3. Continue the Steens Mountain Loop Road National Back Country Byway.
4. Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.

Proposed Actions

The Andrews Management Framework Plan identified a 7.5-mile stretch of the Loop Road to be closed from four miles east of the Blitzen Crossing up to the upper Big Indian viewpoint. However, this was never done. At a later date, it was decided to defer closing this portion of the road, pending the results of the Oregon Wilderness Environmental Impact Statement. The Wilderness Environmental Impact Statement (EIS) recommended the Loop Road be kept open throughout its entirety. The EIS recommendation would be sustained by this alternative.

The Loop Road would be maintained and gravel (rock) applied as needed to keep the road from eroding and to make it safely passable by passenger cars and similar vehicles.

Maintain access routes to campgrounds and natural overlooks at the same level as currently existing. Secondary access routes from the Loop Road would be left unimproved, except as noted below. These routes are used by ranchers, hunters, other back country enthusiasts, and public land managers to get to wildlife habitat, range improvements, vegetation and soil studies, etc. on public land. They also provide access for private landowners to access their land. Minimum maintenance would be provided by grading and installing water bars and culverts to only provide for high-clearance, four-wheel drive, or other similar vehicles. Gravel would be applied in areas where water tends to concentrate, causing mud holes, or where deep ruts threaten to cut the road below the level of the surrounding land. Road maintenance would be kept within the existing area of disturbance, especially where these roads border a Wilderness Study Area.

Gravel would be obtained from any source of suitable rock quality. Sites would be developed and reclaimed in accordance with applicable federal, state, and local regulations. Any sources within the Steens Mountain Recreation Area must conform to the Steens Mountain Recreation Area Management Plan. Rights-of-way would be granted to allow upgrading or construction of roads across public lands for safe hauling of gravel from private sources. These roads would be reclaimed back to their preexisting condition when the rock source is exhausted or otherwise abandoned.

Continue to allow unrestricted camping along the Loop Road and, at the same time, enforce regulations prohibiting off-road vehicle access into Wilderness Study Areas.

Public vehicle access to the Riddle Brothers Ranch day-use complex is presently restricted by a locked gate. Access for organized tours can be arranged.

The Cultural Resource Management Plan calls for implementation of certain actions upon completion of the purchase agreement with the former owner. When this occurs, the dirt road would be improved down to the historic ranch house and outbuildings in T. 33 S., R. 32-3/4 E., Section 30, SW1/4SW 1/4SE1/4. Two parking areas would be developed:

1. A small area on the south side of the Little Blitzen River across from the historic ranch house to accommodate a half dozen vehicles.
2. A larger area, capable of holding several vehicles and a turn around for buses, three-quarters of a mile back up the road at the junction with the access road to the newer house on the hill, in T. 33 S., R. 32-3/4 E., Section 31, SW1/4NE1/4SE1/4.

Public vehicular access to the historic ranch house would be provided for self-guided tours when a caretaker is present. When on-site staffing is unavailable, a gate into the area would remain locked. However, pedestrian access would still be possible. Vehicle access to the Little Blitzen River, the two homestead complexes upstream from the main ranch house, and surrounding meadows would be prohibited. A self-guided river foot-trail would be developed to traverse these areas. No actual trail construction would occur unless resource damage along the route develops as a result of concentrated use.

Overlooks along the Loop Road would continue to be maintained to provide adequate public access.

During winter months the Loop Road would be closed to vehicle traffic using existing gates. However, the north and south segments of the Loop Road would remain open to motorized winter sports on a case-by-case basis only in response to requests to the District or Area Manager as published in the Federal Register, Volume 45, Number 183, dated September 18, 1980. Access for non-motorized winter sports would be on foot from the locked gates.

When the gates are open, motorized vehicles would be limited to open roads and ways (routes suitable for high-clearance four-wheel drive vehicles) over the entire Steens Mountain Recreation Area, as published in the Federal Register, Volume 45, Number 183, dated September 18, 1980. Mountain bikes would be able to use the entire Recreation Area, but restricted from going cross-country in Wilderness Study Areas, on officially closed ways, and 17 miles of the Wild and Scenic Little Blitzen River and Big and Little Indian Creeks.

A parking and staging area would not be constructed at the mouth of Wildhorse Canyon.

An improved campground would not be constructed along the southern segment of the Loop Road. The access road to Big Indian Gorge would remain open.

Alternative No. 1: Emphasis on Resource Protection with Low Development of Public Facilities and Allowance of Motorized Winter Sports

Goal

Provide for the passage of low-clearance passenger vehicles on the Steens Mountain Loop Road. Provide protection for soil, vegetation, and visual resources by constructing a developed campground along the southern segment of the Loop Road and a parking lot and staging area at the base of Wildhorse Canyon.

Objectives

1. Keep the entire Loop Road open to allow the public to enjoy Steens Mountain and maintain the roadbed in a condition which would protect persons and property from undue damage.
2. Discourage camping at undeveloped sites along the southern segment of the Loop Road and protect Wilderness Study Areas by providing the alternative of adequate developed camping facilities in the same general area.
3. Continue the Steens Mountain Loop Road National Back Country Byway
4. Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.
5. Provide for motorized and non-motorized winter sports.
6. Provide parking for a trailhead on newly acquired property near the mouth of Wildhorse Canyon.

Proposed Actions

The entire Loop Road would be kept open as part of the Bureau's Back Country Byway system. The Loop Road would be improved and maintained at a standard sufficient to ensure an even flow of traffic by passenger cars and similar vehicles and to allow oncoming vehicles to pass safely. Most of the reconstruction would be confined to the existing area of disturbance, except where existing curves may need to be altered, so they would not impede the flow of traffic and would improve public safety. Engineers estimate less than one percent of construction activities would occur outside the existing roadbed. Any road realignment work would be kept outside of Wilderness Study Area boundaries. Road reconstruction and maintenance would be designed to repair and prevent washouts and rock slides, stabilize the roadbed and immediate surrounding landscape, install and maintain culverts, and promote public safety.

The surface of the Loop Road would be covered with a gravel layer of sufficient depth (approximately six inches) to provide a roadbed, which would hold up under the present levels of traffic. Gravel would be replaced every five years in general, or as often as needed on specific problem areas to maintain the road.

Gravel would be obtained from any source of suitable rock quality. Sites would be developed and reclaimed in accordance with applicable federal, state, and local regulations. Any sources within the Steens Mountain Recreation Area must conform to the Steens Mountain Recreation Area Management Plan, which goes beyond other federal environmental protection regulations to protect visual resources. Rights-of-way would be granted to allow upgrading or construction of roads across public lands for safe hauling of gravel from private sources. These roads would be reclaimed back to their preexisting condition when the rock source is exhausted or otherwise abandoned.

Access roads from the Loop Road to campgrounds, overlooks, and interpretive sites would be reconstructed or maintained to provide for safe and convenient movement of passenger vehicles. This would include adding gravel to the surface of roads. Parking/turnout areas would be constructed at Kiger Gorge, East Rim, Wildhorse Canyon, Little Blitzen Trail (east), Little Blitzen Trail (west) and staging area, Big Indian Gorge, and a wildhorse/wildlife viewing area west of Blitzen Crossing. Foot-trails would be constructed from parking areas out to the overlooks. Access roads and turnouts would be developed within existing disturbed areas. All construction would occur in areas being used by the public for vehicle travel and parking prior to passage of the Federal Land Policy and Management Act of 1976. No interpretive information would be provided at overlook sites.

Existing closed roads leading off of the Loop Road would be ripped, reshaped, seeded, and blocked as needed.

Existing open secondary access routes off of the Loop Road and outside Wilderness Study Areas would be left unimproved, except as noted above. These routes are used by ranchers, hunters, other back country enthusiasts, and public land managers to get to wildlife habitat, range improvements, vegetation and soil studies, etc. on public land. They also provide access for private landowners to access their land. Minimum maintenance would be provided by grading and installing water bars and culverts to only provide for high-clearance, four-wheel drive, or other similar vehicles. Roads not suitable for passage of low-clearance vehicles would be signed to warn the public. Gravel would be applied in areas where water tends to concentrate, causing mud holes, or where deep ruts threaten to cut the road below the level of the surrounding land. Road maintenance would be kept within the existing area of disturbance, especially where these roads and ways border a Wilderness Study Area.

Camping is presently occurring at undeveloped sites along the southern segment of the Loop Road, with several sites receiving moderate to heavy use. A campground with 25 to 30 developed sites would be located at one of these sites to encourage campers to use sanitary and environmentally compatible facilities designed to reduce impacts to soils and vegetation. This site is located at the base of the hill west of the Rooster Comb in T. 34 S., R. 32-3/4 E., Section 4, SE1/4NW1/4NE1/4 and SW1/4NE1/4NE1/4. See Figure 1. Facilities would include picnic tables, fire rings, grills, vault toilets, a well for culinary water, space for camp trailers, and horse corrals. Facilities would be similar to those existing at Page Springs, Fish Lake, and Jackman Park campgrounds. The access road to Big Indian Creek, beyond the proposed campground, would be closed to motorized vehicles and a trailhead developed to accommodate foot and horse traffic. Blitzen Crossing would be designated a day-use area only.

Public vehicle access to the Riddle Brothers Ranch day-use complex is presently restricted by a locked gate, with access for organized tours prearranged,

The Cultural Resource Management Plan which calls for implementation of certain actions upon completion of the purchase agreement with the former owner would be reaffirmed by this alternative. When this occurs, the dirt road would be improved down to the historic ranch house and outbuildings in T. 33 S., R. 32-3/4 E., Section 30, SW 1/4SW 1/4SE1/4. Two parking areas would be developed:

1. A small area on the south side of the Little Blitzen River across from the historic ranch house to accommodate a half dozen vehicles.
2. A larger area, capable of holding several vehicles and a turn around for buses, three-quarters of a mile back up the road at the junction with the access road to the newer house on the hill, in T. 33 S., R. 32-3/4 E., Section 31, SW1/4NE1/4SE1/4.

Public vehicular access to the historic ranch house would be provided for self-guided tours when a caretaker is present. When on-site staffing is unavailable, a gate into the area would remain locked. However, pedestrian access would still be possible. Vehicle access to the Little Blitzen River, the two homestead complexes upstream from the main ranch house, and surrounding meadows would be prohibited. A self-guided river foot-trail would be developed to traverse these areas. No actual trail construction would occur unless resource damage along the route develops as a result of concentrated use.

During winter months the Loop Road would be closed to vehicle traffic using existing gates. The north segment of the Loop Road would be available for access for winter recreation sports, including those utilizing motorized vehicles. A new gate would be located at the 6,000-foot elevation level four miles below Lily Lake. Motorized sports would adhere to the following guidelines:

Use of snowmobiles would be restricted to open roads and ways for scenic tours above the gate.

Use would be authorized when an average of 24 inches of snow have accumulated at the 6,000-foot elevation level.

Use of motorized sports would be limited to a total of 60 snowmobiles per month, in groups not to exceed 15 snowmobiles.

Use of snowmobiles would be excluded from Wilderness Study Areas.

Trail markers would be located along roads not easily distinguishable when covered with deep snow.

Motorized sports would be monitored to determine if management goals are being achieved and the winter use guidelines revised if needed.

Cross-country skiers would be able to drive to the snow line, but no farther than the gate at the 6,000-foot level.

When the gates are open, motorized vehicles would be limited to existing designated open roads and ways over the entire Steens Mountain Recreation Area, as published in the Federal Register, Volume 45, Number 183, dated September 18, 1980. Mountain bikes would be restricted to open roads and ways.

A small pullout to be used for a parking and staging area, located at the base of the hill just west of the Rooster Comb, would be provided for hiking and horseback riding into the Little Blitzen Gorge. A small parking and staging area would be located in T. 35 S., R. 33 E., Section 10, SE1/4NE1/4SE1/4, on the acquired property at the mouth of Wildhorse Canyon. Approximately three-quarters of a mile of road would be constructed on public land in Sections 11 and 14. See Figure 1.

Alternative No. 2: Emphasis on Resource Protection with a Moderate Level of Education/Information Facilities

Goal

Improve road surfaces, provide camping facilities, and interpretive panels and kiosks which would accommodate present and increasing use, enjoyment of the area, and education by the public while at the same time protecting the natural environment from human impacts.

Objectives

1. Continue to keep the entire Loop Road open to allow the public to enjoy Steens Mountain and protect persons and property from undue damage which can be caused by a deteriorated roadbed.
2. Protect the Loop Road and secondary access roads from the present heavy vehicle traffic and effects of weather with appropriate levels of maintenance and reconstruction.
3. Continue the Steens Mountain Loop Road National Back Country Byway.
4. Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.
5. Provide additional camping facilities along the southern segment of the Loop Road,
6. Provide improved education/information opportunities along the Loop Road.
7. Allow access for non-motorized winter sports along the upper segment of the Loop Road.
8. Provide parking for a trailhead on newly acquired property near the mouth of Wildhorse Canyon.

Proposed Actions

The entire Loop Road would be kept open as part of the BLM's Back Country Byway system. The Loop Road would be improved and maintained at a standard sufficient to ensure an even flow of traffic by passenger cars and similar vehicles and to allow oncoming vehicles to pass safely. Most of the reconstruction would be confined to the existing area of disturbance, except where existing curves may need to be altered so they would not impede the flow of traffic and would improve public safety. Any road realignment work would be kept outside of Wilderness Study Area boundaries to eliminate any surface disturbance. Road reconstruction and maintenance would be designed to repair and prevent washouts and rock slides, stabilize the roadbed and surrounding landscape, and promote public safety.

The surface of the Loop Road would be covered with a gravel layer of sufficient depth (six inches) to provide a roadbed which would hold up under the present high levels of traffic.

A binding agent would be placed on the surface of the Loop Road to hold gravel in place and extend the useful life of the roadbed, reduce erosion by water, and reduce dust. A suitable binder such as bentonite clay and a resin-based product would be used.

Access roads from the Loop Road, to campgrounds and interpretive sites, would be reconstructed or maintained to provide for safe and convenient movement of passenger vehicles. Parking/turnout areas would be constructed at Kiger Gorge, East Rim, Wildhorse Canyon, Little Blitzen Trail (east), Little Blitzen Trail (west) and staging area, Big Indian Gorge, and a wildhorse/wildlife viewing area west of Blitzen Crossing. A small pullout and staging area would be provided for hiking and horseback riding into the Little Blitzen Gorge. Roads and parking areas would be graveled and a binding agent used to reduce erosion and extend their useful life. Foot-trails would be constructed from parking areas out to the overlooks. Non-designated trails, pioneered over the years, would be blocked and allowed to return to a natural condition.

Existing closed roads leading off of the Loop Road would be ripped, reshaped, seeded, and blocked as needed.

Existing open secondary access routes off of the Loop Road and outside Wilderness Study Areas would be left unimproved. These routes are used by ranchers, hunters, other back country enthusiasts, and public land managers to get to wildlife habitat, range improvements, vegetation and soil studies, etc. on public land. They also provide access for private landowners to access their land. Minimum maintenance would be provided by grading and installing water bars and culverts to provide for high-clearance, four-wheel drive, or other similar vehicles. Roads not suitable for passage of low-clearance vehicles would be signed to warn the public. Gravel would be applied in areas where water tends to concentrate, causing mud holes, or where deep ruts threaten to cut the road below the level of the surrounding land. Road maintenance would be kept within the existing area of disturbance, especially where these roads and ways border a Wilderness Study Area.

Two gravel sources located at T. 33 S., R. 31 E., Section 12, SE1/4SE1/4 (Butler Extension) and T. 34 S., R. 32 E., Section 11, NW1/4NE1/4 (Roaring Butte) would be used. See Figure 1. No gravel would be obtained from public land within the Steens Mountain Recreation Area.

Camping is presently occurring at undeveloped sites along the southern segment of the Loop Road, with several sites receiving moderate to heavy use. A campground with 25 to 30 developed sites would be located at one of these sites to encourage campers to use sanitary and environmentally compatible facilities designed to reduce impacts to soils and vegetation. This site is located along both sides of the access road to Big Indian Creek, in T. 34 S., R. 32-3/4 E., Section 4, N1/2SW1/4NE1/4 and NE1/4SE1/4NW1/4. Additional steps would be taken to obliterate vehicle access to dispersed campsites within Wilderness Study Areas. Facilities would include picnic tables, fire rings, grills, vault toilets, a well for culinary water, space for camp trailers, and horse corrals. The access road to Big Indian Creek, beyond the proposed campground, would be closed to motorized vehicles and a trailhead developed to accommodate foot and horse traffic. Also an additional campground with 25 to 30 developed sites would be located west of Bald Headed Camp in T. 33 S., R. 32 E., Section 36, SW1/4. See Figure 1. This campground would be constructed in the future in response to increased demand for additional camping facilities. Blitzen Crossing would be designated a day-use area only.

Public vehicle access to the Riddle Brothers Ranch day-use complex is presently restricted by a locked gate, with access for organized tours prearranged.

The Cultural Resource Management Plan which calls for implementation of certain actions upon completion of the purchase agreement with the former owner would be reaffirmed by this alternative. When this occurs, the dirt road would be improved down to the historic ranch house and outbuildings in T. 33 S., R. 32-3/4 E., Section 30, SW1/4SW1/4SE1/4. Two parking areas would be developed:

1. A small area on the south side of the Little Blitzen River across from the historic ranch house to accommodate a half dozen vehicles.
2. A larger area, capable of holding several vehicles and a turn around for buses, three-quarters of a mile back up the road at the junction with the access road to the newer house on the hill, in T. 33 S., R. 32-3/4 E., Section 31, SW1/4NE1/4SE1/4.

Public vehicular access to the historic ranch house would be provided for self-guided tours when a caretaker is present. Regularly scheduled guided tours would be provided as needed or requested. When on-site staffing is unavailable, a gate into the area would remain locked. However, pedestrian access would still be possible. Vehicle access to the Little Blitzen River, the two homestead complexes upstream from the main ranch house, and surrounding meadows would be prohibited. A self-guided river foot-trail would be

developed to traverse these areas. No actual trail construction would occur unless resource damage along the route develops as a result of concentrated use.

Low profile interpretive panels designed to blend into the environment would be located at existing overlooks, see Figure 1. All construction at overlooks, which border Wilderness Study Areas, would be limited to the area of mechanically created disturbance existing before passage of the Federal Land Policy and Management Act of 1976.

During winter months the Loop Road would be closed to vehicle traffic using existing gates. The north and south segments of the Loop Road would be available for access for non-motorized winter recreation sports. Access would be on foot from the locked gates.

When the gates are open, motorized vehicles would be limited to existing open roads and ways over the entire Steens Mountain Recreation' Area, as published in the Federal Register, Volume 45, Number 183, dated September 18, 1980. Mountain bikes would be restricted to existing open roads and ways.

A small parking and staging area would be located in T. 35 S., R. 33 E., Section 10, SE1/4NE1/4SE1/4, on the acquired property at the mouth of Wildhorse Canyon. Approximately three-quarters of a mile of road would be constructed on public land in Sections 11 and 14 to provide access to the parking area. See Figure 1.

Alternative No. 3: Primary Emphasis on Resource Protection Through Road Closure

Goal

Provide access, camping facilities, and interpretive panels and kiosks to allow use and enjoyment of a portion of the area by the motoring public and enjoyment of the highest elevations by persons on foot or horseback, while at the same time protecting the natural environment from human impacts.

Objectives

1. Close the portion of the Loop Road traversing the higher elevations from Jackman Park campground up to the ridge-line and back around to the bottom of the hill west of the Rooster Comb.
2. Protect the two remaining segments of main road and secondary access roads from heavy vehicle traffic and effects of weather through appropriate levels of maintenance and reconstruction.
3. Provide two developed campgrounds along the southern main road.
4. Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.
5. Provide improved information opportunities along the two remaining open segments of main road.

Proposed Actions

The segment of the Loop Road from Jackman Park campground up to the ridge-line and back around to the bottom of the hill west of the Rooster Comb would be closed to the general public. The Bureau's Back Country Byway designation would be officially modified. The two remaining portions of the Loop Road would be improved and maintained at a standard sufficient to ensure an even flow of traffic by passenger cars

and similar vehicles and to allow oncoming vehicles to pass safely. Reconstruction and maintenance would be confined to the existing area of disturbance.

The surface of the two remaining main road segments and access roads to campgrounds and interpretive sites would be covered with a gravel layer of sufficient depth (approximately 6 inches) to provide a roadbed which would hold up to the present levels of traffic. No surface disturbance would be allowed within Wilderness Study Area boundaries.

Liquid asphalt and a chip-seal would be placed on the surface of the main roads and access roads to campgrounds and interpretive sites to hold gravel in place, reduce erosion by water, and reduce dust.

Existing closed roads leading off of the Loop Road would be ripped, reshaped, seeded, and blocked as needed.

Existing open secondary access routes off of the two remaining main roads and outside of Wilderness Study Areas would be left unimproved. These routes are used by ranchers, hunters, other back country enthusiasts, and public land managers to get to wildlife habitat, range improvements, vegetation and soil studies, etc. on public land. They also provide access for private landowners to access their land. Minimum maintenance would be provided by grading and installing water bars and culverts to provide for high clearance four-wheel drive or other similar vehicles. Gravel would be applied in areas where water tends to concentrate, causing mud holes, or where deep ruts threaten to cut the road below the level of the surrounding land. Road maintenance would be kept within the existing area of disturbance. The closed portion of the Loop Road and secondary access routes above the closure points would be open to provide reasonable access for private landowners, BLM administration and fire suppression, and maintenance of radio facilities. BLM would determine what constitutes adequate and reasonable access.

Two gravel sources located at T. 33 S., R. 31 E., Section 12, SE1/4SE1/4 (Butler Extension) and T. 34 S., R. 32 E., Section 11, NW1/4NE1/4 (Roaring Butte) would be used. See Figure 1. No gravel would be obtained from public land within the Steens Mountain Recreation Area.

Camping is presently occurring at undeveloped sites along the southern segment of the Loop Road, with several sites receiving moderate to heavy use. A campground with 25 to 30 developed sites would be designed to encourage campers to use sanitary and environmentally compatible facilities designed to reduce impacts to soils and vegetation. This site is located along both sides of the access road to Big Indian Creek, in T. 34 S., R. 32-3/4 E., Section 4, N1/2SW1/4NE1/4 and NE1/4SE1/4NW1/4. Additional steps would be taken to obliterate vehicle access to dispersed campsites within Wilderness Study Areas. Facilities would include picnic tables, fire rings, grills, vault toilets, a well for culinary water, space for camp trailers, and horse corrals. The access road to Big Indian Creek, beyond the proposed campground, would be closed to motorized vehicles and a trailhead developed to accommodate foot and horse traffic. Also an additional campground with 25 to 30 developed sites would be located west of Bald Headed Camp in T. 33 S., R. 32 E., Section 36, SW1/4. See Figure 1. This campground would be constructed in the future in response to increased demand for additional camping facilities. Blitzen Crossing would be designated a day-use area only.

Public vehicle access to the Riddle Brothers Ranch day-use complex is presently restricted by a locked gate, with access for organized tours prearranged. The road to the ranch complex would not be improved and the locked gate would remain in place. However, pedestrian access would still be possible. Group tours, accompanied by BLM personnel, would be allowed access to the complex on a case-by-case basis upon approval by the District or Area Manager. Vehicle access to the Little Blitzen River, the two homestead

complexes upstream from the main ranch house, and surrounding meadows would be prohibited. A self-guided river foot-trail would be developed to traverse these areas. No actual trail construction would occur unless resource damage along the route develops as a result of concentrated use.

Low profile interpretive panels and parking/turnout areas would be constructed at Lily Lake and a wildhorse/wildlife viewing area west of Blitzen Crossing, outside of the Wilderness Study Area boundary, see Figure 1. A small pullout, to be used as a parking and staging area, located at the base of the hill just west of the Rooster Comb, would be provided for hiking and horseback riding into the Little Blitzen River Gorge, outside of the Wilderness Study Area.

During winter months the two main roads would be closed to vehicle traffic using existing gates. The north and south segments of road would be available for access for non-motorized winter recreation sports. Access would be on foot from the locked gates.

When the gates are open, motorized vehicles would be limited to existing open roads and ways not permanently closed. A closure order for the portion of the road from just above Jackman Park campground around to the base of the hill west of the Rooster Comb would be published in the Federal Register and enforceable by law. Mountain bikes would be restricted to existing open roads and ways.

A parking and staging area would not be constructed at the mouth of Wildhorse Canyon.

Alternative No. 4: Emphasis on Resource Protection, Controlled Resource Use, and Education/Information Facilities (Preferred Alternative)

Goal

To protect the character and values intrinsic to the mountain while providing for continued compatible multiple use activities and to ensure protection of the environment through public education and improved facilities to properly manage visitor use.

Objectives

1. Continue to keep the entire Loop Road open to allow the public to enjoy Steens Mountain and protect persons and property from undue damage which can be caused by a deteriorated roadbed.
2. Protect the Loop Road and secondary access roads to overlooks and campgrounds from the effects of heavy vehicle traffic and severe weather through appropriate levels of maintenance and reconstruction.
3. Continue the Steens Mountain Loop Road National Back Country Byway.
4. Provide for protection and enjoyment of historical resources at the Riddle Brothers Ranch.
5. Provide for protection of wilderness values by reducing incursions by motorized vehicles into Wilderness Study Areas, throughout the year.
6. Provide additional campground facilities along the southern segment of the Loop Road for increased public enjoyment, health, and safety and to protect soil and vegetative resources.

7. Provide improved education/information opportunities along the Loop Road.
8. Allow limited access for motorized and non-motorized winter sports along the north segment of the Loop Road.
9. Provide parking for a trailhead on newly acquired property near the mouth of Wildhorse Canyon.

Proposed Actions

To better manage the many recreational uses enjoyed on the Steens Mountain Recreation Lands, the BLM would implement a procedure to determine the conditions desired at popular sites used by the public. The primary emphasis is placed on protecting and enhancing natural resources rather than being concerned with how much use an area can tolerate and then setting carrying capacities. The nine-step process, termed Limits of Acceptable Change (LAC) provides a framework for establishing acceptable and appropriate resource and social conditions in recreation settings, see Appendix 2. The Limits of Acceptable Change system helps land managers cope with increasing demands on recreational areas in a visible, logical fashion.

The Limits of Acceptable Change system requires collection of base line data on visitor use and type and condition of natural resources. Some visitor use information is available but additional data on existing resources and visitor use data would be collected at specific areas such as overlooks and the Riddle Brothers Ranch. A task force would be put together to set objectives and desired conditions for each recreation site. The task force could include BLM managers and recreation specialists, private land owners, Oregon Department of Fish and Wildlife personnel, environmental interests, and recreation oriented clubs. Finally, the BLM, with assistance from the task force, would develop a monitoring plan to track progress toward meeting objectives.

The entire 52.9 miles of the Loop Road would be kept open to public access during the normal season of use as part of the BLM's Back Country Byway system. The Loop Road would be improved and maintained at a standard sufficient to ensure an even flow of traffic by passenger cars and similar vehicles and to allow oncoming vehicles to pass safely. Reconstruction and maintenance would be confined to the existing area of disturbance, no road realignment work would be allowed. Road reconstruction and maintenance would be designed to repair and prevent washouts and rock slides, stabilize the roadbed, reduce impacts to the surrounding landscape, and promote public safety.

The surface of the Loop Road would be covered with a gravel layer of four to six inches to provide a roadbed which would hold up under the present levels of traffic. Engineers stipulate that four inches is the minimum depth which can be feasibly put on a road.

Bentonite clay would be mixed with the gravel road base material, at two percent by volume, to act as a binding agent. This would hold gravel in place on the surface of the Loop Road and extend the useful life of the roadbed, reduce erosion by water, and reduce dust. The appearance of the road would be similar to any well maintained gravel road.

Existing closed roads leading off of the Loop Road would be ripped, reshaped, seeded, and blocked as needed.

Access roads from the Loop Road, to campgrounds and interpretive sites, would be reconstructed and maintained to provide for safe, organized movement of passenger vehicles. Roads and parking areas would be graveled and a bentonite clay binding material used to reduce erosion and extend their useful life. Small

parking/turnout areas would be constructed at Kiger Gorge, East Rim, Wildhorse Canyon, Little Blitzen Trail (east), Little Blitzen Trail (west) and staging area, Big Indian Gorge, and a wildhorse/wildlife viewing area west of Blitzen Crossing, staying within the Loop Road right-of-way. Foot-trails would be constructed from the parking areas out to the rims at the Kiger Gorge, East Rim, Big Indian (see Figures 2, 3, and 4), and Wildhorse Canyon overlooks. At each rim, the viewing area would remain natural except for a small area designed as access for the physically challenged. Vegetation would be removed in the construction of foot-trails, three feet wide, to accommodate wheelchairs. Large rocks sticking up along the trails would be removed, soil would be excavated to a two-inch depth, and the void filled with crushed rock which would be compacted to create a firm surface. Large rocks would be set in the ground six to ten inches deep along the rim of each area for the physically challenged to create a safety barrier one foot high. Construction of all parking/turnout areas and the foot-trail and viewing facility at the Wildhorse Canyon overlook would be within the area of existing disturbance. The proliferation of existing paths, pioneered over the years, would be blocked and rehabilitated to a natural condition.

Since the Wilderness Study Area recommendations have been submitted to Congress, the policy for Interim Management of these areas is even more restrictive. Therefore, until future wilderness management is defined, construction of trails at overlooks within Wilderness Study Areas would be done with minimum development, including no excavation of soil or application of crushed rock. Trails would be defined by a series of rocks to direct foot traffic. This should help prevent the wilderness resource qualities from deteriorating by concentrating use along one route while conforming to Interim Management Policy and guidelines.

Reclamation actions would be initiated in areas showing resource degradation. These actions would include reclamation of existing indiscriminate and non-designated trails. Rocks would be placed strategically as safety barriers near the rims. Soil excavation, removal of boulders, and placement of gravel for the trail may be done in the future when Congress makes a decision on wilderness status or if resources continue to show evidence of degradation. Small low profile signs at trail heads and parking areas would be placed to indicate trail locations and to encourage visitors to stay on the trail to help prevent resource damage to sensitive soils and vegetation.

A small parking and staging area would be constructed adjacent to the Loop Road, keeping within the Loop Road right-of-way, at the head of the trail leading into the Little Blitzen gorge, see Figure 1. Roads leading off of the Loop Road which have been closed would be ripped, reshaped, seeded, and blocked depending on the condition and problems associated with each road.

Low profile interpretive panels designed to blend into the environment would be located at the three proposed overlooks, see Figures 2, 3, and 4.

Gravel could be obtained from all sources outside the Steens Mountain Recreation Area. No gravel would be obtained from public land within the designated recreation lands boundary. Preliminary evaluation indicates the Roaring Butte site located in T. 34 S., R. 32 E., Section 11, NW1/4NE1/4 is most likely to be used as a rock source. Another potential rock source identified in this alternative is the Butler Extension, located approximately one mile west of Highway 205 in T. 33 S., R. 31 E., Section 12, SE1/4SE1/4, see Figure 1.

Existing open secondary access routes off of the Loop Road and outside Wilderness Study Areas would be left unimproved. These routes are used by ranchers, hunters, other back country enthusiasts, and public land managers to get to wildlife habitat, range improvements, vegetation and soil studies, etc. on public land. They also provide access for private landowners to access their land. Minimum maintenance would be

Figure 2

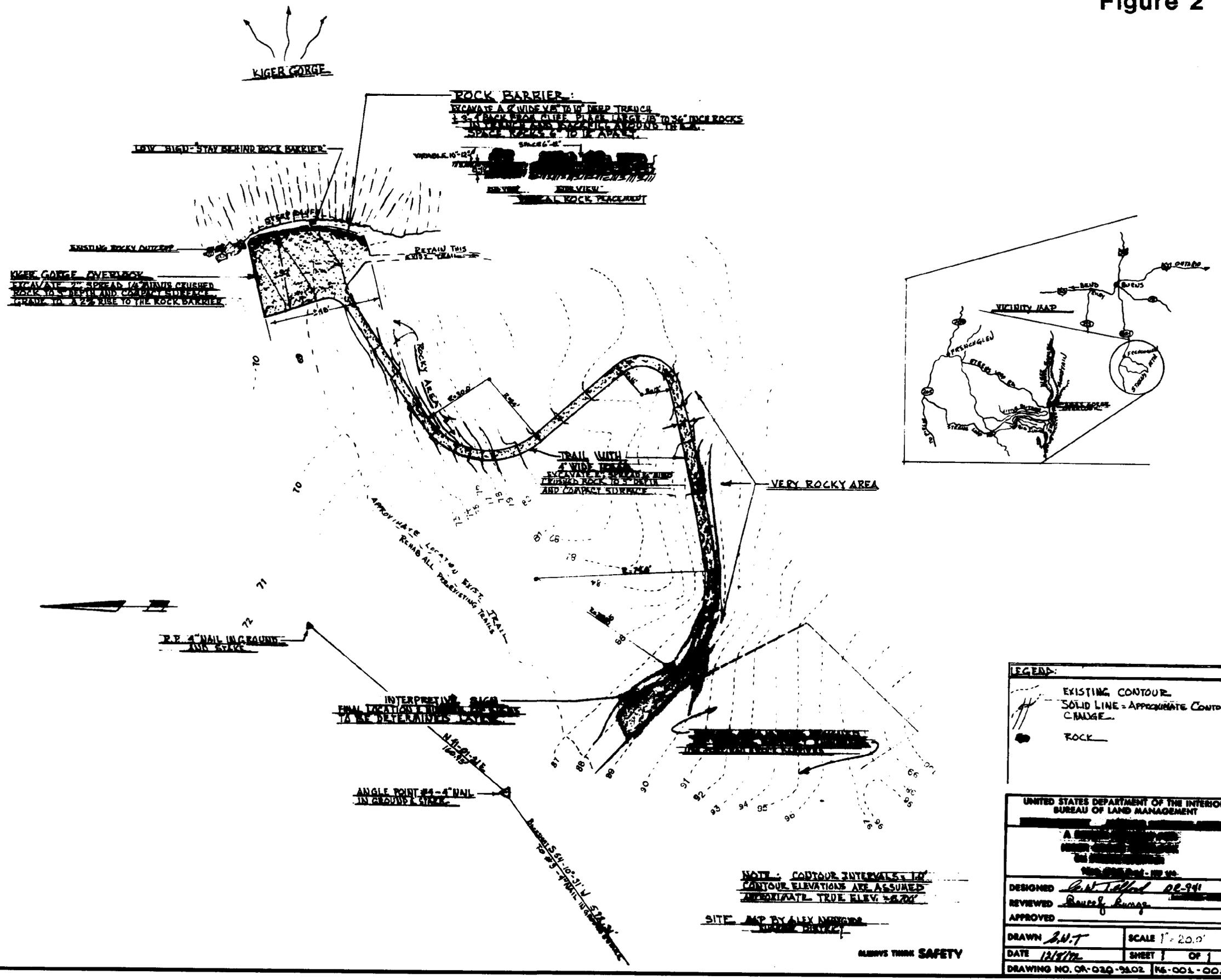
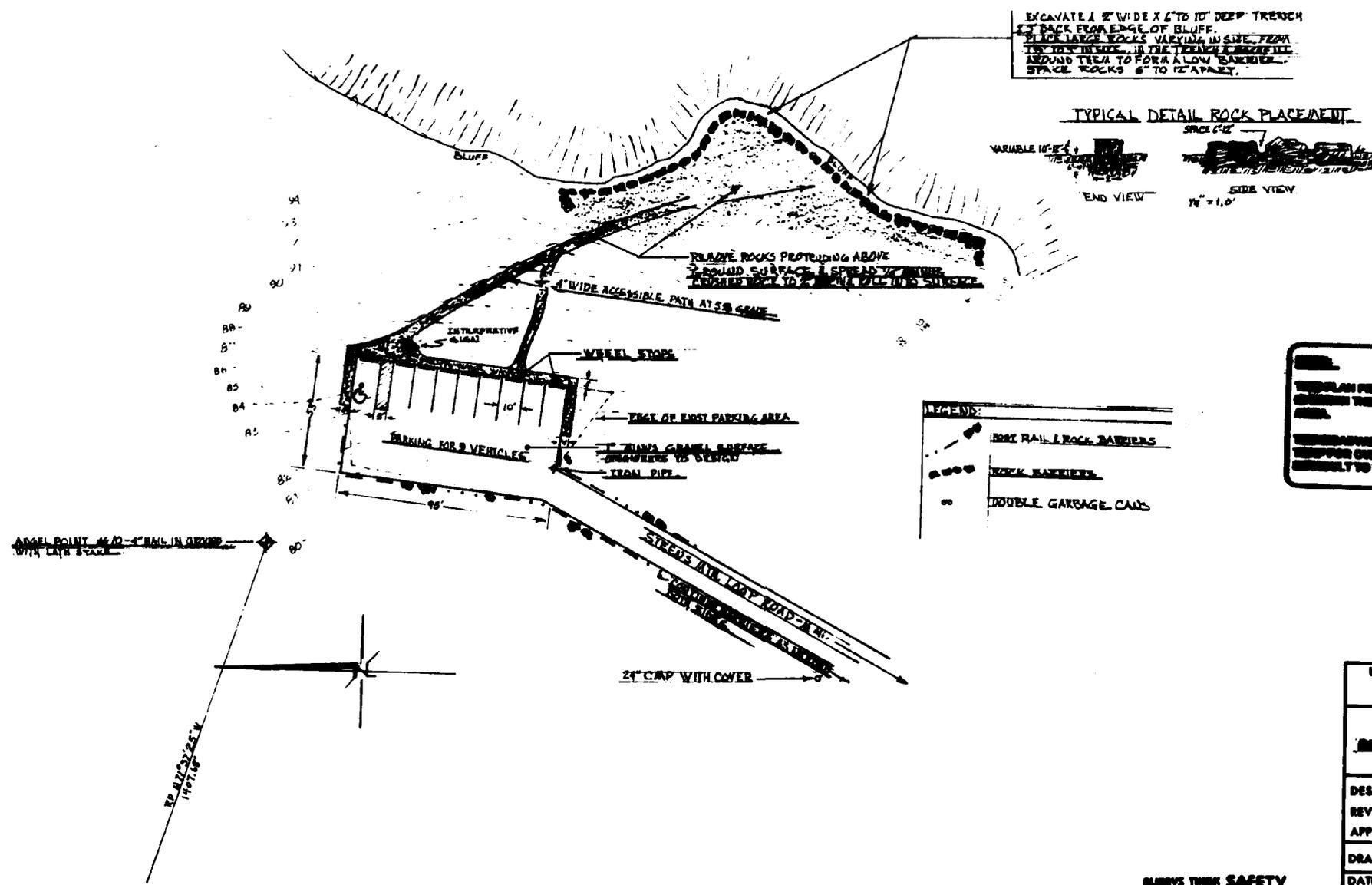


Figure 3



THIS PLAN PROVIDED FOR A LIMITED AREA WHICH COULD BE THE SUBJECT OF FURTHER DEVELOPMENT.

THE RESPONSIBILITY OF THE DESIGNER IS TO PROVIDE FOR SUFFICIENT CLEARANCE TO BE MAINTAINED TO THE ROAD TO BE ADJACENT TO THE CURB.

APPROVED FOR THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT

DATE 3/20/82

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT BLISS DISTRICT - ANCHORAGE RESOURCE AREA	
A DESIGN CONCEPT FOR BLISS DISTRICT - ANCHORAGE RESOURCE AREA PLAN A	
DESIGNED <i>B. W. Toland</i>	DATE 3/20/82
REVIEWED <i>Barney B. King</i>	SCALE 1" = 30'
APPROVED	SHEET 1 OF 1
DRAWN <i>B. W. Toland</i>	DRAWING NO. 01-020-2302 (20-001-001A)

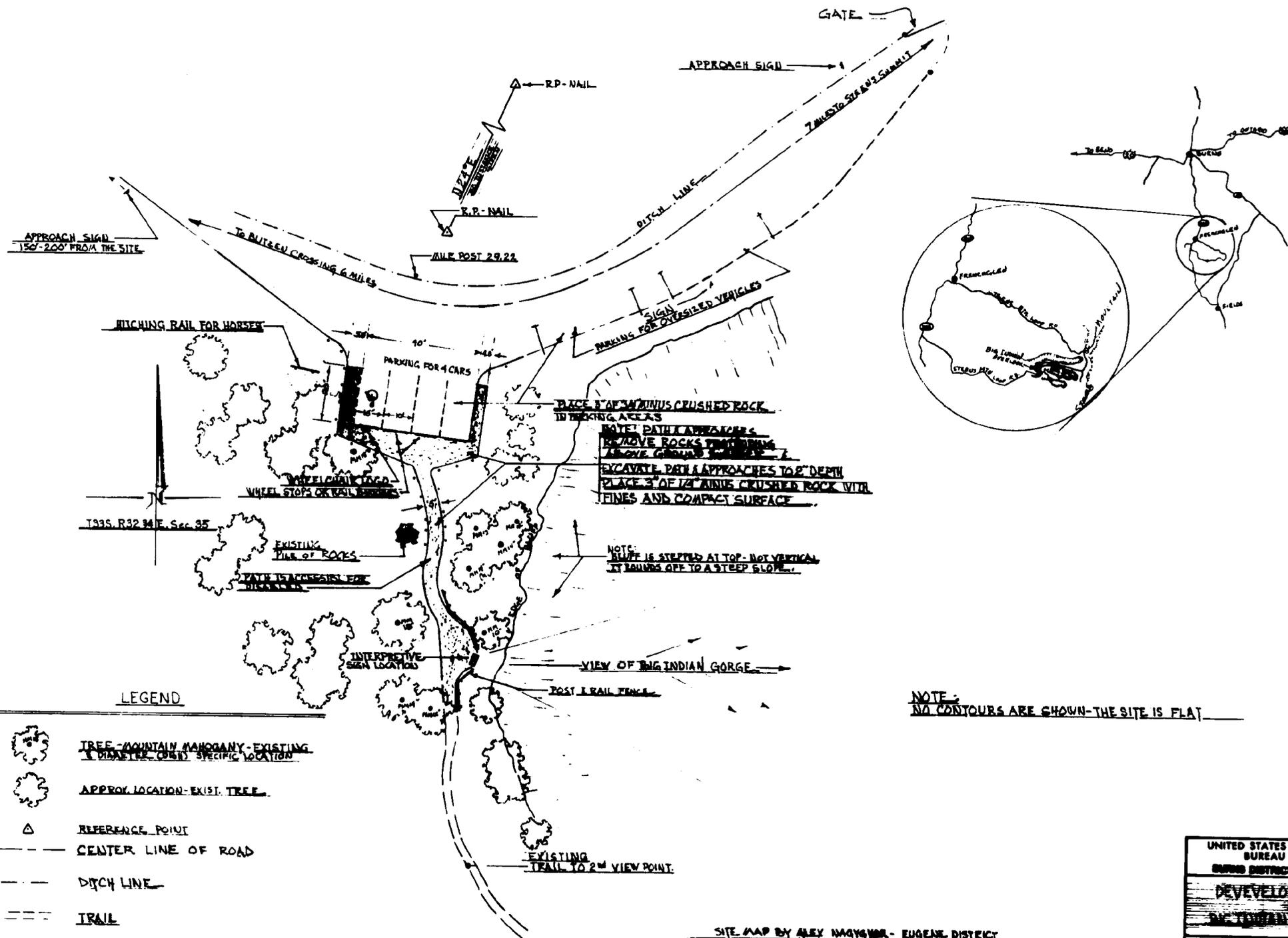
ALWAYS THINK SAFETY

Figure 4

NOTE:

- This conceptual drawing is for planning purposes only. It is not to be used as a design or construction document.
- This drawing represents an approximation of location and dimensions of the building structures as well as the proposed trail.
- Design and Construction of this site cannot take place until all required permits and approvals have been received and a complete site survey has been conducted.

Questions? Contact Chief Engineering Support Services OR 691.



- LEGEND**
- TREE - MOUNTAIN MAHOGANY - EXISTING
(DIAMETER CIRCLES SPECIFIC LOCATION)
 - APPROX LOCATION - EXIST. TREE
 - REFERENCE POINT
 - CENTER LINE OF ROAD
 - DITCH LINE
 - TRAIL
 - POST BARRIERS

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	
BURNS DISTRICT ADDRESS RESOURCE AREA	
DEVELOPMENT CONCEPT PLAN	
BIG INDIAN DISTRICT	
DESIGNED <i>Law Telford</i>	
REVIEWED <i>Boyle Runge</i>	
APPROVED	
DRAWN <i>L.W.T.</i>	SCALE 1"=200'
DATE 12/9/92	SHEET 1 OF 1
DRAWING NO. OR-020-93.02	BLM-001-00

ALWAYS THINK SAFETY

provided by grading and installing water bars and culverts to provide for high-clearance, four-wheel drive, or other similar vehicles. Gravel would be applied in select areas where water tends to concentrate, causing mud holes, or where deep ruts threaten to cut the road below the level of the surrounding land. Road maintenance would be kept within the existing area of disturbance, especially where these roads and ways border a Wilderness Study Area.

Camping is presently occurring at undeveloped sites along the southern segment of the Loop Road, with several sites receiving moderate to heavy use. A campground would be developed with 36 sites similar to those already existing on Steens Mountain, to encourage campers to use sanitary and environmentally compatible facilities designed to reduce impacts to soils and vegetation. This site is located along both sides of the access road to Big Indian Creek, in T. 34 S., R. 32-3/4 E., Section 4, N1/2SW1/4NE1/4 and NE1/4SE1/4NW1/4. Individual campsites would be clustered in two adjacent locations. One area with 15 sites would have hitching posts for people with horses. The other area would contain 21 sites for family camping. Facilities would include picnic tables, fire rings, grills, vault toilets, a well for culinary water, and spaces large enough to accommodate camp trailers, see Figure 5. The perimeter of the campground would be fenced. A total of 15 acres would be disturbed by construction of new facilities for the campground. Areas presently disturbed would be rehabilitated. Additional steps would be taken to obliterate vehicle access to dispersed campsites within Wilderness Study Areas. The access road to the mouth of Big Indian Gorge would remain open beyond the proposed campground.

Blitzen Crossing would be closed to overnight camping. The BLM would publish a supplemental rule in the Federal Register notifying the public of those activities to be prohibited.

The Cultural Resource Management Plan which calls for implementation of certain actions upon completion of the purchase agreement with the former owner would be reaffirmed by this alternative. When this occurs, the dirt road would be improved down to the historic ranch house and outbuildings in T. 33 S., R. 32-3/4 E., Section 30, SW1/4SW1/4SE1/4. Two parking areas would be developed:

1. A small area on the south side of the Little Blitzen River across from the historic ranch house to accommodate a half dozen vehicles.
2. A larger area, capable of holding several vehicles and a turn around for buses, three-quarters of a mile back up the road at the junction with the access road to the newer house on the hill, in T. 33 S., R. 32-3/4 E., Section 31, SW1/4NE1/4SE1/4.

Public vehicular access to the historic ranch house would be provided for self-guided tours when a caretaker is present. Regularly scheduled guided tours would be provided as needed or requested. When on-site staffing is unavailable, a gate into the area would remain locked. However, pedestrian access would still be possible. Vehicle access to the Little Blitzen River, the two homestead complexes upstream from the main ranch house, and surrounding meadows would be prohibited. A self-guided river foot-trail would be developed to traverse these areas. No actual trail construction would occur unless resource damage along the route develops as a result of concentrated use.

During winter months the Loop Road would be closed to general vehicle traffic using existing gates. Travel by wheeled vehicle would be allowed on the north segment of the Loop Road from the gate at Page Springs up to the 5,600-foot level, for groups involved in motorized and non-motorized winter sports. The use of snowmobiles would be allowed by organized groups on a case-by-case basis, along the north segment of the Loop Road beginning at the 5,600-foot level up to the Kiger overlook. The road would be too difficult to keep open for wheeled vehicles above the 5,600-foot level. The narrow ridge with cliffs of the East Rim and

Little Blitzen Gorge on either side present too great a hazard for snowmobile traffic, especially under conditions of low clouds, high winds, and falling snow.

Snowmobiles would also be allowed on public lands, outside of Wilderness Study Areas, on both sides of the Loop Road. This represents a change from the draft plan amendment and reflects the comments made by over 70 percent of the respondents in favor of keeping the present “case-by-case” program instituted in 1982. The BLM would ensure access through the locked gate at Page Springs. The Loop Road would be closed when wheeled vehicle use would cause damage to the roadbed.

A request for a winter sports use permit would be approved based on the following guidelines:

Adequate snow accumulation to ensure no damage would occur to soil and vegetation. A guide based on past experience would be an average of 18 inches at 5,600 feet elevation.

Authorization of winter sports would be limited to groups for safety reasons, due to the extreme weather conditions which can occur on the mountain, quickly and without warning.

Groups desiring to cross-country ski, snowshoe, or use snowmobiles would be required to have approval of the Burns District Office, requested in writing five working days prior to each trip (as stated in a supplemental rule to be published in the Federal Register). Each request should indicate the number of skiers or snowmobiles in the group, include an itinerary indicating dates of use, routes to be taken, and the estimated time of return from the mountain. A permit would be issued with pertinent stipulations or reasons given why a permit was rescheduled for another date or reasons given why a permit was denied.

Limit amount of use to prevent undue stress on wildlife during critical winter months. A guide would be 30 wheeled vehicles through the deer winter range per month during December, January, and February and 60 vehicles per month during March, April, and May.

All access to winter sports areas along the north segment of the Loop Road would be excluded during severe winters when such use would greatly stress deer on the winter range.

If snow is too deep for wheeled vehicles to get above the critical deer winter range, access would not be allowed unless snow was cleared from the road.

Use of snowmobiles would be excluded from Wilderness Study Areas.

People involved in winter sports activities are advised that use of private land should be made only after obtaining approval of the landowner.

Each group would be encouraged to carry survival gear for use in case of an emergency. Trail markers would be located along roads to mark Wilderness Study Area boundaries. When permits are issued, the BLM would undertake sufficient monitoring with resource personnel and law enforcement rangers to ensure compliance with permits and for public safety. No winter sports would be allowed until the boundary markers are in place and the BLM has the capability to patrol the area. Winter use guidelines would be revised if the results of monitoring show that management goals are not being achieved. Non-motorized winter sports use along the south segment of the Loop Road would not change.

A small parking and staging area would be located on public land in T. 35 S., R. 33 E., Section 14, SW1/4SW1/4SW1/4NW1/4, as a trailhead for access into Wildhorse Canyon. A hiking/equestrian trail

marked with carsonite signs would cross Section 14, follow a public easement through Section 11 to public land in Section 10. This would allow the public to travel between blocks of private land without trespassing on private land and eliminate the need for building three-quarters of a mile of new road.

When the gates are open, motorized vehicles would be limited to existing open roads and ways over the entire Steens Mountain Recreation Area, as published in the Federal Register, Volume 45, Number 183, dated September 18, 1980. Mountain bikes would also be restricted to existing open roads and ways.



Figure 6. Construction of the south segment of the Steens Mountain Loop-Road across the Rooster Comb (1959-61). Big Indian Gorge is shown on the left of the photo.



Figure 7. South segment of the Loop Road across the Rooster Comb nearing completion in 1961.

Chapter 3 AFFECTED ENVIRONMENT

Climate

The climate of Steens Mountain is semi-arid, characterized by moderate summers and cold winters. Summer temperatures rarely exceed 80 ° Fahrenheit at the higher elevations, a welcome change from the hot, lower elevations at the base of the mountain. Temperatures during the winter may reach as low as -40 ° Fahrenheit. Temperature variations can be extreme with temperatures falling drastically in a matter of minutes, accompanied by a snow storm with white-out conditions and severe winds.

Average annual precipitation varies from seven inches at the lower elevations to more than twenty inches at the summit. The majority of moisture is received in the form of snow from November through March. Snow depth during the winter measured at the Silvies snow course has varied from 15 inches to 74 inches since 1978, depending on the month and the year. Additional moisture is received in the form of rain or snow from April through June and thunderstorms from July through October. Snow is present in protected places at higher elevations throughout the summer.

Air

Air quality on Steens Mountain is generally excellent with visibility most limited by terrain. Seasonal sources of air pollution include dust from wind storms and smoke from rangeland and forest fires.

Winds are usually upslope to the east during the day, strengthening towards the top of the mountain, and downslope and gentle during the evening.

Water

Water quality varies greatly from year to year depending on annual precipitation, from season to season, and by site. Water quality is poorest in the spring when runoff from snowmelt is highest. Volume of sediment, mineral content, Ph, and water temperature are generally in an acceptable range.

Geology

Steens Mountain is located at the northern end of the Basin and Range physiographic province. It is a fault block which tilts gently westward toward the Blitzen River and Catlow Valleys and has a steep east-facing escarpment (cliff) overlooking the Alvord Desert more than 5,000 feet below. The fault block itself is cut by many faults, most of which trend northwest.

The foundation of Steens Mountain began forming 20 to 25 million years ago when rhyolite and andesite magma erupted from local vents, forming light-colored rocks. Approximately three million years later, basalt began to flow from long fissures that formed in the same area. Individual basalt flows of 20 to 40 feet thickness were separated by soil horizons that developed by weathering during lulls in volcanic activity. Many of the basalt layers contain lath-like feldspar crystals nearly an inch long. The total thickness of the basalt flows is approximately 4,000 feet. Sediment was later deposited over the basalt by small lakes and rivers. Remnants of this sediment are as much as 100 feet thick underlying mesas in the northern part of the Steens Mountain Recreation Area. The mesas are capped by erosion-resistant Devine Canyon Ash-Flow Tuff and local basalt flows that formed approximately 9 million years ago.

Although fault movements occurred before and during deposition of the Steens Basalt, most of the topographic relief we see today formed more recently than 9 million years ago. Occasional fault movement continues today.

The highest part of Steens Mountain was eroded by the forces of glaciers within the last two million years. No absolute age of the glaciation is known. The first major glacial advance formed an ice cap that extended eight to nine miles west of the crest and resulted in extensive deposits of glacial drift on the west slope. Cirques (semi-circular basins) formed at this time along the eastern side of the mountain crest. Ice was thickest in channels of Kiger, McCoy, Fish, Little Blitzen, Big Indian, Little Indian, and Wildhorse Creeks. The second major glacial advance was mostly confined to the eastside cirques and the above mentioned creek channels except that Fish Creek was not glaciated during this advance. A third phase of glaciation formed small cirques on pre-existing cirque headwalls. Glacial features that can be found in the Steens include tiered cirques, 2,000-foot deep U-shaped valleys, kettles, striations in rocks, hanging valleys, and moraines.

Minerals

The oldest rocks in the Steens Mountain Recreation Area include rhyolites exposed at the base of the eastern escarpment. These rhyolites contain small deposits of mercury, uranium, gold, and copper that have been intensively prospected since 1890, and thundereggs that have been of more recent interest. The only recorded production consisted of approximately 55 flasks of mercury. The rhyolites along the eastern edge of the Steens have moderate to high potential for gold, mercury, and uranium and low potential for zeolites and perlite.

As of February 12, 1993, there were nine mining claims located within the Steens Mountain Recreation Area. They are all located east of the Steens escarpment. All nine claims were located subsequent to 1976 and are in the High Steens Wilderness Study Area. The claimants may engage in no surface-disturbing activity within the Wilderness Study Area until Congress acts to designate all, part, or none of the Areas as wilderness.

Any surface-disturbing activity on claims, after wilderness designation, will be subject to a validity examination by BLM and an Environmental Impact Statement. No new claims may be located in wilderness unless Congress specifically provides otherwise in the wilderness designation. If their claims are outside of newly designated wilderness, claimants may engage in surface-disturbing activities up to the boundary of a Wilderness Area under mining notices or plans subject to BLM review.

There is low to no potential for oil and gas resources due to the lack of suitable source rocks in this geologic setting. There is moderate to high potential for geothermal resources in the northwest and southeast corners of the Steens Mountain Recreation Area. The Alvord Desert Known Geothermal Resource Area, with high potential for geothermal resources, bounds the east and southeast sides of the Steens Mountain Recreation Area.

Most of the Recreation Area is judged by the U.S. Geological Survey and the U.S. Bureau of Mines to have unknown potential for mineral development because it is believed that mineralization would be buried beneath 2,000 to 4,000 feet of unmineralized Steens Basalt lava flows. Sediments overlying the Steens Basalt in the northwestern portion of the Recreation Area may contain small amounts of diatomite.

Potential sites to obtain road rock exist throughout the Steens Mountain Recreation Area and surrounding region. Three sites have been identified on public land near the Loop Road. None of the sites would be apparent to the casual observer. The Juniper site is near the north segment of the Loop Road and inside the Steens Mountain Recreation Area. The Butler Extension and Roaring Butte sites are near the south segment

of the Loop Road and outside the boundary of the Steens Mountain Recreation Area. All three sites are outside riparian zones and below the subalpine zone.

Vegetation

Vegetation on Steens Mountain occurs in a large and variable array of plant communities at different elevations ranging from 4,200 to 9,700 feet. At the lower elevations, the vegetation is typically a semiarid shrub association with Wyoming big sagebrush and low sagebrush dominating the overstory and Sandberg's bluegrass, bluebunch wheatgrass, Idaho fescue, and squirreltail comprising the grass layer in the understory.

Western juniper is co-dominant with Wyoming big sagebrush at elevations ranging from 5,000 to 6,000 feet. Other species which form a major component of the overstory include mountain mahogany, snowberry, quaking aspen, and bitterbrush.

Mountain big sagebrush is the dominant overstory shrub at elevation of 6,000 to 8,000 feet. The understory plants in the mountain big sagebrush type include needlegrass, mountain brome, Idaho fescue, and a host of wildflower species. Quaking aspen is another major type in this elevational zone, occurring primarily on north slopes and in stream channels.

The subalpine vegetative community occurs from 8,000 feet up to the summit. The major plants include wildflowers and grasses, occurring in subalpine grasslands, on exposed ridges and in meadows or swales. Trees are not part of the subalpine community and only a few shrubs exist. Snow may accumulate in depressions for most of the year.

The Steens Mountain paintbrush and Steens Mountain thistle are plants found only on Steens Mountain. The paintbrush occurs at high elevations within the subalpine grassland and is a federal candidate for listing as threatened or endangered. The thistle thrives on both disturbed and undisturbed sites within the mountain big sagebrush and subalpine vegetative communities. It is found in abundance along the edges of the Loop Road. Sierra onion, Cusick's hyssop and Davidson's penstemon are sensitive plants, not federally protected, which occur in the vicinity of the Loop Road.

Wildlife

The lower elevations provide summer range for a small number of pronghorn antelope and late fall, winter, early spring range for mule deer. An estimated 40 percent of the Steens Mountain deer winter along the west side of Steens Mountain and many of these winter along the lower five miles of the Loop Road. During severe winters deer range is reduced in area as deer move to lower elevations because of deep snow.

Other species using the lower elevations include sage grouse, a federal candidate species for listing as threatened or endangered, coyote, black-tailed jackrabbit, western meadowlark, sage sparrow, red-tailed hawk, western rattlesnake and many others.

Mid and upper elevations provide summer range for mule deer, pronghorn antelope, Rocky Mountain elk, sage grouse and many non-game species such as sage thrasher, rufous-sided towhee, sagebrush vole, Preble's shrew, and Belding's ground squirrel.

Upper elevation rocky ledges, canyon walls, talus slopes, and other secluded areas provide habitat for pika, and California bighorn sheep, a federal candidate for listing as threatened or endangered, especially along the east rim.

Fish Lake contains rainbow and brook trout. The Little Blitzen River, South Fork of the Blitzen River, and Big Indian Creek contain mottled sculpin, long-nose dace, redband shiner, and redband trout, a federal candidate species for listing as threatened or endangered. The riparian zones along streams provide habitat for raccoon, common and western aquatic garter snakes, yellow warbler, tree swallow, northern oriole, common snipe, warbling vireo, Brewer's blackbird, great horned owl, sharp shinned hawk and many other species.

Recreation

Visitors to Steens Mountain enjoy a multitude of recreation opportunities including hunting, fishing, sightseeing, day hiking, backpacking, camping, picnicking, wildlife viewing, nature study, mountain bike riding, and horseback riding. The mountain is popular because it offers wide panoramas, scenic vistas, spectacular glaciated gorges, wildlife viewing, high mountain lakes, and numerous other features valued by outdoor enthusiasts.

Access provided by the Loop Road is the key element in all recreation activities on Steens Mountain. The road allows all people; the old, the young, and the handicapped to enjoy the recreation opportunities offered by Steens Mountain. For most visitors, the Loop Road starts at Frenchglen, first crossing the Malheur Wildlife Refuge for 2.8 miles.

In 1971, an area of more than 200,000 acres and encompassing the Loop Road, was designated as the Steens Mountain Recreation Lands. In 1989, the entire Loop Road was designated as a National Back Country Byway. The Oregon High Desert Trail, designated as part of the National Recreation Trails system in September 1992, crosses the summit ridge of Steens Mountain from south to north and then proceeds down Little Blitzen River or Big Indian Canyon and finally to Page Springs.

According to a Recreation Area Study performed for BLM by Oregon State University in 1988, the most important recreation activity was driving the Loop road for pleasure. This information on specialized activity preference has been reiterated in periodic visitor use surveys. Visitation to the mountain has been relatively static over the past five years. Visitation in 1992 was 48,520 visitors; the five year average 48,524; peak visitation occurred in 1989 with 50,631 visits.

Preliminary data from a 1992 "Visitor Use Analysis" conducted by the South East Research Center, University of Georgia, Athens showed the Steens to be most popular with Oregonians. Fully 83 percent of those interviewed were from Oregon, another 15 percent from other states, and 4 percent international visitors.

At the present time BLM issues approximately 8-10 Special Recreation Use Permits each year for various commercial and non-commercial uses. These range from outfitters and guides, to educational groups, a high altitude running camp, and specialized activities such as co-sponsoring the Steens Rim Run. The rim run attracts approximately 300 runners and spectators for one of the most physically challenging 10K runs in the Pacific northwest.

There are three campgrounds located along the north loop road of Steens Mountain. Page Springs recreation site is located 3 miles east of Frenchglen, Oregon. Fish Lake recreation site is 18 miles east of Frenchglen, at an elevation of 7400 feet, and Jackman Park recreation site is 3 miles east of Fish Lake at an elevation of 7700 feet. All three campgrounds are U.S. fee areas and are extremely popular recreation sites.

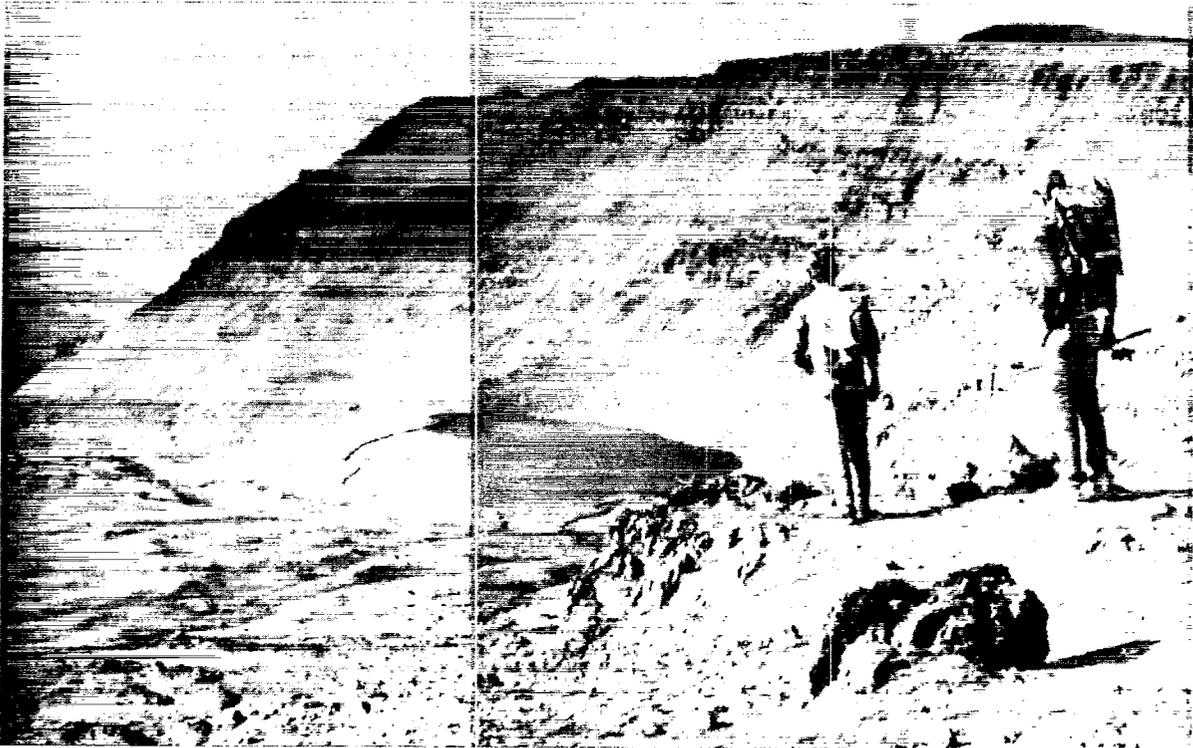


Figure 8. Hikers at the trail head down into Wildhorse Canyon looking down at Wildhorse Lake.



Figure 9. Participants in the Steens Rim Run crossing the finish line near the East Rim overlook.

The major glaciated canyons such as Big Indian, Little Blitzen Gorge, Wildhorse and the upper portion of Kiger receive back country recreation use such as hiking, backpacking, camping, horseback riding, hunting and fishing. The two most used canyons are Big Indian and Little Blitzen due to their proximity to the Steens south loop road, and that they can be easily accessed by hiking into the mouth of these gorges. Overlooks at Kiger Gorge, East Rim and Wildhorse Canyon are heavily used by sightseers causing a proliferation of foot-trails and damage to soils and fragile subalpine vegetation.

Recreation use occurs year around at the Page Springs campground along the lower stretch of the Donner und Blitzen National Wild & Scenic River. The campground and adjacent stretches of river receive heavy use because of its close proximity to Frenchglen and moderate climate. Heavy dispersed camping in several places, especially along the south segment of the Loop Road, is resulting in unsanitary conditions.

Steens Mountain is a popular area for deer, elk, antelope, bighorn sheep, and chuckar hunting. Each fall approximately 800 to 1,000 deer hunters, 450 to 500 elk hunters, 90 antelope hunters, 20 bighorn sheep hunters, and a few hundred chuckar hunters cover Steens Mountain within a relatively short time. These same sportsmen make extensive use of the Loop Road and secondary access routes in order to reach areas used by game animals. Travel on dirt roads when soils are saturated by rain or snow results in ruts and erosion of roadways, especially on roads which traverse steep hill slopes. Hunting camps dot the region and littering and sanitation create a challenge for the land manager.

The Oregon High Desert National Recreation Trail traverses the Steens and it is popular with backpackers and horseback riders. The BLM has developed two trail guides to assist the public in using this section.

Rock hounding and hiking are enjoyed by people exploring the steep, rugged terrain east of the summit ridge. Secondary roads off the Fields-Follyfarm road near the eastern boundary of the Steens Mountain Recreation Area provide access to these areas.

Wilderness

There are five Wilderness Study Areas associated with the Steens Mountain Loop Road. These are: High Steens (2-85F), South Fork Donner und Blitzen River (2-85G), Blitzen River (2-86E), Little Blitzen Gorge (2-86F), and Bridge Creek (2-87).

All Wilderness Study Areas meet the criteria for study and possible designation as wilderness by possessing outstanding qualities of naturalness and offering opportunities for solitude and/or primitive and unconfined recreation. However, only three of five areas were recommended for final wilderness designation in the Oregon Wilderness Environmental Impact Statement.

The Loop Road forms at least partial boundaries for all five of the Wilderness Study Areas. The most noticeable outside sights and sounds affecting wilderness is traffic along the Loop Road and adjacent access roads.

Wild and Scenic Rivers

A total of 74.8 miles of the Blitzen River and its tributaries have been designated as a Wild and Scenic River in the planning area. Tributaries include Fish Creek, Little Blitzen River, Big and Little Indian Creeks, and South Fork of the Donner und Blitzen River. A plan has been developed and published for management of the Donner und Blitzen National Wild and Scenic River.

Cultural

Native Americans inhabited the Steens Mountain region at least as long as 8,000 years ago, when ancient lakes filled the Malheur, Catlow, and Alvord basins.

In prehistoric times, Native American people, including the Northern Paiute and their predecessors, used the region for hunting, fishing, and gathering of plants for food and medicine along ridges and watercourses which they followed as transportation corridors. Areas used seasonally or on a temporary basis contain evidence of shelters, cooking, processing of plants for food, clothing, and dyes, and manufacturing of stone tools.

Between 1826 and 1829, men with the Snake Country expeditions began trapping for beaver in the region. While exploring and trapping on his third and fifth trips, Peter Skene Ogden came into the Malheur Lake Basin near the Steens. In 1845, the Lost Wagon Train led by Steven Meek mistook the snow-capped Steens for the Cascade Mountains as they entered the Harney Basin.

In 1860, the U.S. Army sent Major Enoch Steen to protect settlers from the Paiute Indians and to determine the feasibility of a road from southeastern Oregon to the Willamette Valley. His party named many prominent topographic features, including Steens Mountain. During a thunderstorm in 1864, Captain George B. Curry and his command were forced to cross a river on the west slope of the Steens. He named the river "Donner und Blitzen," which is German for thunder and lightning.

Cattle were first driven into the area in 1872. By the early 1900's, many ranches had been established on homesteads in the lush valleys and grazing lands on and surrounding the Steens. Prior to the passage of the Taylor Grazing Act in 1934, over 100,000 sheep and thousands of cattle grazed on Steens Mountain during the summer. Historic remnants in the region usually associated with livestock raising activities during the homestead era (approximately 1890-1930), include old cabins, tree carvings, corrals, windmills, rock walls and fences, irrigation ditches, discarded agricultural equipment, and trash dumps.

The Riddle Brothers Ranch Historic District, located along the Little Blitzen River on 1,120 acres of public land, is listed on the National Register of Historic Places. The site is still functioning as a private working ranch under a title transfer agreement with Clemens Ranches, Inc. Three complexes of structures are included within the historic district. Structures at the main complex include a ranch house, root cellar, bunkhouse, chicken house, storage building, tack room, barn, and corrals built of willows and juniper. Another complex includes a house, root cellar, and stone storage building, while the smallest complex has a log house and split rail fences.

The cultural resource base includes data collected from prehistoric and historic sites along streams of the Donner und Blitzen Wild and Scenic River system, inventories of the Riddle Brothers Ranch, and clearance surveys for construction projects. Potential for prehistoric sites is moderate to high throughout the area, while historic sites are found primarily near springs or streams.

No known Native American traditional activities are practiced on Steens Mountain by contemporary Indian tribes. The Burns Paiute and people from the Confederated Tribes of the Warm Springs Indian Reservation have expressed interest in using the mountain. Future sites for traditional practices and other purposes may be identified through consultation with the appropriate tribes.

Wild Horses

The South Steens Wild Horse Herd Management Area is located in the lower foothills of Steens Mountain, along the south segment of the Loop Road west of Blitzen Crossing. The Area is approximately 151,315 acres in size and contains from 159 to 304 animals, depending on the gathering schedule.

The horses range over a wide area, but they tend to concentrate in the remote areas south of the Loop Road. Occasionally some horses can be seen grazing along the Loop Road between Bald Headed Camp and Blitzen Crossing.

Livestock Grazing

Beginning in the 1870s Steens Mountain was heavily grazed by large herds of domestic sheep. By the turn of the century an estimated 140,000 to 200,000 sheep grazed 450 square miles on the Steens during the summer months. At the same time, the area was also being grazed by thousands of cattle and hundreds of saddle horses.

Passage of the Taylor Grazing Act in 1934 marked the beginning of a significant reduction in the number of sheep, cattle and horses that grazed the Steens. Beginning in 1935, grazing areas and livestock numbers were adjudicated for each rancher who had shown historic use. Further livestock reductions began in the 1950s and changes in grazing season were begun in the 1970s and 1980s. John Scharff, long-time superintendent of the Malheur Wildlife Refuge, observed that within three years after 1935, plants of many different species returned to the mountain.

Today, cattle are authorized to graze along all of the Loop Road except a portion above Jackman Park along the top of the mountain, to the Rooster Comb. These high elevation areas are excluded from grazing to protect sensitive subalpine soils and vegetation.

The Loop Road bisects a total of 6 livestock grazing allotments. Table 2 illustrates the size of each allotment, the grazing system and the grazing capacity in animal unit months (AUM):

Table 2. Grazing Allotment Information Within the Steens Mountain Recreation Area

Allotment Name	Public Acres	Grazing System and Season of Use	Grazing Capacity in AUMs
Frazier Field	21,172	Rest rotation, spring and summer	1,906
Hardie Summer	2,312	Deferred, use during summer	408
Chimney	14,772	Deferred, use during summer	2,015
Steens Summit	4,890	No livestock grazing	0
Fish Creek/Big Indian	33,844	Early spring	1,978
South Steens	226,438	Spring through summer	21,926

The area near the mouth of Wildhorse Canyon is part of the Penland Allotment, containing 4,281 acres. The grazing system and grazing capacity has yet to be determined because it is part of a recent acquisition.

Private and State Land

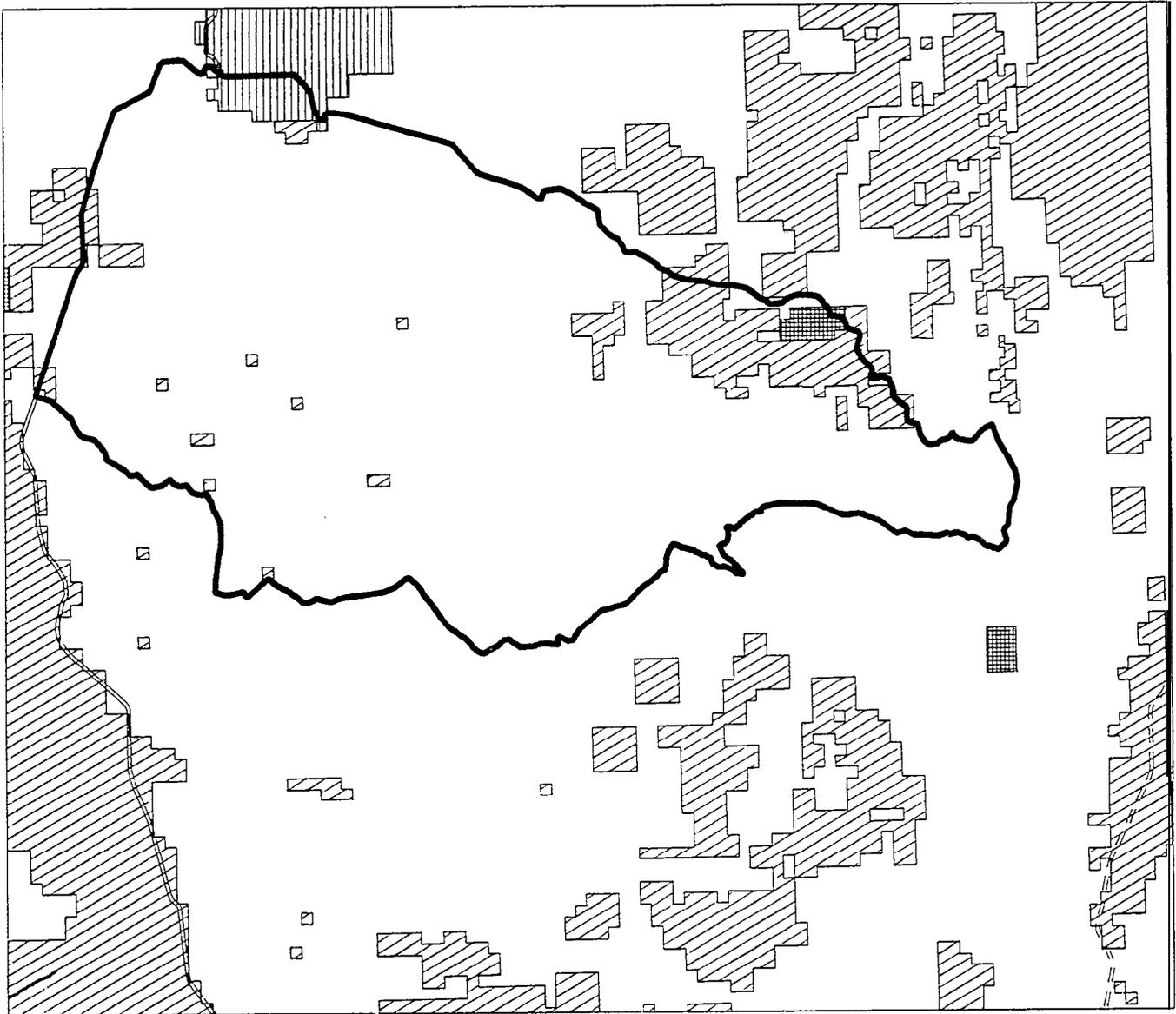
Approximately 40,000 acres of private land and over 1,000 acres of state land are located within the Steens Mountain Recreation Area boundary. See Table 3 and Figure 6. Private lands are owned by 13 different individuals or corporations and the primary use made by the owners is the grazing of livestock. These lands are located along the north segment of the Loop Road, and in addition to being grazed are popular recreation areas. For example, Whorehouse Meadows is being extensively used by the public for camping and has also received some snowmobile use.

Table 3: Land Ownership Within the Steens Mountain Recreation Area

Land Ownership	Total Acres
Public land administered by BLM	200,000
Privately owned land	40,700
State owned land	1,030
Total	241,730



Figure 10. Cattle being herded on Steens Mountain,



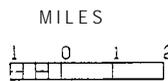
LEGEND

-  PRIVATE LAND
-  BLM LAND
-  STATE LAND
-  MALHEUR WILDLIFE REFUGE
-  STEENS MTN LOOP ROAD
-  PAVED ROAD
-  GRAVEL ROAD

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BURNS DISTRICT
1993

**STEENS MOUNTAIN
LAND STATUS**



MAP PREPARED BY THE BURNS DISTRICT THROUGH NON-CARTOGRAPHIC METHODS

FIGURE 11

Chapter 4 ENVIRONMENTAL CONSEQUENCES

Table 4 summarizes impacts by each of the five alternatives.

Table 4. Summary of Impacts by Alternative

Resource Impacted	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Air Quality	Dust along roadway and in campgrounds	Same as Present Situation	Dust considerably reduced	Dust eliminated from asphalt roads	Same as Alternative 2
Water Quality	Sediment from Loop Road can reach river at Blitzen Crossing	Some reduction in sediment from Present Situation	Sediment reduced from Loop Road	Similar to Alternative 2, except further reduction due to asphalt	Same as Alternative 2
Recreation	Dispersed camping creates unsanitary conditions; limited clearance vehicles have difficulty traversing Loop Road; people impact aesthetics at overlooks; few people enjoy motorized winter sports; mountain bike can go anywhere	Comfortable and sanitary camping facilities along south Loop Road; access improved for sightseers; access improved to overlooks; snowmobilers would have greater access to the north Loop Road; road to Big Indian Gorge closed; Blitzen Crossing day-use only; access to Wildhorse Canyon would improve; mountain bikers would have less area to enjoy	Impacts would be the same as under Alternative 1, except one additional campground would accommodate growth of visitor use in a more orderly manner; use and enjoyment of area enhanced and safety increased by improved Loop Road; enjoyment and understanding of resources increased by education; snowmobilers would have to go elsewhere	Impacts would be same as under Alternative 2, except enjoyment of overlooks would be reduced; access to upper Steens and Wildhorse Canyon would be reduced or eliminated for some segments of the public such as the elderly or physically impaired	Same as Alternative 2, except one less campground proposed; road to Big Indian Gorge would be open; snowmobilers would have slightly more freedom than in Alt. 1, but fewer allowed on Mtn.
Wilderness	Occasional intrusion of vehicles from Loop Road into WSAs	Less vehicle intrusion into WSAs because of new campground; snowmobiles may intrude WSAs and noise would impact solitude	Better defined Loop Road and two new campgrounds would reduce vehicle intrusions into WSAs; no impact of snowmobiles on WSAs	Closing upper part of Loop Road would enhance opportunities for solitude; no impact of snowmobiles on WSAs	Same as Alternatives 1 and 2, except both positive and negative impacts changed with one less campground

Resource Impacted	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Wild and Scenic Rivers	Some limited sediment from Loop Road can reach river at Blitzen Crossing; sediment reduced from actions in Wild and Scenic River Plan	Some reduction in sediment at Blitzen Crossing over Present Situation; a new campground would reduce camping along streams	Same as Alternative 1, except additional reduction in sediment at Blitzen Crossing	Same as Alternative 1, except two new campgrounds would further reduce impacts of camping along streams	Same as Alternative 2, except slightly less benefits from campgrounds
Wildlife	Camping at undeveloped sites and at Blitzen Crossing has limited impact on wildlife over a broad area and increases angling pressure; improved access to Riddle Brothers Ranch would increase fishing and hunting pressure in the area	Impacts same as under Present Situation, except impacts to wildlife over a broad area are lessened by concentrating people in campgrounds; increased use from winter sports would impact wildlife, but mitigated by allowing use only above 6,000-foot level	Impacts same as under Alternative 1, except increased impacts to wildlife from increased access to Riddle Brothers Ranch; no impact from snowmobiles	Impacts same as under Alternative 2, except closing upper segment of Loop Road would , reduce disturbance of wildlife and hunting pressure; reduced impacts on fishery on Riddle Brothers Ranch	Same as alternative 2; impacts somewhat less than from Alternative 1 for snowmobile use
Cultural Resources	Cultural resources would benefit from enhanced public education, especially at Riddle Brothers Ranch; continued impact of cultural and historic resources scattered over the area	Impacts same as under Present Situation, except increased use of cultural and historic resources resulting from improved roads and additional camping facilities	Impacts same as Alternative 1, except improved roads and public facilities would further increase use of cultural and historic resources; increased public awareness through education would help mitigate impacts	Impacts to cultural and historic resources reduced as public access is restricted; opportunities for public education would be reduced	Impacts same as for Alternative 2

Resource Impacted	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Vegetation	Some loss of plants from trampling at overlooks, at dispersed campsites, and from mountain bikes	Temporary loss of some Steens Mountain paintbrush and thistle due to road improvement; 5-7 acres disturbed for new campground; less damage to plants at overlooks; no plant damage from mountain bikes	Impacts same as under Alternative 1, except 5-7 additional acres disturbed for a second campground; further protection for plants at overlooks because of improved parking areas and public education	Impacts same as under Alternative 2, except reduced impact to Steens Mountain thistle and paintbrush as a result of closing upper segment of Loop Road	Impacts same as for Alternative 2, except there would be no impact from a second campground
Geology	Condition of Loop Road limits number of people who can enjoy geologic features seen from overlooks	Improved Loop Road would allow increased numbers of people to enjoy geologic features	Impacts same as under Alternative 1, except increased education would enhance public appreciation and understanding of geologic features	Impacts same as under Alternative 2, except fewer people would be able to enjoy geologic features	Impacts same as under Alternative 2
Minerals	Consumption of 215,000 cubic yards of gravel every 1.5 years	Consumption of 750,000 cubic yards of gravel every 1.5 years	Consumption of 260,000 cubic yards of gravel for road and campground surfacing; loss of 25,000 cubic yards of gravel every 5 years for maintenance	Consumption of 140,000 cubic yards of gravel for road and campground surfacing; loss of 10,000 cubic yards of gravel every 5 years for maintenance	Impacts same as under Alternative 2, except less gravel used because of one less campground being constructed
Wild Horses	No impact to wild horses	Slight increase in disturbance but not a significant factor	Same as under Alternative 1, except horses would avoid Bald Headed campground	Same as under Alternative 2	Same as under Alternative 1
Livestock Grazing	Vehicles traveling the Loop Road pose a threat to cattle grazing along the roadway but not significant	Any potential increase in visitor use would increase impacts noted in Alternative 1, again impact to cattle would not be significant	Same as under Alternative 1	Impacts would be less because of closing a significant portion of the Loop Road	Same as under Alternative 1

Resource Impacted	Present Situation	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Private Lands	Private lands are being used by the public; visitor use to the Mtn. will increase in the future; Frenchglen is benefitting economically, but is also experiencing impacts from visitors	Same as Present Situation, no significant change in visitor use and impacts to private land	Same as under Alternative 1	Same as under Alternative 1	Same as under Alternative 1

Impacts to Air Quality

The Loop Road in its present condition (*Present Situation*) and with a layer of gravel with no binding agent (*Alternative 1*) would be a significant contributor of dust to the person driving the roadway or people enjoying nearby overlooks and campgrounds. The use of a binding agent in *Alternatives 2 and 4* would considerably reduce the level of dust in the air for people driving the Loop Road, visiting overlooks and campgrounds, and dust would be eliminated by use of asphalt in *Alternative 3*. A significant increase in visitor use is not expected from any alternative, therefore, air pollution from vehicle exhaust is not expected to increase significantly.

Impacts to Water Quality

The Loop Road in its present condition (*Present Situation*) is subject to erosion of soil from the roadway. However, because of the distances of most streams from the Loop Road, sediment is not a problem. Where the Loop Road crosses the south fork of the Donner und Blitzen River at Blitzen Crossing is an exception. A layer of gravel with no binding agent (*Alternative 1*) would reduce erosion and sediment entering the river at Blitzen Crossing. The use of a binding agent in *Alternatives 2 and 4* would greatly reduce runoff and soil loss from the roadbed and asphalt in *Alternative 3* would virtually eliminate runoff and soil loss except from drainage ditches. Sediment from the Loop Road into streams is not a significant issue under any of the alternatives.

Impacts to Recreation

Present Situation

Dispersed camping, especially along the south segment of the Loop Road, would continue to occur creating localized unsanitary conditions from human waste scattered on the ground. In addition, litter, fire pits, disturbed soils, and other effects of dispersed use would have an impact on scenic values and an attendant impact on enjoyment of the area by the public.

Passenger vehicles with limited road clearance would continue to have difficulty traversing the Loop Road and could be damaged in the process, limiting sight-seeing opportunities and enjoyment of Steens Mountain. Increasing numbers of visitors would find it more difficult to enjoy traveling the Loop Road. People on mountain bikes would continue to go cross-country over much of the Recreation Area with maximum enjoyment of the country.

Vehicles would continue to use non-designated pullouts and people would walk where they wished, causing indiscriminate use over a broad area on the overlooks and an impact on the aesthetics of overlooks.

Relatively few people would continue to enjoy motorized winter sports and the spectacular winter scenery along the north segment of the Loop Road. Hunting and fishing would continue to be popular with most of the activity occurring near roads and ways. Access to the Riddle Brothers Ranch would continue to be restricted in accordance with the purchase agreement with the previous owner. Limited opportunities to visit this historic site, while maintaining and enhancing historic integrity, would continue by way of organized tours and public education. The locked gate would not restrict pedestrian access. When the agreement period ends, access and opportunities for public enjoyment of the Riddle Brothers Ranch would be increased.

Alternative 1

Access would be improved for the sight-seeing public using passenger cars. This would enhance enjoyment of the scenery on Steens Mountain for a greater portion of the public. Proposed improvement of the Loop Road would not significantly increase the number of people visiting Steens Mountain. The surface of the road was greatly improved in 1975 and 1991 with little increase in visitor use. Studies conducted on Steens Mountain by the University of Oregon indicate the Mountain is a destination point for tourists. Almost all visitors had to drive long distances to enjoy the area. Economic and social factors such as available free time, expendable income, and a desire to experience open space all contribute to the visitors on the Steens.

One of the most important factors which affects the number of people who travel the Loop Road is snow depth on the mountain. During the past seven years of drought, the road has been open from early May into November. Visitor use from 1998 through 1992 averaged 48,525 visitors per year. During the particularly dry, warm year of 1989, visitor use was up to 50,631 while the number of visitors in 1983 when precipitation was far above normal was only 20,456.

Brochures developed by the BLM and distributed to the public at the Frenchglen visitor facility and at the Burns district office are designed to help the visitor to Steens Mountain enjoy the campgrounds and overlooks along the Loop Road. Improvements to the Loop Road and overlooks are designed to improve visitor enjoyment, understanding, and safety; and to protect and enhance the natural environment. Word of mouth from past visitors, brochures and maps distributed throughout the northwest by user groups, and unsolicited magazine articles will continue to be factors in bringing new visitors to the Steens.

The developed campground at the turnoff to Big Indian Gorge would provide comfortable and sanitary facilities for the public along the south segment of the Loop Road. Vault toilets would dramatically improve the existing unsanitary conditions of human waste. Some dispersed camping presently occurring would be curtailed by obliterating old sites and encouraging the use of developed campsites. The new campground would cause some visual intrusion on the existing landscape, but impacts would be mitigated by designing facilities to be screened by trees and topography and by removing very few of the existing juniper trees. The campground would serve as a jumping off point for people hiking, backpacking, and horseback riding into the Little Blitzen, Big Indian, and Little Indian gorges. Prohibiting motorized use beyond the proposed campground would create some inconvenience for hikers into Big Indian Gorge by making them hike an additional two miles.

Improvement of roads to overlooks would (enhance use and enjoyment of scenic areas by the public. Proliferation of foot-trails would be reduced by concentrating visitors on a single trail. This would improve the aesthetics of the area around the overlooks. The lack of any on-site interpretation, such as visitor information, would reduce opportunities for visitors to be informed of geologic features and plant communities found on the mountain and bisecting gorges.

The opportunity for visitors to enjoy the Riddle Brothers Ranch would be similar to *the Present Situation*.

Mountain bike riders would have less area to enjoy by being restricted to existing open roads and ways. Winter use on the north segment of the Loop Road above the 6,000-foot level and adjacent access roads would increase the spectrum of recreation opportunities offered to the public. Some conflicts may arise between motorized and non-motorized activities competing for the same limited space. This may be mitigated by designating separate areas or times for motorized and non-motorized uses.

Access for back country recreation would be improved. The parking and staging area at the mouth of Wildhorse Canyon would greatly improve access for hiking, backpacking, horseback riding, hunting, and fishing in the canyon. These facilities would also provide better public, administrative, and emergency access to the nearby section of the Oregon High Desert National Recreation Trail. Signed public access would also reduce impacts to private land in the area.

Alternative 2

Impacts from sightseeing along the Loop Road and camping would be similar to those from *Alternative 1*, except additional growth in camping would be partially accommodated and managed in a more orderly manner by a second new campground. Use and enjoyment of the mountain by the public for sight-seeing and other day-uses such as picnicking would be further enhanced because of the improved condition of the surface of the Loop Road. Impacts from mountain bikes would be the same as under *Alternative 1*.

Visitor enjoyment of scenery from overlooks, as well as their understanding of geology and plant ecology, would be enhanced through interpretive panels.

Winter use along the north segment of the Loop Road would be maintained for non-motorized winter sports. Conflicts between motorized and non-motorized winter sports would be eliminated. Motorized winter sport enthusiasts would have to go elsewhere.

Access for back country recreation would be the same as in *Alternative 1*.

Alternative 3

Impacts from camping and winter sports would be similar to those from *Alternative 2*.

Visitor enjoyment of sightseeing along the Loop Road and viewing scenery from overlooks, as well as their understanding of geology and plant ecology, would be greatly reduced because the most spectacular overlooks would be reached only by hikers.

Driving for pleasure, the most popular recreation activity associated with Steens Mountain, would be severely impacted because the closure of the central section of Loop Road would essentially create two dead end roads. Management of the annual Steens Rim Run would be difficult since the entire length of the race would be on closed road. Spectators would either have to walk to the race area or would not be able to view the race along its course. Participants in the race would be forced to return to the starting area on foot. Provision would be made for emergency vehicles to travel the closed road in order to administer first aid or remove incapacitated runners.

Alternative 4

Impacts from sightseeing along the Loop Road, viewing scenery at overlooks, enjoyment of the Riddle Brothers Ranch, and camping would be similar to those from *Alternative 2*, except only one campground would be developed along the south segment of the Loop Road. Enjoyment of winter sports should be similar to *Alternative 1* even though stipulations for use are somewhat different.

Access to the mouth of Wildhorse Canyon for hikers and horseback riders would be similar to *Alternative 2*, except recreationists would have to walk or ride three-quarters of a mile farther from the parking/staging area.

Impacts to Wilderness

Present Situation

The lack of a developed campground along the south segment of the Loop Road would continue to encourage camping at undeveloped sites, spreading impacts over a broad area. People seeking good campsites occasionally intrude inside Wilderness Study Areas with their vehicles. Intrusions leave vehicle tracks which other people tend to follow.

Alternative 1

Improvement and maintenance of the Loop Road, construction of parking areas at overlooks, and maintenance of secondary roads would cause short-term noise, dust, and loss of solitude where these features are along Wilderness Study Area boundaries. Parking areas should reduce the incidence of vehicle incursions into Wilderness Study Areas for parking. Foot-trail and overlook construction would be minimal and should help keep large numbers of people from walking on sensitive soil and plants within Wilderness Study Areas. A parking area at the wildhorse/wildlife viewing area may cause an increase in foot traffic into the South Fork of the Donner und Blitzen River (2-85G) Wilderness Study Area for a short distance. However, since the area is presently being used by the public to view wild horses, the parking area may better accommodate this use with reduced impacts to wilderness values.

An improved, well defined gravel roadbed: on the Loop Road, slightly raised above the adjacent landscape, may create at least a psychological barrier which the casual visitor may be reluctant to cross in a low clearance passenger vehicle. Sightseers may then tend to stay on the road and not venture across Wilderness Study Area boundaries. At the same time, an improved road may also increase visitor use and the increased number of people may also increase intrusions inside Wilderness Study Areas. Parking and staging areas would increase legitimate uses by visitors within Wilderness Study Areas.

Removal of crushed rock for gravel from the Roaring Butte site would have a short-term impact from noise and dust for visitors to the South Fork of the Donner und Blitzen River (2-85G) Wilderness Study Area. The rock pit would be visible from a small portion (200-300 acres) of the Wilderness Study Area from the west facing slopes of the hill in Sections 2 and 11 in T. 34 S., R. 32 E. Long-term impacts would be mitigated by reclamation of the pit after rock has been removed.

A new campground along the south segment of the Loop Road would help reduce the incidence of vehicle intrusions into Wilderness Study Areas. The new campground would continue to serve as a jumping off point for people hiking, backpacking, and horseback riding into the Little Blitzen, Big Indian, and Little Indian gorges and pressure on these areas would increase. Increased wilderness patrols and teaching hikers and campers using Wilderness Study Areas the techniques of "leave no trace" camping would help mitigate potential impacts.

Noise from snowmobile use on the north segment of the Loop Road would have an impact on four adjacent Wilderness Study Areas, reducing opportunities for solitude of some cross-country skiers and snowshoers for a quarter-mile in from the boundary created by the Loop Road. These Wilderness Study Areas are Bridge Creek (2-87), Little Blitzen Gorge (2-86F), High Steens (2-85F), and Blitzen River (2-86E). Snowmobiles may also intrude into the Wilderness Study Areas. Impacts would be mitigated through increased marking of Wilderness Study Area boundaries with snow poles and winter patrols by a law enforcement ranger.

The parking/staging area and road near the mouth of Wildhorse Canyon would make the area more accessible to the public and increase visitor use into the High Steens (2-85F) Wilderness Study Area. Impacts would be mitigated by wilderness patrols and development of a “leave no trace” education program.

Activities such as ripping, reshaping, seeding and blocking necessary to reclaim roads previously closed by the BLM would cause short-term noise, dust, surface disturbance and loss of solitude. Long-term results would be increased wilderness values such as naturalness.

Alternative 2

Impacts would be similar to those from *Alternative 1*, except the use of a binding agent with gravel and more frequent maintenance of the Loop Road would increase the contrast between the roadway and the adjacent landscape and further help to reduce the incidence of intrusions across the Wilderness Study Area boundaries, especially by passenger vehicles. Potential increased visitor use on the Loop Road may also increase use within the Wilderness Study Areas. However, most of the increased use would be sightseeing and camping which would be accommodated by the proposed facilities. Non-motorized winter sports may increase winter use of Wilderness Study Areas, however these uses would be compatible with wilderness values as long as naturalness is not impaired. A second campground along the south segment of the Loop Road would further help to reduce dispersed vehicle intrusions into Wilderness Study Areas.

Alternative 3

Closure of the Loop Road from Jackman Park campground up to the ridge-line and back around to the bottom of the hill west and below the Rooster Comb would enhance and improve wilderness values by increasing opportunities for solitude and primitive and unconfined recreation in the Little Blitzen Gorge (2-86F) and High Steens (2-85F) Wilderness Study Areas because of fewer vehicles.

Alternative 4

Impacts would be similar to those from *Alternatives 1 and 2*, except impacts from campgrounds would accrue from a single campground. Impacts to wilderness values in Wildhorse canyon may be slightly less by requiring people to hike an additional three-quarters of a mile. Evidence of violation of motorized vehicles in Wilderness Study Areas would be grounds for closure to snowmobiles.

Impacts to Wild and Scenic Rivers

Present Situation

Some siltation may occur into the South Fork of the Donner und Blitzen River where the Loop Road crosses the river. Actions in conformance with the Donner und Blitzen National Wild and Scenic River Management Plan and Environmental Analysis dated May 5, 1993, such as controlling access to secondary roads and ways which cross streams, would reduce sedimentation from roadways.

Alternative 1

The use of gravel on the Loop Road would reduce erosion of the roadway and would improve water quality at Blitzen Crossing. Enhanced maintenance of secondary access roads would also reduce erosion and improve water quality in streams. A new campground along the south segment of the Loop Road would help reduce camping within the river system and result in improved riparian conditions where camping now occurs, such as at Blitzen Crossing.

Alternatives 2

The use of gravel and a binding agent on the Loop Road would further reduce erosion of the Loop Road and improve water quality at Blitzen Crossing. Impacts on water quality from enhanced maintenance of secondary access roads would be similar to *Alternative 1*. Two new campgrounds along the south segment of the Loop Road would further help reduce camping within the river system and result in improved riparian conditions where camping now occurs.

Alternative 3

Impacts would be similar to *Alternative 2*, except less sedimentation would occur where secondary access roads are in close proximity to or cross streams, as closed roads begin to heal with an increased plant cover.

Alternative 4

Impacts would be similar to *Alternative 2*, except benefits from people using campgrounds and staying away from riparian areas may be less.

Impacts to Wildlife

Present Situation

Once a year road maintenance has short-term minimal impacts on deer and antelope and very little impact on other species. Camping at undeveloped sites along the southern segment of the Loop Road has an impact on wildlife over a broad area. Campers concentrate at the Blitzen River Crossing, increasing angling pressure at the site.

Motorized vehicles are limited to existing open roads and ways and this reduces disturbance to wildlife and habitat damage. Mountain bike use has little effect on wildlife.

Improved public access to the Riddle Brothers Ranch would cause an increase in angling pressure on redband trout in the Little Blitzen River. Current angling regulations are catch and release using barbless hook lures, but some increase in mortality could still occur. Also, an increase in deer hunting could occur from increased public access to formerly private land. Additional disturbance to nongame species would occur from recreation use at the ranch and adjacent areas.

Winter sports allowed on a limited case-by-case basis has historically occurred, primarily in the spring when wintering mule deer are under less stress than they experience in midwinter. Occasional winter sports during the spring disturb deer along the north segment of the Loop Road, but related stress would not be too severe as long as winter sports activities are infrequent.

Alternative 1

Road reconstruction and maintenance would have minimal impacts to wildlife during late spring through fall. Mining of gravel in the spring and summer would have a short-term impact by disturbing wildlife near the gravel pit and haul road. Long-term impacts would be partially mitigated through rehabilitation of the mined areas.

Construction of a new campground would temporarily disturb wildlife in the area during operation of equipment. Campers would cause disturbance within one-quarter mile of the campground when campsites are occupied and displacement of some species of animals, such as summering deer, from the area of impact. Impacts to wildlife would be lessened over a broad area as campers are concentrated into campgrounds.

However, the close proximity of the campground at Big Indian turnoff may cause an increase in angling and hunting in nearby sections of Big Indian Creek and Little Blitzen River. Five to seven acres of deer habitat would be replaced by roads and camp sites.

Impacts to the fishery in the Little Blitzen River and Big Indian Creek would be greater with increased public use of the Riddle Brothers Ranch. However, the catch and release restrictions in the Little Blitzen River would mitigate impacts to some extent. Hunting pressure on the ranch would be similar to that experienced on other public lands.

Transporting sports enthusiasts by wheeled vehicle through deer winter range, up to the 6,000-foot level, could cause animals to temporarily move up to one-quarter mile away from the Loop Road. However, this disturbance would be less than allowing skiers, snowmobilers, and other winter recreationists to move individually up through the deer winter range from the snow line. Deer respond more to people on skis than snowmobiles. A single disturbance to deer may cause a loss of from three to five percent of an animal's daily metabolized energy during severe winters (Freddy, et.al. 1986). Controlling the frequency of human disturbance by restricting the number of snowmobiles allowed on the mountain each month would minimize disturbance during the colder months of December, January, and February.

Motorized and non-motorized winter sports occurring from late November through early March above 6,000 feet elevation would have slight impact on wildlife wintering in the area. Impacts would be less in spring as snow dissipates and animals become more active. Impacts would depend on the intensity of human intrusion. However, measures included in the use guidelines described in Chapter 2 would help to reduce potential impacts, especially requiring all winter sport to occur above the normal deer winter range.

Construction of the parking area and access road at the mouth of Wildhorse Canyon would have a short-term impact on wildlife in the area during construction. Most of the impact would be to nongame species. The area is valuable as a deer winter range and impacts could be mitigated by closing the area to the public during the winter. Some impact to deer would result from recreational use during years of low snowfall and in the spring before deer move up to their summer range. Approximately four acres of deer winter habitat would be lost due to the proposed facilities.

Alternative 2

Impacts would be similar to *Alternative 1*, except removal of gravel from the Roaring Butte site would impact primarily nongame species with slight impact to antelope and sage grouse, generally found several miles away from this area. Removal of gravel from the Butler Extension site would impact primarily nongame species specific to the immediate site. Use of a binding agent on the Loop Road and parking areas would have no impact on wildlife or their habitats.

Impacts from public access to the Riddle Brothers Ranch would be similar to those from *the Present Situation*.

Installation of interpretive panels/kiosks would cause minimal additional impact to wildlife over what is presently being caused by vehicle traffic along the Loop Road and access roads to overlooks.

Impacts from winter sports would be similar to those stated for *Alternative 1*, except there would be no impact from motorized winter sports activities. Accessing the winter range on foot could disturb wintering deer. Impacts would increase with increasing disturbance.

Alternative 3

Impacts would be similar to *Alternative 2*, except conditions for big game and the fishery on the Riddle Brothers Ranch would be similar to those which exist under the *present situation*.

Closing the road between Jackman Park and the base of the hill west of the Rooster Comb would reduce the disturbance to wildlife over approximately 29,000 acres during the summer and early fall. Hunting pressure in this area would also be reduced. Species impacted would be mule deer, pronghorn antelope, and sage grouse. Hunting pressure would shift to more accessible areas on Steens Mountain. Angling pressure on redband trout would be reduced in the upper portions of Kiger Creek, Little Blitzen River, Big Indian and Little Indian Creeks, Little Fish Creek, Grove Creek, Wildhorse Creek, and Wildhorse Lake. Angling pressure would increase in the more accessible lower sections of these and other streams.

Alternative 4

Impacts from road construction, sightseeing, four-wheeling, picnicking, camping, hunting, and access to the Riddle Brothers Ranch would be similar to *Alternative 2*, except disturbance from additional camping facilities would be reduced because the campground at Bald Headed Camp would not be constructed. Impacts on the fishery and big game in Wildhorse Canyon may be slightly less since people wishing to fish and hunt would have to walk an additional three-quarters of a mile.

Restricting the number of wheeled vehicles allowed up the Loop Road to the 5,600-foot level to 30 vehicles per month during December, January, and February would further minimize disturbance to deer on their winter range, over that expected from *Alternative 1*. Increasing the number of wheeled vehicles to 60 per month during March, April, and May would pose no significant hardship on deer as temperatures are warmer and snow has receded making sufficient forage available. Plowing the Loop Road up to the 5,600-foot level would temporarily disturb wintering deer. However, this practice would allow winter sports enthusiasts to move through the deer winter range more rapidly. Prohibiting access during severe winter periods would eliminate man-caused disturbance during this critical time.

Winter sports activities above the 5,600-foot level, from December on through winter, would have little impact on deer and elk since these animals would have moved to their winter ranges. Almost no impact would occur to nongame species as most of these animals would have moved to wintering areas in the juniper woodland and aspen groves or are inactive through the winter. Most winter sports would occur in treeless areas.

Impacts to Cultural Resources

Present Situation

Increased benefits to the cultural resource program would occur as a result of enhanced public education gained from continued implementation of the Riddle Brothers Ranch Cultural Resource Management Plan for this National Register Historic District. Improved roads, parking area, interpretive and educational facilities, and the caretaker would encourage visitation while mitigating impacts from increased public use.

Cultural and historic resources scattered throughout the planning area would continue to be somewhat impacted by pressure from increasing public use.

Alternative 1

Impacts would be similar to the *Present Situation*, except authorized and unauthorized uses of cultural and historic resources would increase as a result of improved roads and additional camping facilities, and the parking lot and staging area at the mouth of Wildhorse Canyon.

Alternative 2

Impacts would be similar to *Alternative 1*, except improved roads would further increase authorized and unauthorized uses of cultural and historical resources throughout the planning area. This would especially be true at the Riddle Brothers Ranch. However, the presence of a caretaker for most of the time would help protect the Ranch.

Increased campground facilities, parking facilities and staging areas, and visitor information at kiosks would help to mitigate impacts by channeling visitors into well designed facilities and highly scenic areas. Public awareness and appreciation for cultural and historical resources throughout the planning area would also be increased through education.

Alternative 3

Impacts to cultural and historic resources would be reduced in areas where public access is restricted, especially at the Riddle Brothers Ranch. Full implementation of the Cultural Resource Management Plan for the Riddle Brothers Ranch Historic District would not occur. Also, opportunities for public education and awareness would be reduced as a result of reduced information facilities throughout the planning area.

Alternative 4

Impacts would be similar to *Alternative 2*.

Impacts to Vegetation

Present Situation

Disturbance caused by random foot traffic between the parking and viewing areas at Kiger and East Rim overlooks has resulted in a braided network of footpaths, soil compaction, erosion, and some loss of vegetation through trampling. Damage has occurred to fragile subalpine vegetation including habitat for Steens Mountain paintbrush. Areas now being used heavily by campers and pack livestock would continue to experience resource damage such as soil compaction, vegetation loss, and accelerated erosion. Mountain bikes would continue to go cross-country over much of the Recreation Area, causing a proliferation of trails and damage to vegetation.

Alternative 1

Disturbance from road maintenance along the edge of the present roadbed could temporarily remove a number of Steens Mountain thistle plants. However, the plant grows on disturbed sites, with roadsides being a preferred habitat, and plants removed should be quickly replaced with new ones. The anticipated one percent area of disturbance would impact only a small area of potential habitat. Its numbers are sufficient to keep it off federal and state sensitive plant lists.

Any widening of access roads to interpretive sites on top of the mountain would affect the habitat of Steens Mountain paintbrush. However, movement outside the existing disturbed area would be incidental, less than one percent. Improved roads and confined trails into overlooks would help limit impacts to soil and

vegetation and halt further deterioration of the fragile subalpine habitat. Confining mountain bikes to open roads and ways would protect vegetation in areas formerly used for cross-country riding.

Five to seven acres would be disturbed at the new campground by constructing access roads to individual campsites, parking spaces, picnic tables, and corrals. Some disturbance has already occurred as camping is now taking place. Concentrating people in one area instead of using many scattered areas would reduce soil compaction and trampling of vegetation over a broader area along the south segment of the Loop Road. Pressure on vegetation from hiking, backpacking, and horseback riding may increase in the Little Blitzen, Big Indian, and Little Indian gorges. Four acres would be disturbed by construction of the road, parking area, and staging area near the mouth of Wildhorse Canyon. Snowmobiles and cross-country skiers would have no impact on vegetation.

Alternative 2

Impacts would be the same as under *Alternative 1*, except an additional five to seven acres would be disturbed at the second new campground. Soil compaction, erosion, and loss of plants, caused by foot traffic, would be further reduced by improved parking areas and signs at overlooks.

Alternative 3

Impacts would be the same as under *Alternative 2*, except there would be a reduced impact to the subalpine zone including sensitive plants such as Steens Mountain thistle and paintbrush, and other plants, as a result of closing the upper segment of the Loop Road, because fewer people would be able to visit the Kiger and East Rim overlooks. There would be no impacts at Wildhorse Canyon because of not building a parking area and road.

Alternative 4

Impacts would be the same as under *Alternative 1* for winter sports and *Alternative 2* for other actions.

Impacts to Geology

Present Situation

The present condition of the Loop Road would continue to limit somewhat the number of people who would be able to enjoy the spectacular geologic features which are visible from overlooks adjacent to the Loop Road.

Alternative 1

More frequent maintenance and graveling of the Loop Road would make sightseeing of geologic features more accessible by people in low-clearance passenger vehicles and more people would become familiar with the geologic landscape on Steens Mountain. Improvement of the road would not encroach on cirques and gorges because no widening of the road may occur where the road is narrowest such as at the Rooster Comb, due to the presence of Wilderness Study Areas adjacent to the road. Small geologic features such as glacial striations may be obliterated by improving parking areas. The proposed campground near Big Indian Gorge is located on a moraine two miles or more in size, but this large feature would not be impaired for research purposes or public appreciation by the proposed activities.

Alternative 2

Impacts would be the same as under *Alternative 1*. In addition, kiosks and interpretive panels would increase the public's appreciation and understanding of the geologic features. The proposed campground near Bald Headed Camp is on a faulted ridge, a non-glacial feature. The two proposed rock sources are outside of the Steens Mountain Recreation Area, are not on glacial features, and would not be apparent to the casual observer.

Alternative 3

Impacts would be the same as under *Alternative 2*, except fewer interpretive panels and closure of the upper elevation portion of the Loop Road would reduce accessibility to spectacular geologic features and reduce opportunities for public education on geology.

Alternative 4

Impacts would be the same as under *Alternative I*, except kiosks and interpretive panels would increase the public's appreciation and understanding of the geologic features.

Impacts to Minerals

Present Situation

There would continue to be consumption of approximately 215,000 cubic yards of rock every 15 years from suitable rock sources to gravel the Loop Road. Putting additional gravel on the existing campgrounds at Page Springs, Fish Lake and Jackman Park requires approximately 5,000 cubic yards of additional rock. When the road is improved and parking areas are developed at the Riddle Brothers Ranch, there would be an additional consumption of approximately 10,000 cubic yards of rock to gravel the access road and a new parking area. In total, approximately 230,000 cubic yards of rock would, be consumed every 15 years from suitable rock sources.

No claims or mineral leases and no areas of moderate or high mineral potential occur in the vicinity of the Loop Road and access roads and therefore none are impacted.

Alternative 1

Impacts would be the same as under the *Present Situation*, except more rock would be used due to more frequent road maintenance and graveling, graveling the access roads to the overlooks, construction of an access road and parking area at the mouth of Wildhorse Canyon, and construction of a new campground along the south segment of the Loop Road. Approximately 250,000 cubic yards of rock would be consumed every 5 years from suitable rock sources totalling 750,000 cubic yards every 15 years.

No claims or mineral leases occur within one-half mile of the proposed parking areas and campground, but there is high geothermal potential near the mouth of Wildhorse Canyon and moderate to high mineral potential near the base of the eastern escarpment of Steens Mountain. The proposed facilities would have no impact on these resources.

Alternative 2

Impacts would be the same as under *Alternative 1*, except less rock would be used because the binding agent would hold gravel on the road. The lower consumption of gravel even takes into account the building of a second campground. Approximately 260,000 cubic yards of rock would be removed from the Roaring Butte or Butler Extension sites at the time of the first gravel and bentonite binder application. Subsequent reapplications every 5 years would result in a need for approximately 25,000 cubic yards each time. In total,

approximately 310,000 cubic yards of rock would be needed from the Roaring Butte or Butler Extension sites during the next 15 years. Beyond this period, 25,000 cubic yards of gravel would be needed every 5 years.

No claims or mineral leases occur in the vicinity of the second campground or two proposed new gravel sources, so no impact to mining would occur.

Alternative 3

Impacts would be the same as under *Alternative 2*, except *less* rock would be used than in the *Present Situation* or *Alternative 2*. Although two new campgrounds would be constructed, there would be closure of the upper elevation portion of the Loop Road, no improved road and parking area at the Riddle Brothers Ranch, no new road and parking area at the mouth of Wildhorse Canyon, and use of liquid asphalt as a binder for the gravel. Approximately 140,000 cubic yards of rock would be needed from the Roaring Butte or Butler Extension sites at the time of the first gravel and asphalt binder application. Subsequent reapplications every 5 years would result in the use of approximately 10,000 cubic yards each time, totaling 160,000 cubic yards during the next 15 years. Beyond this period, 10,000 cubic yards of gravel would be required every 5 years.

Alternative 4

Impacts would be the same as under *Alternative 2*, except approximately 10,000 cubic yards less rock would be used due to not constructing the second campground and using a foot-trail instead of a road to Section 10 near the mouth of Wildhorse Canyon.

Impacts to Wild Horses

Present Situation

People are viewing wild horses from an area along the south segment of the Loop Road. Horses are seen at a distance and there seems to be no impact to the horses from this activity since they are far enough from the road to feel no threat from humans.

Alternatives 1, 2, 3, and 4

The number of people viewing horses from the area would increase somewhat with a developed parking and viewing area. The increased number of people stopping at the site and walking outside their vehicles, when wild horses are present, would cause wild horses to avoid the area until they became accustomed to the disturbance. Impacts would be slight since the horses normally graze some distance from the road.

The proposed construction of the campground at Bald Headed Camp in *Alternatives 2 and 3* would change the pattern of use in the surrounding area. Horses would tend to avoid the new activity created by campers.

Impacts to Livestock Grazing

Present Situation

Cattle grazing along the Loop Road have become used to vehicles and graze away from the roadway or get out of the way when vehicles approach. Cattle can be seen grazing the green forage in the ditches along the road with no concern for vehicles passing by. The threat from vehicles is increased with young calves or new cattle not used to vehicles that have had little experience with the danger. People are generally courteous and drive defensively when approaching livestock, especially cows with young calves. Vehicle encounters and vehicle speeds would be much less than that experienced on the state/county highways which border the

west and east sides of Steens Mountain from Burns to Fields, Oregon. The BLM could mitigate any possible impacts by educating the public to drive defensibly through the Steens Mountain visitor's brochure.

Alternatives 1, 2, 3, and 4

Any potential increase in visitors to Steens Mountain would increase the danger to cattle from vehicles. However, this level of impact would still not be significant. Impacts would be less under *Alternative 3* where grazing occurs along the closed portion of the Loop Road. Construction of a protective fence around the proposed campground at the Big Indian turnoff would remove about 60 acres from grazing on the Newton Cabin pasture of the Fish Creek-Big Indian grazing allotment. This would result in a loss of four animal unit months of forage. Livestock would avoid the area during the construction period but would become accustomed to the presence of the campground. The construction of a campground at Bald Headed Camp in *Alternatives 2 and 3* would cause temporary disruption in grazing and remove four animal unit months of forage from the South Steens allotment.

Impacts to Private Land and Community of Frenchglen

Private lands are being used by people camping, hunting, fishing, four-wheeling and for other activities. Summer use has the greatest potential for impact on soils and vegetation. Impacts can be mitigated through education of the public in low impact or no-trace camping, etc., and by asking for permission before entering private land. Winter sports have no impact on soils and vegetation when occurring over adequate snow depth.

The store and hotel in the community of Frenchglen have benefitted from money spent for goods and services by recreationists visiting Steens Mountain. Some congestion may occur on busy days because of the existence of only one store and gasoline source, and limited parking and restroom facilities in Frenchglen. Visitor use may increase with increasing population and a desire by the public for unconfined back country recreation, irrespective of which alternative is chosen. Growth in the economy of the area should continue at a rate similar to the rest of the county, the state of Oregon, and the Nation. No extreme shifts are anticipated. All alternatives are designed to manage current and future recreation use. The preferred alternative provides for maximum education of the public in protecting the environment and respecting the rights of private landowners.

Mitigating Measures

The protection of cultural resources and sensitive plant and animal species will be a priority under all alternatives. Cultural and botanical inventories will be made before new surface disturbance occurs associated with rock sites, campgrounds, parking and staging areas, interpretive sites, and overlooks. Mitigation will emphasize avoidance and/or the use of other appropriate measures to minimize impacts to identified cultural resources and sensitive species.

When previously unknown cultural resources or sensitive species are encountered in the course of authorized surface-disturbing activities, work will immediately cease until BLM determines what mitigation will be required. This measure shall be stipulated in construction contracts.

Any rock source for gravel must conform to all federal, state, and county regulations, must not be located in any riparian or subalpine zone, and must not be apparent to the casual observer.

Cumulative Impacts

Present Situation

A continuing demand for gravel on the Loop Road would cause new rock pits to be opened up with attendant loss of vegetation, wildlife habitat, and scenic values. Dust from the surface of the Loop Road would be a continuing problem for travelers along the road and visitors to overlooks and adjacent campgrounds. These conditions would increase in the future as visitor use increases as a function of increased population. As the number of visitors to Steens Mountain increases the unsanitary conditions at frequently used undeveloped campsites would create a serious public health problem. Damage to the fragile subalpine environment at overlooks may in time cause a denuded zone around each overlook.

Alternative 1

Dust from the Loop Road would be a continuing problem, but to a lesser degree than under *the Present Situation*. Cumulative impacts on the environment from an adequate gravel roadbed would be less than under existing conditions. Impacts from extraction of rock for gravel would be mitigated by reclamation of the sites. Proposed actions would allow existing recreational activities to continue without undue damage to the fragile environment in the area surrounding the Steens Mountain Loop Road. Developments at overlooks would reduce long-term impacts on the fragile subalpine soil and vegetation. A developed campground at the historically popular camping area along the south portion of the Loop Road is designed to reduce the indiscriminate spread of camping and its impacts to soil and plants in the area and provide for sanitary facilities.

Alternatives 2, 3 and 4

Cumulative impacts would be similar to those under *Alternative I*, except that cumulative impacts on the environment from a stable road surface provided by a binding agent would be less.

Residual Impacts

None identified.

Chapter 5 CONSULTATION AND COORDINATION

List of Preparers

Name	Title	Primary Responsibility
Steve Anderson	Steens Project Manager	Recreation
Mark Armstrong	Public Affairs Officer	Public Participation Plan
Gordon Bentley	Planning and Environmental Coordination	Team Leader
Jim Buchanan	Range Conservationist	Range Management
Don Cain	Associate District Manager	Managerial Oversight and Direction
Bruce Crespin	District Archaeologist	Cultural Resources
Don Dollar	District Ranger	Law Enforcement and Resource Protection
Terri Geisler	District Geologist	Geology and Minerals
Rick Hall	Natural Resource Specialist	Special Status Plants, Wild Horses
Fred McDonald	Natural Resource Specialist	Recreation
Scott Moore	District Wilderness Specialist	Wilderness
Glenn Patterson	Andrews Resource Area Manager	Managerial Oversight and Direction
Vic Pritchard	Assistant District Manager for Resources	Managerial Oversight and Direction
Guy Sheeter	Wildlife Biologist	Wildlife

Consultation, Coordination, and Distribution

A Notice of Intent to prepare an amendment to the Andrews Management Framework Plan was published in the Federal Register on September 10, 1992. Preliminary issues, a draft of planning criteria, and possible alternatives for recreation access management were identified in a scoping document dated August 28, 1992. That document was sent to over 1,000 persons and groups asking for ideas and comments from the public. The BLM received 28 letters from members of the public. Three separate public scoping meetings were held in Burns, Bend, and Frenchglen on September 16, 17, and 18, 1992, respectively. A total of 314 verbal comments were recorded and copies sent to all meeting participants.

A list of public agencies, groups, and individuals who were sent copies of the scoping document and the draft amendment and environmental assessment can be seen at the BLM Burns District office during normal office hours. The following is a list of persons who attended the public scoping meetings.

Harvey Barnes	Troy and Tyann Batson
Joy Belsky	Larry Blair
Jean Cain	Chris Carey
Mike Choate	Lew Curtis
Helen E. Davis	Richard, Cherry, and Kara Day
Van Decker	Dick Duford
William Evans	John Hammond
Dwight and Susan Hammond	Bill Hart
Matt Holmes	Carol Hudkins
Malena Konek	Larry and Virginia Kribs
Connie Lonsdale	Bill Marlett
Jesse Meredith	Craig Miller
Gary Miller	Anne Mitchell
C.W. Otley	Howard Otley
Raymond and Marilyn Peterson	Kevin L. Pryse
Peggy Robinson	Mark Smith
Johnnie "Cactus" Smyth	Warren Thompson
Glen Van Cise	H. Lee Wallace
Lew West	Philip Wilcox
Doug and Betsey Williams	John and Cindy Witzel
Dale White	Jill Workman

Glossary

Deferred Grazing: Delay of livestock grazing on an area for an adequate period of time to provide for plant reproduction, establishment of new plants, or restoration of vigor of existing plants.

Rest-Rotation Grazing: A systematic method for rotating grazing within pastures in order to 1) allow plants the opportunity to make and store food - to recover vigor, 2) allow seed to ripen, 3) allow seedlings to become established, and 4) allow litter to accumulate between plants.

APPENDICES

Appendix 1 Special Status Plant and Animal Species

Common Name	Scientific Name	Status
<u>Plants</u>		
Cusick's giant-hyssop	Agastache cusickii	B
lance-leaved grapefern	Botrychium lanceolatum	B
moonwort	Botrychium lunaria	B
pinnate grapefern	Botrychium pinnatum	B
Hayden's cymopterus	Cymopterus nivalis	B
moss gentian	Gentiana prostrata	B
slender gentian	Gentianella tenella	B
nodding melic	Melica stricta	B
Rafinesque's pondweed	Potamogeton diversifolius	B
wedge-leaf saxifrage	Saxifraga adscendens v. oregonensis	B
Steens Mountain paintbrush	Castilleja pilosa v. steenensis	F
<u>Animals</u>		
ferruginous hawk	Buteo regalis	F
western sage grouse	Centrocercus urophasianus phaios	F
spotted bat	Euderma maculatum	F
American peregrine falcon	Falco peregrinus (anatum)	L
California wolverine	Gulo gulo luteus	F
northern bald eagle	Haliaeetus leucocephalus leucocephalus	L
Lahontan cutthroat trout	Oncorhynchus clarki henshawi	L
redband trout	Oncorhynchus mykiss	F
California bighorn sheep	Ovis canadensis	F
Pacific western big-eared bat	Plecotus townsendii townsendii	F
white-faced ibis	Plegadis chihi	F
Preble's shrew	Sorex Preblei	F

B - BLM Sensitive

F - Federal Candidate

L - Federally Listed

Appendix 2 Limits of Acceptable Change

The nine interrelated steps for implementing the Limits of Acceptable Change system are as follows:

1. Identify issues of concern to each area or site.
2. Define and describe recreation opportunities and the resource, social and managerial conditions appropriate for each class of opportunity. Information such as physical and biological features, current use levels, and types of use being made are determining factors.
3. Select indicators of resource and social condition such as amount of bare ground at campsites and average number of people encountered per day.
4. Inventory existing resource and social conditions. The inventory is guided by the indicators identified in step 3.
5. Specify standards for resource and social conditions in each opportunity class. These are the maximum permissible conditions that will be allowed in each opportunity class and will indicate when restoration or enhancement might be needed.
6. Identify alternative opportunity class allocations reflecting area-wide issues and concerns and existing resource and social conditions.
7. Identify management actions for each alternative allocation. This involves what it will take to move an area from its existing condition into a desired condition, including costs.
8. Evaluation and selection of a preferred alternative.
9. Implement actions and monitor conditions.

Appendix 3 Bibliography

- Andrews Resource Area Management Framework Plan, Bureau of Land Management, Burns District, 1982
- Bureau of Land Management Manual 1601, Bureau Planning System
- Draft Donner und Blitzen Wild and Scenic River Management Plan and Environmental Assessment, June 1992, 116 pp. USDI, Bureau of Land Management, Burns District.
- Federal Land Policy and Management Act of 1976, as amended
- Federal Register Notice, Volume 45, Number 183, Page 62212, September 18, 1980, Off-Road Vehicle Plan
- Proposed Donner und Blitzen Wild and Scenic River Management Plan and Environmental Assessment, May 1993, 116 pp. USDI, Bureau of Land Management, Burns District.
- Freddy, D.J., W.M. Bronaugh, and M.C. Fowler. 1986. Responses of Mule Deer to Disturbance by Persons Afoot and Snowmobiles. *Wildlife Society Bulletin*. 14:63-68.
- Steens Mountain Loop Road National Back Country Byway designation, November 1989, Oregon State Director
- National Environmental Policy Act BLM Handbook, H-1790-1, Release 10/25/88
- Oregon High Desert National Recreation Trail Designation, September 1992, Secretary of the Interior
- Oregon Wilderness Study Report, Volume I, and Environmental Impact Statement, Volumes II, III, IV, October 1991, BLM-OR-EA-43-856 1.6
- Riddle Brothers Ranch National Register Historic District Cultural Resource Management Plan, 1989
- Stankey, George H., Stephen F. McCool, Gerald L. Stokes. *Limits of Acceptable Change: A New Framework for Managing the Bob Marshall Wilderness Complex*, Western Wildlands, Fall 1984. pp. 33-37.
- Steens Mountain Recreation Area Interpretive Prospectus, Oregon State University, November 30, 1988, 68 pp.
- Steens Mountain Recreation Area Management Plan, Bureau of Land Management, Burns District, 1985
- Steens Mountain Recreation Area Study, Final Report, Refinement of Recreation Opportunity Spectrum System by Field Studies on Bureau of Land Management Lands in the Steens Mountain Area of Oregon, Volumes I, II, and III, Oregon State University, Corvallis, August 1982

Appendix 4 Public Comments and BLM Responses

1. Comment:

The amendment lacks an analysis of environmental impacts of graveling the first 18 miles of the Loop Road.

Response:

Maintenance of the road was analyzed by an interdisciplinary team with the finding that no effects were associated with the routine procedure of re-rocking the roadbed. In chapter 4, Environmental Consequences, impacts to air quality, water quality, and recreational use from graveling the road and applying a binding agent are discussed.

2. Comment:

The environmental assessment does not consider a reasonable range of alternatives.

Response:

Burns district resource specialists and managers believe a reasonable range of alternatives dealing with the issues developed by the BLM and involved members of the public were discussed and analyzed. A additional alternative has been incorporated into the proposed amendment based on public comments.

3. Comment:

The environmental consequences section is completely inadequate.

Response:

The BLM believes the analysis of environmental consequences is adequate. Environmental consequences in the final document include clarifications resulting from questions asked in public comment letters. *New Alternative 4* was developed by taking proposed actions from other alternatives in response to public comments. Analysis of the new alternative further adds to the adequacy of the environmental assessment.

4. Comment:

What does BLM mean by “maintenance” of the Loop Road?

Response:

Maintenance activities can include grading of the road surface to remove washboard conditions, pulling accumulated gravel from ditches to keep this material on the roadbed, filling in pot holes, replacing loose gravel, removal of mud slides, and other actions necessary to keep the road way safe and passable. Maintenance activities would be confined within the area of existing disturbance.

5. Comment:

Are the campgrounds, interpretive sites, trail heads, and access roads to these sites necessary improvements?

Response:

An interdisciplinary team analyzed the resources, uses and potential of the entire Steens area. They also followed closely the existing recreation management plan for the Steens Mountain Recreation Lands. Their findings resulted in the proposals for interpretive sites and trail heads contained in the amendment. The findings were also similar to those resulting from a University of Oregon study published in 1982. These improvements are necessary to properly manage recreational activities of the public.

6. Comment:

Eliminate the horse corrals planned for the south Loop Road campground.

Response:

Horse corrals have been eliminated and hitching posts are substituted in the preferred alternative in this proposed plan amendment.

7. Comment:

What is the cumulative impact of all proposed actions recommended in the plan amendment?

Response:

Cumulative impacts are discussed at the end of Chapter 4, Environmental Consequences. Proposed actions in the amendment will allow existing recreational activities to continue without undue damage to the fragile environment in the area surrounding the Steens Mountain Loop Road. Cumulative impacts from an adequate roadbed and a stable road surface will be less than under existing conditions. Impacts from extraction of rock for gravel will be mitigated by reclamation of the sites. Developments at overlooks will reduce long-term impacts on the fragile subalpine soil and vegetation. A developed campground at the historically popular camping area along the south portion of the Loop Road is designed to reduce dispersed camping and its impacts to soil and plants in the area and provide for sanitary facilities.

8. Comment:

The BLM should consider an alternative which protects Steens Mountain in its present primitive and undeveloped condition.

Response:

The Present Situation alternative represents a no action alternative or the continuance of existing management direction. The present condition along the Loop Road cannot be characterized as undeveloped. The projects proposed in the amendment are all along the road and most are in areas already disturbed by existing visitor use. Proposed actions are designed for the needs of the casual visitor on the Loop Road and are intended to reduce impacts to natural resources. A demand for recreational access to the Steens Mountain Loop Road exists, and without adequate provisions for access, and visitor services, problems and conflicts associated with recreational use are likely to continue. The improvements at overlooks and at an additional campground offer an opportunity to accommodate some of the public demand under safer and more functional conditions. The objective of actions in this amendment are to retain the existing character of the landscape by approving landscape modifications that will not attract attention and would blend in with the existing landscape.

9. Comment:

Putting a binding agent on the Loop Road will have severe impacts on the six WSAs.

Response:

The binding agent proposed in the preferred alternative is a naturally occurring clay which, when mixed with crushed rock, will stabilize the road base. This will result in a significant reduction in dust and erosion of surface material on the roadway from surface runoff. All road construction and maintenance activities will occur within the present area of disturbance. The entire Loop Road on public land is within a long standing right-of-way which falls completely outside of the five Wilderness Study Areas adjacent to the road. The binding agent will have no adverse impacts on wilderness values and dust abatement and erosion control will help protect wilderness values. Also, people driving low-clearance vehicles have less of a tendency to get off improved roadways.

10. Comment:

Will the preferred alternative increase visitor use on Steens Mountain?

Response:

Improvement of the Loop Road will help to increase use, but not significantly. It is likely visitor use will increase as the population increases. The preferred alternative was designed to accommodate present and reasonably foreseeable levels of increase in visitor use. Visitor use on Steens Mountain is affected by many factors. One of the most important factors affecting the number of people who travel the Loop Road is weather. During the past seven years of drought, the road has been open from early May into November. Visitor use from 1988 through 1992 averaged 48,525 visitors per year. During the particularly dry, warm year of 1989, visitor use was up to 50,631 while the number of visitors in 1983 when precipitation was far above normal was only 20,456.

Brochures developed by the BLM and distributed to the public at the Frenchglen visitor facility and at the Burns district office are designed to help the visitor to Steens Mountain enjoy the campgrounds and overlooks along the Loop Road. The Loop Road, overlooks, campgrounds, and other naturally occurring camping opportunities are existing features. Improvements to the Loop Road and overlooks are designed to improve visitor enjoyment, understanding, and safety; and to protect and enhance the natural environment. The proposed campground should protect the environment and improve sanitation for visitors by concentrating visitor use in an area designed to withstand and accommodate such use. None of these proposed actions will, in and of themselves, significantly increase visitor use. Word of mouth from past visitors, brochures and maps distributed throughout the northwest by user groups, and unsolicited magazine articles will continue to be factors in bringing new visitors to the Steens.

Studies conducted on Steens Mountain by the University of Oregon indicate the Mountain is a destination point for tourists. Almost all visitors had to drive long distances to enjoy the area. Economic and social factors such as available free time, expendable income, and a desire to experience open space all contribute to the number of visitors to the Steens.

11. Comment:

An environmental impact statement is needed.

Response:

The Finding of No Significant Impact based on the attached environmental assessment has found no significant impacts on the human environment and therefore no environmental impact statement is required, as stated in the National Environmental Policy Act of 1969.

12. Comment:

The BLM failed to view Steens Mountain as an ecosystem.

Response:

This is an amendment to an existing Management Framework Plan and is not intended to be an all encompassing resource management plan. The amendment discusses and analyzes impacts of actions related to limited issues concerning recreation and access on the environment. The preferred alternative would implement several actions designed to contribute to public education and protection of the Steens Mountain ecosystem.

13. Comment:

Upgrading of the Loop Road will encourage more traffic into sensitive areas on Steens Mountain.

Response:

Upgrading of the Loop Road is designed to keep casual visitors on the main road. Lateral or secondary access roads and trails will be maintained as suitable for high-clearance four-wheel drive vehicles only. This will discourage use by casual visitors. Upgrading of overlooks will channel people into areas designed to handle large volumes of foot traffic, thus reducing pressure on adjacent sensitive areas.

14. Comment:

Additional air pollution from vehicle exhaust will have a significant impact on the air quality of the Steens.

Response:

The preferred alternative is not expected to significantly increase visitor use or air pollution from vehicle exhaust. An improved road surface should require less energy for vehicles to move along the road as compared with a rocky, washboard or rutted road surface. This should result in increased fuel economy for each vehicle and could actually decrease emissions per vehicle.

15. Comment:

Increased activity will cause remoteness of the area to be lost.

Response:

The existing level of visitor use has diminished opportunities for solitude and values associated with remoteness along the Loop Road. As the population of Oregon and the northwest continue to grow and publications continue to advertise remote areas, visitation to areas like Steens Mountain is likely to increase. Proposed actions in the amendment are designed to keep manmade intrusions to a minimum

and channel visitors to facilities constructed to absorb high impacts of vehicle and foot traffic. Areas away from the Loop Road continue to offer solitude and other qualities of the back country.

16. Comment:

Upgrading the Loop Road will make a more permanent division between WSAs (Wilderness Study Areas).

Response:

The 1989 final Oregon Wilderness Environmental Impact Statement, Volume III states the proposed action recognizes the Loop Road as the boundary between Wilderness Study Areas. The 1991 Wilderness Study Report states the High Steens and Little Blitzen Gorges WSAs "...would be managed as separate individual wilderness areas due mainly to the desirability of keeping the entire Steens Mountain Loop Road open." "This is a change from the draft EIS and reflects public comments which were overwhelmingly in favor of keeping the Loop Road open." The Federal Land Policy and Management Act of 1976 defines Wilderness Study Areas as roadless areas. The division between Wilderness Study Areas exists today and "upgrading" of the Loop Road has not been identified as intensifying this division.

17. Comment:

The preferred alternative in the draft should restrict mountain bikes to existing roads.

Response:

The preferred alternative in the draft amendment did restrict mountain bikes to existing roads and trails. This restriction also appears in the preferred alternative in this proposed amendment.

18. Comment:

Campgrounds should not be located in areas that will encourage heavier use of ecologically sensitive areas.

Response:

The proposed campground at the turnoff to Big Indian Gorge is in an area currently being used for camping. It is not in close proximity to any ecologically sensitive areas. The campground is designed for use by people desiring a camping experience yet having such conveniences as toilets, picnic tables, grills, and easy access from a well maintained road.

19. Comment:

Campgrounds should contain only primitive camp sites.

Response:

A large number of comments were received voicing acceptance of a campground on the south segment of the Loop Road having facilities similar to those in the campgrounds on the north segment of the Loop Road. Each camp site would have a picnic table, grill, and parking area for a vehicle. Facilities for the entire campground include vault toilets, culinary water taps, firewood bins, garbage cans, and a fee collection box. The purpose of the campground is to reduce the impacts associated with dispersed

camping along the south segment of the Loop Road. The campground would be designed and constructed with maximum protection of existing vegetation and to harmonize with the terrain.

20. Comment:

The Andrews amendment is in conflict with management direction for WSAs, RNAs, wild and scenic rivers, and the Steens Mountain Recreation Management Plan.

Response:

The proposed actions are primarily designed to accommodate public use in areas along the Loop Road where visitor use is heavy, in such a way as to increase the quality of recreational experiences, while still protecting and enhancing the environment. Access routes to WSAs, Research Natural Areas (RNA), and wild and scenic rivers would not be improved to allow access by low-clearance vehicles, except for the Riddle Brothers Ranch. The BLM staff find the proposed actions in the revised preferred alternative in conformance with the management direction for special management areas.

21. Comment:

Close the 7.5 miles of the Steens south Loop Road through the Rooster Comb area.

Response:

Public comments received during preparation of the Oregon Wilderness Environmental Impact Statement were "...overwhelmingly in favor of keeping the Loop Road open." Responses to the draft Andrews Management Framework Plan amendment were similar with many comments requesting the entire Loop Road remain open.

22. Comment:

Recommend no panels or kiosks at scenic overlooks and interest points.

Response:

The proposal in the draft amendment to install kiosks has been dropped in this proposed amendment. Interpretive panels will be small, low profile, and located in parking areas and other disturbed sites. Panels will be designed to be compatible with the natural environment and constructed of natural materials.

23. Comment:

Specific groups should be given tours at the Riddle Brothers Ranch on a case-by-case basis.

Response:

Groups asking for tours of the Riddle Brothers Ranch have been accommodated in the past. Our intention is to continue this practice as staffing and scheduling allow.

24. Comment:

We want the road from the proposed campground into Big Indian Gorge closed to motorized vehicles.

Response:

Public comments indicate a desire for vehicle access to Big Indian Gorge to be kept open. The two mile access route from the Loop Road to Big Indian Creek is presently suitable for high-clearance vehicles only. This vehicle way will not be improved to allow a greater volume of traffic.

25. Comment:

We desire a low level of development for public access below Wildhorse Canyon.

Response:

This change has been made in the proposed amendment.

26. Comment:

What would be the cost of continued road maintenance?

Response:

Engineers estimate a cost of \$2,000 per mile to properly maintain a gravel road or approximately \$106,000 per year to maintain the entire 52.9 miles of the Loop Road. Proper maintenance includes grading, watering, rolling, spot replacement of gravel, and repair and cleaning of culverts and cattleguards.

27. Comment:

Where will BLM get water needed for road maintenance?

Response:

The State of Oregon's Department of Water Resources has authorized BLM to obtain water from the Donner und Blitzen River for the present road work. The U.S. Fish and Wildlife Service, Malheur National Wildlife Refuge, has indicated they have no objections to the BLM using water from the river near Frenchglen.

28. Comment:

The present situation, no action alternative, is not a true "no action" because BLM is proposing to open up new gravel pits with new disturbance.

Response:

The Bureau has always needed gravel to upgrade and maintain roads throughout the Burns District. This need will continue under all alternatives, including the present situation which we call the no action or more properly termed "no change".

29. Comment:

What are the visual impacts of developing gravel sources?

Response:

Visual impacts are discussed in the draft and proposed amendment. The two proposed gravel sites are located to minimize visual impacts to travelers on state highway 205 and the Loop Road.

30. Comment:

Will the proposed new campground reduce the possibility of wilderness camping and solitude?

Response:

The answer to this comment is simply no. The proposed campground is designed to provide alternative camp sites for people now camping over a broader area. The BLM believes the proposed campground would reduce accidental vehicle incursions into Wilderness Study Area boundaries by people seeking camp sites off the south segment of the Loop Road and therefore enhance the opportunities for solitude inside Wilderness Study Areas.

31. Comment:

How will BLM's proposed actions effect Lahontan cutthroat and redband trout?

Response:

Lahontan cutthroat trout do not occur in the Donner und Blitzen River or its tributaries. Actions proposed in this plan amendment would have no effect on the streams on the east face of Steens Mountain which contain Lahontan cutthroat trout. Actions in the Donner und Blitzen Wild and Scenic River Management Plan, and actions in this amendment to the Andrews Management Framework Plan such as, a) construction of an additional campground along the south portion of the Loop Road to take pressure off camping along streams and b) maintenance of secondary roads near streams to reduce erosion and movement of sediment into streams are designed to protect and enhance habitat for redband trout.

32. Comment:

Is the entire Steens Loop Road essential to public enjoyment?

Response:

Yes. Many people have commented they do not want the Loop Road closed. Many people each year communicate to BLM how much they have enjoyed the Loop. The Loop Road has been in existence for many years and is obviously a major existing improvement.

33. Comment:

The amendment should propose closure of non-essential access roads near WSAs, RNAs, etc.

Response:

Non-essential roads have been closed and are proposed for reclamation in the preferred alternative. Existing open roads are essential for access to private lands, for ranchers to access grazing lands and facilities, for BLM administration, hunter access and other public land users. The public has ignored signs and continued to use some roads designated and posted as closed. The BLM recognizes this

problem and will attempt to close these roads by other means such as placing rocks or other structures across roadways to affect a permanent closure

34. Comment:

Cattle grazing and its effect are not addressed in the amendment.

Response:

The need for the amendment was driven by recreation and related access issues. The BLM has determined livestock grazing will not impact these issues nor will recreational uses significantly impact livestock grazing. Existing grazing environmental impact statements and allotment management plans are the Bureau's procedural mechanisms used to address grazing issues.

35. Comment:

Let the Loop Road deteriorate back to a high clearance vehicle road.

Response:

Many public comments concerning the Loop Road were in favor of improving and maintaining its condition, see response to comment number 38. The BLM has a responsibility to maintain heavily used roads, such as the Steens Mountain Loop Road, to reduce damage to natural resources and to ensure public safety is not compromised.

36. Comment:

The amendment should discuss a maximum number of people to be allowed on Steens Mountain.

Response:

The BLM is proposing, in the preferred alternative, to implement a procedure to determine the conditions the public and resource managers desire to see at popular sites. The primary emphasis would be placed on protecting and enhancing natural resources rather than being concerned with how much use an area can tolerate and then setting carrying capacities. A nine-step process, termed Limits of Acceptable Change (LAC) provides a framework for establishing acceptable and appropriate resource and social conditions in recreation settings, see Appendix 2. Implementing the Limits of Acceptable Change system will help the Andrews Area Manager cope with increasing demands on recreational areas in a visible, logical fashion.

37. Comment:

Signs should be kept to a minimum.

Response:

The BLM agrees. See response to comment number 22.

38. Comment:

The Loop Road should be a well maintained high quality gravel road but not paved.

Response:

Paving is not proposed in the preferred alternative. It was included in one alternative for analysis of a range of alternatives.

39. Comment:

We are against the visitor center proposed for Frenchglen.

Response:

The visitor center in Frenchglen is not an issue addressed in the Andrews MFP amendment.

40. Comment:

The BLM needs to expand or increase camping facilities on Steens Mountain.

Response:

A campground with 36 sites is being proposed along the south segment of the Loop Road in the preferred alternative in this proposed amendment.

41. Comment:

Frenchglen needs adequate public restrooms, a public water supply, public picnic and parking area, and an informal, weather-proof information center.

Response:

See response to comment number 39. The Bureau is working with the U.S. Fish and Wildlife Service to develop an interpretive program for the public visiting the area, which includes a visitor center at Frenchglen. The center would include facilities needed by the public and would relieve pressure on existing Frenchglen facilities.

42. Comment:

We are opposed to closing any portion of the Loop Road.

Response:

The preferred alternative in both the draft and proposed amendments calls for the entire Loop Road to remain open during the seasons when weather permits the road to be used without causing damage to the roadbed.

43. Comment:

Please open the road up the bottom of Big Indian Gorge to ORVs.

Response:

The road you describe is inside a Wilderness Study Area boundary. The area has been analyzed in an EIS and has been found to be suitable for designation as wilderness. The BLM is mandated by the

Federal Land Policy and Management Act of 1976 to manage WSAs in a manner that would not impair wilderness values until Congress makes a decision. This road has also been closed as stated in Federal Register Notices dated September 18, 1980 and February 20, 1987.

44. Comment:

Opposed to motorized winter sports on Steens Mountain.

Response:

A large number of comments were received requesting snowmobile use be allowed along the north portion of the Loop Road. The proposed actions in the preferred alternative are designed to allow use of snowmobiles above 5,600 feet elevation with minimum impact on all resources on the mountain. Motorized winter sports activities will be monitored and any necessary changes made based on analysis of monitoring data.

45. Comment:

Opposed to motorized winter recreation above historic levels.

Response:

The BLM has no clear records of historic use. Prior to the gates being installed on the Loop Road in the early 1980s there was no monitoring of winter sports. The preferred alternative provides concise direction for all winter sports including motorized use. The guidelines for issuing winter sports permits allow the BLM to authorize use only when snow depths are sufficient to ensure least impact to soils and vegetation, cause the least disruption to deer on their winter range, assure maximum safety for recreationists, maintain wilderness values, and protect private property rights. If monitoring data show detrimental impacts to any of the other resource values on the mountain, winter sports use will be modified or eliminated as necessary.

46. Comment:

Winter sports should only occur outside of big game winter range and high meadows.

Response:

The deer winter range from Page Springs campground up to the 5,600-foot elevation would be closed to snowmobiles and cross-country skiers in the preferred alternative in the proposed amendment. Snowmobile use on adequate snow pack will have no detrimental impact on meadow vegetation or soils. See also Response to Comment number 45.

47. Comment:

Snowmobiles should be allowed to use Steens Mountain.

Response:

The preferred alternative in the proposed amendment allows snowmobile use along the north segment of the Loop Road.

48. Comment:

We do not agree with having a monthly use limit on snowmobiles and recommend group sizes be increased from 15 to 30 machines.

Response:

Restrictions on numbers of wheeled vehicles in the preferred alternative or the monthly use limit in Alternative 1 are to reduce impacts on deer wintering along the Loop Road, which provides access to the winter sports area. These restrictions apply to both motorized and non-motorized sports. See also Response to Comment number 45.

49. Comment:

Snowmobiles do not cause damage to road surfaces.

Response:

This is true as long as there is adequate snow depth to protect soil. However, our main concern has been possible damage to the road below the winter use area where wheeled vehicles driving up to the area of deep snow could cause damage to a muddy road surface.

50. Comment:

Snowmobiles passing through an area do not disturb wildlife.

Response:

Your comment was helpful in developing a new preferred alternative. However, vehicle traffic through a critical deer winter range may cause disruption to animals under severe stress during severe winters. For this reason the guidelines in the preferred alternative limit the number of wheeled vehicles allowed up the Loop Road through the deer winter range.

51. Comment:

The amendment needs to address conflicts between increased recreational use and private property rights.

Response:

As stated in response to comment number 10, actions proposed in the plan amendment will have no significant impact on increasing recreational use on Steens Mountain. Proposed actions in the amendment are designed to manage recreational use and to reduce public impacts on private land by channeling visitors to improved facilities on public land. In the amendment the public is clearly encouraged to respect private property rights and ask permission before entering private property.

52. Comment:

We do not believe development of tourism is compatible with cattle grazing. An area developed for tourism no longer has a long-range capacity for grazing.

Response:

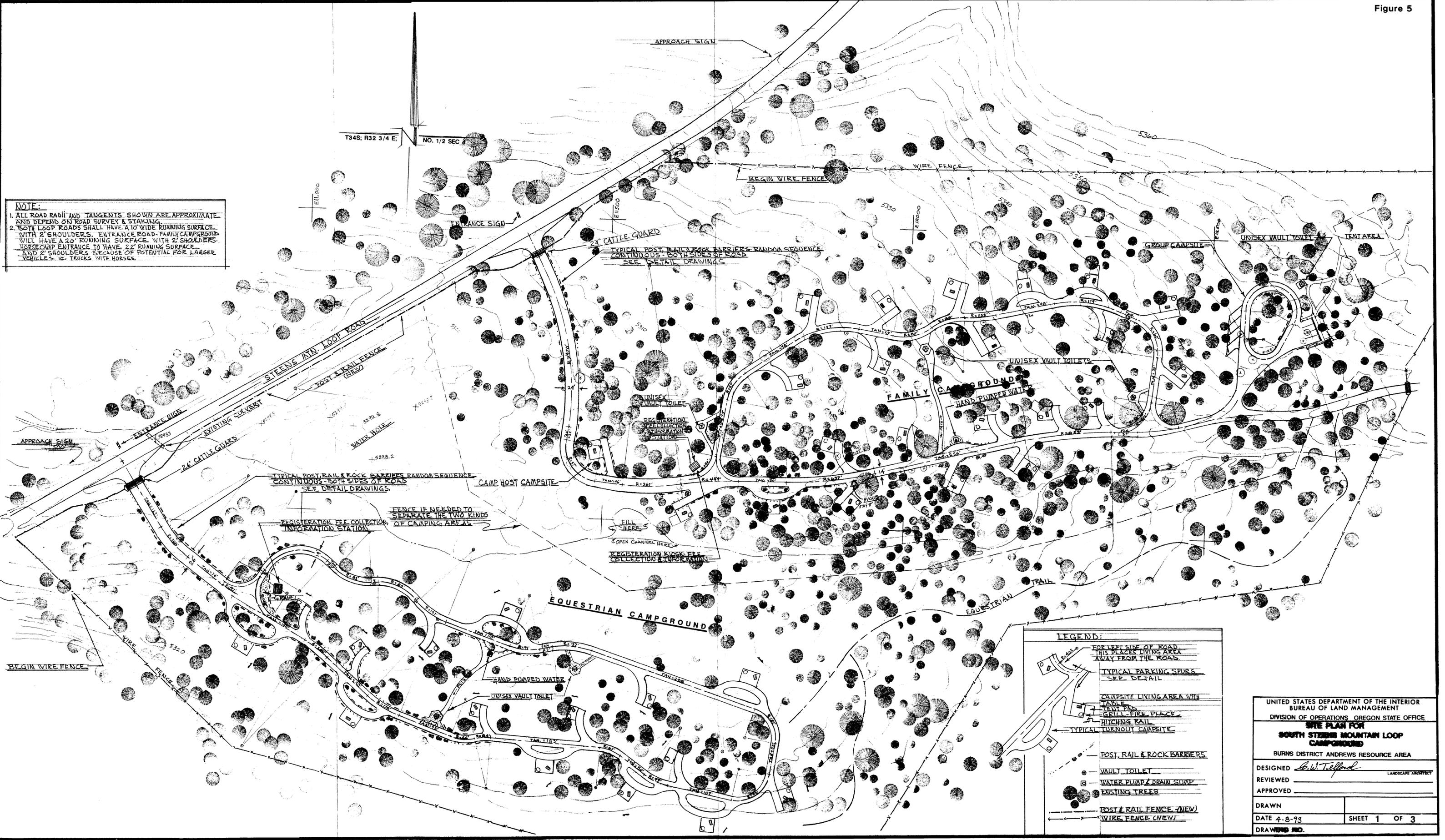
Actions in the proposed plan amendment are designed to manage the Steens Mountain Recreation Lands for multiple use. While there may be some additional visitor use and recreational activity related to improved road condition and facilities associated with the proposed action, we have no data to support an expectation of a major increase. The preferred alternative is designed to better accommodate the use that is already occurring. It will also channel a major part of this use along the road corridor, to scenic overlooks and developed campgrounds and away from areas more likely to be grazed by livestock. This will help to minimize encounters between cattle and recreationists, instead of increasing them. Also see Response to Comment number 8.

53. Comment:

As human activity in the area increases, livestock grazing by logic should decrease.

Response:

The amendment calls for fencing of campgrounds. Generally over a large area such as Steens Mountain, livestock grazing and recreational activities should not be in conflict. It is important to note that 90 percent of the visitor use will be confined to less than two percent of the land area on Steens Mountain. See also response to comment 52.



NOTE:
 1. ALL ROAD RADII AND TANGENTS SHOWN ARE APPROXIMATE AND DEPEND ON ROAD SURVEY & STAKING.
 2. BOTH LOOP ROADS SHALL HAVE A 10' WIDE RUNNING SURFACE WITH 2' SHOULDERS. ENTRANCE ROAD-FAMILY CAMPGROUND WILL HAVE A 20' RUNNING SURFACE WITH 2' SHOULDERS. HORSE CAMP ENTRANCE TO HAVE 22' RUNNING SURFACE AND 2' SHOULDERS BECAUSE OF POTENTIAL FOR LARGER VEHICLES, I.E. TRUCKS WITH HORSES.

LEGEND:

- FOR LEFT SIDE OF ROAD THIS PLACES LIVING AREA AWAY FROM THE ROAD
- TYPICAL PARKING SPURS SEE DETAIL
- CAMPSITE LIVING AREA WITH TABLE GRILL FIRE PLACE HITCHING RAIL
- TYPICAL TURNOUT CAMPSITE
- POST, RAIL & ROCK BARRIERS
- VAULT TOILET
- WATER PUMP & DRAIN SUMP
- EXISTING TREES
- POST & RAIL FENCE (NEW)
- WIRE FENCE (NEW)

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 DIVISION OF OPERATIONS, OREGON STATE OFFICE
**SITE PLAN FOR
 SOUTH STEENS MOUNTAIN LOOP
 CAMPGROUND**
 BURNS DISTRICT ANDREWS RESOURCE AREA

DESIGNED *G.W. Telford* LANDSCAPE ARCHITECT
 REVIEWED _____
 APPROVED _____

DRAWN _____
 DATE 4-8-93 SHEET 1 OF 3
 DRAWING NO. _____