

FSH 7709.59 - ROAD SYSTEM OPERATIONS AND MAINTENANCE HANDBOOK

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Road system operations and maintenance is the process of managing National Forest roads and road uses to meet land and resource management objectives. This handbook provides guidance for conducting planning, traffic management, investment sharing (cost share), highway safety, traffic studies, road maintenance, and other road system operations and maintenance activities.

Transportation system operations and maintenance addresses the integration of all methods of National Forest access, including roads, trails, airfields, railroads, and waterways, with the overall management of motorized travel, both on-road and off-road. This handbook emphasizes road system related aspects of these multi-modal operations.

02 - OBJECTIVE

To operate and maintain the National Forest road system in a manner that provides for user safety; support for resource programs; implementation of management area direction; protection of road investment, the environment, and adjacent resources; and meeting applicable air and water quality standards.

03 - POLICY

Follow specific transportation direction in Land and Resource Management Plans and be familiar with resource objectives in Plans.

1. Coordinate operations activities with States, counties, and other local authorities, and be familiar with State and local laws that apply to the transportation system.
2. Coordinate operation and maintenance criteria with design criteria (FSH 7709.56, Road Preconstruction Handbook).
3. Work with other affected disciplines to ensure that operation and maintenance decisions are consistent with the intended purpose of the facility.
4. Be aware of outstanding rights that may affect operations and maintenance, such as reserved and outstanding interests in the road and outstanding off-highway haul authorizations.

05 - DEFINITIONS

See FSM 7705 and FSM 7730.5 for applicable definitions.

06 - PROCESS FOR TRAVEL MANAGEMENT

Exhibit 01 illustrates the process for travel management. Road system operations and maintenance serves two important functions in the process. The first is maintenance of road management objectives (RMOs), which document existing travel management direction. The other function is ongoing monitoring and implementation of travel management decisions. This

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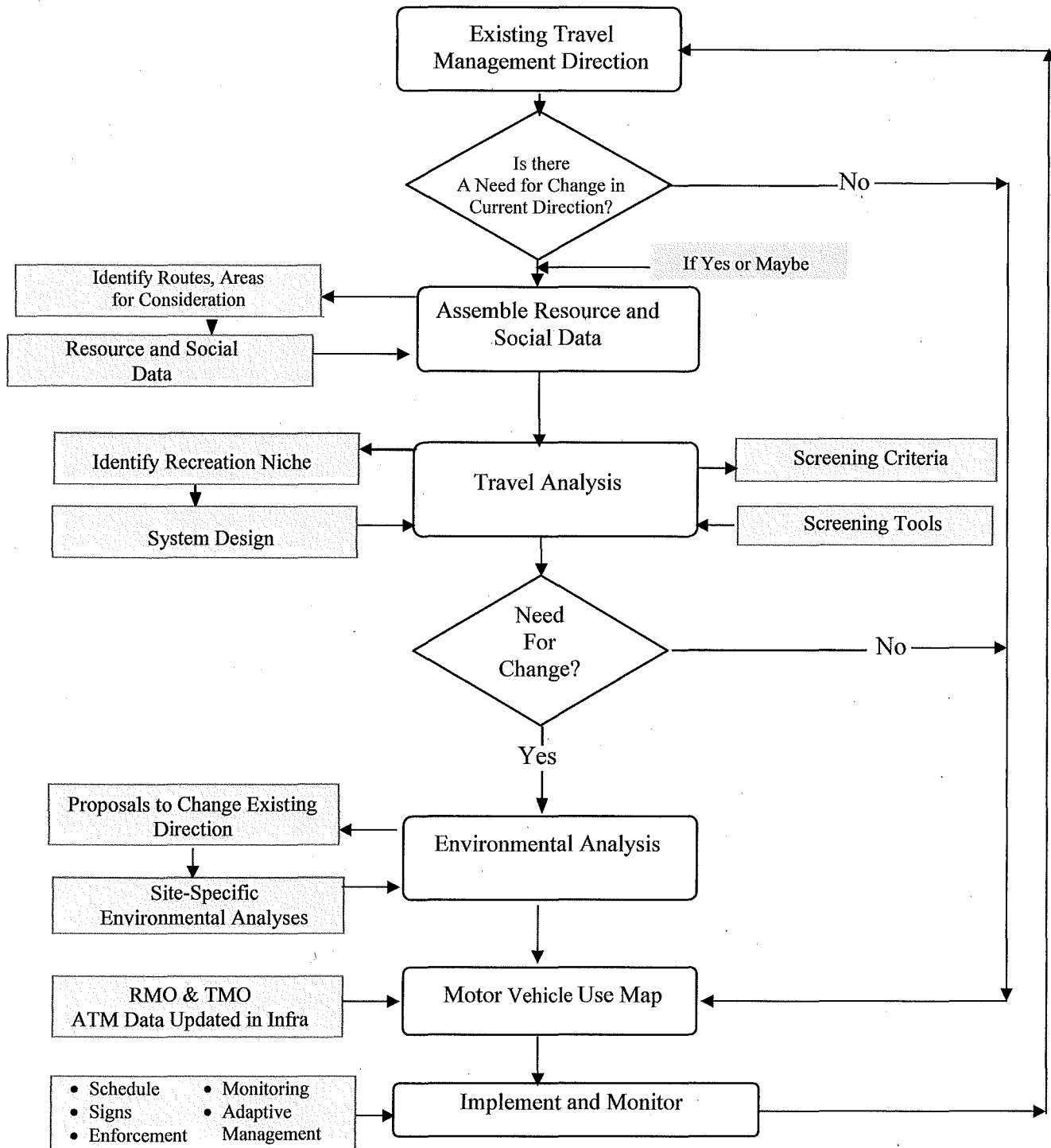
includes assisting in development of motor vehicle use maps; development of operation and maintenance criteria; implementing traffic management strategies; implementing traffic rules and orders; providing traffic control devices, permits, and other traffic control measures; and providing maintenance of roads.

For further information on the process for managing travel, see FSH 7709.55 chapter 10.

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06 – Exhibit 01

Process for Travel Management





**FOREST SERVICE HANDBOOK
NATIONAL HEADQUARTERS (WO)
WASHINGTON, DC**

FSH 7709.59 - ROAD SYSTEM OPERATIONS AND MAINTENANCE HANDBOOK

Amendment No: 7709.59-2009-1

Effective Date: February 5, 2009

Duration: This amendment is effective until superseded or removed.

Approved: GLORIA MANNING
Associate Deputy Chief, NFS

Date Approved: 01/30/2009

Posting Instructions: Amendments are numbered consecutively by handbook number and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this handbook was 7709.59-91-1 to FSH 7709.59.

New Document(s):	7709.59-2009-1_transmittal	9 Pages
	7709.59_contents	1 Page
	7709.59_zero_code	4 Pages
	7709.59_10	7 Pages
	7709.59_20	26 Pages
	7709.59_30	4 Pages
	7709.59_40	7 Pages
	7709.59_50	6 Pages
	7709.59_60	18 Pages
Superseded Document(s) by Issuance Number and Effective Date	!7709.59_contents (Amendment 7709.59-91-1, 03/01/1991)	8 Pages
	!7709.59_zero_code (Amendment 7709.59-91-1, 03/01/1991)	5 Pages
	10 (Amendment 7709.59-91-1, 03/01/1991)	3 Pages
	20.1-23.23 (Amendment 7709.59-91-1, 03/01/1991)	13 Pages
	24-27 (Amendment 7709.59-91-1, 03/01/1991)	16 Pages
	30 (Amendment 7709.59-91-1, 03/01/1991)	4 Pages
	40 (Amendment 7709.59-91-1, 03/01/1991)	5 Pages
	50 (Amendment 7709.59-91-1, 03/01/1991)	7 Pages

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Digest:

7709.59 - This amendment changes the title from "Transportation System Operation Handbook" to "Road System Operations and Maintenance Handbook."

02 - Revises objectives to include results of both operations and maintenance and for protecting investments, resources, and environment.

03 - Removes cross-references to FSM 2350, FSM 2730, and FSM 5460. Adds references to maintenance.

05 - Removes cross-references to definitions in FSH 7709.16, FSM 2353.05, FSM 2355.05, FSM 5460.5, and FSM 5467.05.

06 - Changes caption from "Process for Access Management" to "Process for Travel Management" and sets forth new direction on current travel planning process. Revises exhibit 01 to illustrate the process for the travel management process.

08 - Removes code, caption, and reference documentation.

10 - Changes the chapter title from "Planning" to "Road Management" and sets forth revised direction previously set out in 7709.55, chapter 30, "Planning for Projects." Changes cross-references from FSM 7711 to FSM 7711.1 and FSM 7712.31 to FSM 7714.

11.1 - In paragraph 1b, adds travel analysis and existing legal agreements and contracts to sources of information list and removes access management objectives. In paragraph 3, sets forth new direction on use of considerations derived from travel planning and travel analysis to include Environmental and Resource Considerations, Legal Requirements, Road Users, Vehicle Characteristics, Traffic Requirements, Safety, and Economics. Clarifies direction that road management objectives are not decision documents, but are certified documentation of decisions.

11.2 - Changes caption from "OHV Use on Forest Development Roads" to "Coordination of Uses on National Forest System Roads" and sets forth new direction to follow guidance in 7709.59 section 52 for coordinating Highway Legal and Non-Highway Legal vehicles.

11.3 - Sets forth new direction to use the RMO Module of Infra Travel Routes and that the electronic record must be printed and signed by the certifying line officer. Updates exhibit 01 using a sample of the electronic output of an RMO developed through the Infra module.

20 - Throughout the chapter, changes the term "Forest development road(s)" to "National Forest System road(s)." Makes other technical and editorial changes.

20.11 - Revises cross-reference of the Organic Administration Act to emphasize statutory right to use existing roads as opposed to statutory right to mine for minerals.

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Digest--Continued:

20.12 - Updates cross-reference to Title 36, Code of Federal Regulation, Part 212 to reflect the Travel Management Rule. Adds new prohibitions in paragraph 3, prohibited activities, to cross-reference Title 36, Code of Federal Regulations, section 261.13 and Title 36, Code of Federal Regulations, section 261.14.

20.3 - Removes code, caption, and direction for "Policy."

20.41 - Changes caption from "Regional Forester and Experiment Station Directors" to "Regional Foresters." Clarifies and adds new regional forester responsibilities.

20.42 - Changes caption from "Forest Supervisors and Administrator of the Lake Tahoe Basin Management Unit" to "Forest Supervisors and Management of Other Administrative Units of the National Forest System."

20.5 - Removes code and caption for "Definitions" and removes obsolete terms.

21 - Adds cross references to Title 23, Code of Federal Regulations, section 660.103 and FSM 7705.

21.2 - Adds direction that roads included in the "Schedule A" of Forest Road Agreements are considered to be on the transportation system. Revises direction on expenditure of funds for maintenance of private roads to assure appropriations under Title 23, United States Code, section 205 are not used for such purposes.

22 - Removes direction on Forest Service rights on public roads and recodes to section 22.1.

22.1 - Recodes to this section direction on Forest Service rights on public roads previously set out in section 22. Removes obsolete direction stating, "use of roads built under the Act of July 26, 1866, and which are being maintained by the Forest Service cannot be restricted."

23 - Changes caption from "Traffic Rules and Orders" to "Traffic Rules, Designations, and Orders." Changes cross-reference from Title 36, Code of Federal Regulations, section 212.7 to Title 36, Code of Federal Regulations, section 212.5.

23.1 - Revises exhibit 01. Adds examples to include limiting motor vehicle use to designated roads, trails, and areas as shown on a use map; limiting over-snow vehicle use on roads as shown on a use map; and prohibiting use of vehicles not state licensed and/or driven by state licensed operators. Removes examples prohibiting passenger cars on a four wheel drive way, prohibiting motorcycles on a road, restricting commercial haul to certain hours of the day, superseding State law for vehicle length or width, and superseding State law to allow OHV/ORV use on a road.

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Digest--Continued:

23.22 - Adds direction in paragraph 2 that establishing a speed limit requires engineering judgment and on site signing in accordance with the Manual on Uniform Traffic Control Devices.

24.1 - Adds direction that requires applicants applying for road use permits during times of the year when road use is normally restricted, to make financial arrangements for completion of an environmental analysis. Recodes to paragraph 3 direction previously set out in section 24.11 for electronic submission of form FS-7700-40 "Application for Permit Non-Federal Commercial Use of Roads Restricted by Order."

24.11 - Changes caption from "Road Use Permit Clause" to "Instructions for Certain Clauses" and sets forth direction on instructions for certain clauses.

24.11a - Removes code, caption, and obsolete direction for "Special Instructions for Certain Clauses."

24.12 - Establishes code and caption, and sets forth direction for "Supplemental Clauses."

24.2 - Adds cross-reference to Title 36, Code of Federal Regulations, section 261.13. Adds direction that emergency vehicles operating under emergency conditions are exempt from permit requirements, but that exemption does not apply to overload ratings of bridges.

24.21 - Adds direction to consider modeling permits after forms used by State Departments of Transportation.

24.22 - Removes all obsolete cross references except cross-reference to FSM 7731.17.

25 - Adds direction to find road management objectives. Removes obsolete direction for implementing traffic management strategies.

25.1 - Changes caption from "Traffic Control Devices" to "Signs and Traffic Control Devices." Removes obsolete direction and sets forth new direction to design signs and traffic control devices using engineering judgment in accordance with the Manual on Uniform Traffic Control Devices requirements.

25.11 - Removes cross-reference to FSH 7109.11. Revises title of EM-7100-15 from "Guidebook for Forest Service Signing" to "Sign and Poster Guidelines for the Forest Service."

25.12 - Adds direction for use of ditches and berms.

25.2 - Changes caption from "Redirection and Attenuation Devices" to "Traffic Management Strategies." Recodes to this section direction previously set out in section 25.3.

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Digest--Continued:

25.21 - Establishes new code and caption "Application of Traffic Management Strategies to Roads Not Subject to the Highway Safety Act." Recodes to this section direction previously set out in 25.31. Removes cross references to FSH 7709.11. Adds direction to prohibit passenger cars by special local designation on motor vehicle use maps when necessary, to coordinate the "discourage" strategy with motor vehicle use maps, and to consider use of travel management signs in the "eliminate" strategy. Revises direction for the prohibit strategy to utilize Title 36, Code of Federal Regulations, section 261.13 as the primary prohibition instead of Title 36, Code of Federal Regulations, section 261.54 orders.

25.22 - Establishes new code and caption "Application of Traffic Management Strategies to Roads Subject to the Highway Safety Act." Recodes to this section direction previously set out in section 25.32

25.3 - Removes code and caption "Traffic Management Strategies" and recodes direction to section 25.2.

25.31 - Removes code and caption "Application of Traffic Management Strategies to Roads Not Subject to the Highway Safety Act." Recodes direction to section 25.21.

25.32 - Removes code and caption "Application of Traffic Management Strategies to Roads Subject to the Highway Safety Act." Recodes direction to section 25.22

27 - Revises direction to include cooperating with State or local agencies to enforce vehicle weights.

30 - Throughout the chapter, changes the term "Forest development road(s)" to "National Forest System road(s)." Removes references to FSH 7709.58. Recodes all direction on sharing of maintenance to chapter 60 of this handbook. Makes minor technical and editorial changes throughout the chapter.

30.1 - Revises cross-reference from Title 36, Code of Federal Regulations, section 212.7 to Title 36, Code of Federal Regulations, section 212.5.

40 - Throughout the chapter, changes the term "Forest development road(s)" to "National Forest System road(s)." Makes minor technical and editorial changes throughout the chapter.

40.1 - Removes obsolete reference to Title 23, Code of Federal Regulations, Part 1230. Removes three Memorandums of Understanding, 76-SIE-004, 76-SIE-005, and Amendment Number 1 of November 29, 1982, with U.S. Department of Transportation agencies based on Title 23, Code of Federal Regulations, Part 1230. Adds references to Title 23, Code of Federal Regulations, section 500.108, and Title 23, Code of Federal Regulations, section 655.603, and the Manual on Uniform Traffic Control Devices. Adds reference to Title 36, Code of Federal Regulations, section 212.52.

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40.3 - Establishes code, caption, and policy that road user safety takes precedence over biological resources, roadside danger trees are to be identified, qualified persons should do the identification, and when hazards associated with danger trees cannot be mitigated, roads must be closed.

40.4 - Removes direction and adds cross-reference to FSM 7733.04 for responsibilities.

40.4a - Establishes code, caption, and sets forth regional forester responsibilities related to identification and mitigation of roadside danger trees.

40.4b - Establishes code, caption, and sets forth forest supervisor responsibilities related to identification and mitigation of roadside danger trees.

40.5 - Establishes definitions of "danger tree" and "qualified person." States that the terms "danger tree" and "hazard tree" are synonymous when used in this directive.

41 - Changes caption from "Safety Standards" to "Highway Safety Program Components." Removes obsolete direction in subsections 41.1 through 41.5.

41.1 - Establishes new caption and sets forth direction for "Traffic Engineering Services."

41.2 - Establishes new caption and sets forth direction for "Identification, Investigation, and Surveillance of Accident Locations."

41.3 - Establishes new caption and sets forth direction for "Design and Construction."

41.4 - Establishes new caption and sets forth direction for "Roadside Design."

41.5 - Establishes new caption and sets forth direction "Highway-Rail Grade Crossings."

41.6 - Establishes new code and caption, and sets forth direction for "Roadway Maintenance."

41.7 - Establishes new code and caption, and sets forth direction for "Hazard Identification and Correction." Establishes policy in Section B. regarding prioritization of Danger Trees, when to close roads due to Danger Trees, use of categorical exclusions from NEPA procedures when mitigating Danger trees, using all available methods for financing mitigation of Danger Trees, and prioritizing Danger Tree mitigation work against other road maintenance work through inclusion in the annual road maintenance plan.

41.8 - Establishes new code and caption, and sets forth direction for "Incident Management."

41.9 - Establishes new code and caption, and sets forth direction for "Forest Service Employees and Forest Service-owned Equipment."

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Digest--Continued:

50 - Throughout the chapter, changes the term "Forest development road(s)" to "National Forest System road(s)." Makes minor technical and editorial changes throughout the chapter.

51.1 - Removes obsolete direction for establishing traffic patterns and verification of the suitability of road management objectives. Adds direction to use traffic surveillance to determine accident rates.

51.2 - Modifies existing direction for clarity.

51.3 - Adds direction that Forest Service engineering personnel conducting additional investigation of severe accidents should have professional engineering registrations. Revises direction to include minimum accident data for other modes of travel and that required road data should include copies of approved reports and so forth. Adds direction to correct deficiencies identified in the course of accident investigations, retaining investigation records, and availability of investigation records through Freedom of Information Act.

51.4 - Removes code, caption, and direction for "Hazard Analysis." Recodes direction to FSH 7109.55, chapter 30.

52.2 - Changes caption from "Mixed Use on Forest Development Roads" to "Mixed Use on National Forest System Roads." Revises direction to include designations for uses under the Travel Management Rule and to follow procedures in FSH 7109.55 for Motorized Mixed Use Analysis. Removes exhibit 01.

52.3 - Establishes new code and recodes to this section caption and direction for "Advanced Notice of Changes" that was previously set out in 53.1. Removes obsolete direction regarding details of information to be provided and restricting use on new roads

52.4 - Establishes new code and recodes to this section caption and direction for "Maps and Signs" that was previously set out in 53.2. Removes obsolete direction regarding positive messages on signs. Adds direction to assure that route numbers on maps match route number signs on ground and to use appropriate guide signs when a traffic management strategy of "encourage" is in effect. Revises cross-reference from FSH 7109.11 to EM-7100-15.

53 - Removes code and caption for "Public Information."

53.1 - Removes code and recodes caption and direction to 52.3.

53.2 - Removes code and recodes caption and direction to 52.4.

60 - Establishes new chapter and recodes to this chapter direction previously set out in FSH 7709.58, chapter 10. Throughout chapter, changes term "Forest Development road(s)" to "National Forest System road(s)." Makes technical and editorial changes throughout chapter.

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Digest--Continued:

61 - Removes direction for establishing maintenance criteria following the Process for Access Management. (Process replaced by the Travel Management Rule - November 9, 2005, 70 FR 68264.)

62 - Removes direction regarding use of the Forest Service Central Accounting System. Removes exhibit 01. Adds cross references to FSM 7732.11 on road maintenance plans and to FSM 7732.04c for approval of road maintenance plans.

62.1 - Removes reference to traffic service level. Changes term "closed" roads to "stored" roads. Adds direction that decommissioning is not considered maintenance, is a financial responsibility of resource programs, and may be financed with road maintenance funds if authorized by Congress in annual appropriations bills.

62.2 - Removes requirements to store information in the Forest data management inventory system and in the sign plan and replaces with requirement to store information in Infra Travel Routes.

62.31 - Removes traffic service level from list of factors.

62.32 - Removes direction on constant and intermittent service and recodes direction to 62.33. Removes exhibit 01. Revises direction for maintenance level 1 by changing the term "stored" for "closed." Adds direction to not show level 1 roads on motor vehicle use maps. Adds direction on maintenance level 2 to indicate that user comfort and convenience are not a consideration, signs are generally not provided, and motorists should not have expectations of being warned of hazards. Revises direction for maintenance level 3 by including references to MUTCD. Adds direction on provision of signs and traffic control devices to warn of hazards and removes references to road surface type. Adds reference to MUTCD in maintenance levels 4 and 5.

62.33 - Changes caption from "Management Decisions" to "Maintenance Levels." Removes obsolete direction. Recodes to this section direction on constant and intermittent service previously set out in 62.32. Adds direction clarifying roads open to administrative traffic only are not maintenance level 1, explains the sharp distinction between maintenance levels 1 and 2, the sharp distinction between maintenance levels 2 and 3, the distinctions between maintenance levels 3, 4, and 5 are less sharply defined, and other factors besides surface smoothness and speed of travel must be considered when assigning maintenance levels.

62.4 - Removes obsolete direction and reserves code and caption.

62.6 - Removes exhibit 01.

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62.7 - Removes direction on use of automated data processing systems, providing management a reliable assessment of total needs, and reducing the frequency of maintenance operations. Adds direction to consider operating roads at less than objective maintenance levels. Adds cross reference to FSM 7732.04c.

62.83 - Removes obsolete direction to redo nonconforming work and to meet with line officers to review a representative sample of work.

63.2 - Changes cross reference from 36 CFR 212.7 to 36 CFR 212.5.

63.21 - Changes caption from "Timber Sale Contracts" to "Timber Sale and Resource Stewardship Contracts." Updates cross references to sections of currently used contracts. Removes cross reference to timber sale appraisal and updates cross references to timber sale administration handbook.

63.43 - Establishes code and caption "National Forest Administration Generated Maintenance" and sets forth direction on financial responsibility for maintenance of roads during fire suppression, stewardship service contracts, and other administration related activities.

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CHAPTER 10 - ROAD MANAGEMENT

This chapter provides guidance for the planning activities necessary for transportation system operations and maintenance and identifies the criteria that affect transportation system operations and maintenance (FSM 7703 and FSM 7730.3).

11 - ROAD MANAGEMENT OBJECTIVES

Road management objectives document the intended purpose of an individual road in providing access to implement a land and resource management plan as well as decisions about applicable standards for the road. Road management objectives should be based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria.

11.02 - Objective

To identify and document a management objective for each road in the Forest Road Atlas (FSM 7711.2).

11.03 - Policy

See FSM 7714.

11.1 - Development

Develop road management objectives from the appropriate management area direction, access management objectives, and similar sources of resource management direction, standards, and guidelines. Secure data concerning the type and extent of resource activities to be served by the road, environmental constraints, and mitigating measures to be employed. Utilize this data to prepare specific objectives that define the intended purpose of the road and that describe how the road will be designed, operated, and maintained.

1. The primary sources of information for developing road management objectives are:
 - a. Management Area Direction. Typical information is the forest plan management emphasis for the area, and resource practices for timber, wildlife, recreation, minerals, soils, and water. Road densities or even site-specific road location may be described. Guidelines may discuss visual quality objectives, motorized and non-motorized recreation opportunities, and wildlife featured species. All of this information must be accumulated to provide the background for developing access management objectives and road management objectives.

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- b. Travel Analysis. The travel analysis process (FSM 7712 and FSH 7709.55, ch. 20) will help identify objectives for managing access. Examples of information developed are Recreation Opportunity Spectrum classifications, densities for facility development, soil sedimentation limits, and fish and wildlife protection measures.
 - c. Existing Legal Agreements and Contracts. These contain the legal and outstanding rights which management of roads must observe.
2. Road management objectives contain:
- a. Design Criteria. These govern the selection of design elements and standards. Vehicle characteristics, such as the design and critical vehicles, and traffic service levels are examples of design criteria. FSH 7709.56, chapter 4, contains a description of design criteria.
 - b. Operation Criteria. Operation criteria are those influences and requirements that determine how a road must be operated and maintained. These govern operation of the road. Examples are such items as seasonal road use restrictions, special off-highway vehicle (OHV) and all-terrain vehicle (ATV) use, and traffic management strategies. Operation criteria should be consistent with design and maintenance criteria.
 - c. Maintenance Criteria. These govern maintenance of the road. Examples are such items as surface smoothness and financial responsibility. Chapter 60 contains a description of maintenance criteria.
3. Whenever possible, develop road management objectives during travel planning activities including travel analysis. Consider the following factors when establishing road management objectives:
- a. Environmental and Resource Considerations. Factors such as needs for aquatic species passage, need to prevent spread of invasive plant species, watershed damage done by unmanaged motorized use, visual quality concerns, sensitive soils, or recreational uses guide both maintenance levels and operational status. Consult land management plans and any subsequent tiered documents.
 - b. Legal Requirements. Check legal requirements such as the Highway Safety Act, the National Forest Roads and Trails Act of 1964, the National Forest Management Act, agreements, easements, and contracts as these may constrain or define the limits of transportation system operations.

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c. Road Users. Motorized use designations, the intended users, and the acceptable mix of such users should help determine whether traffic restrictions and orders are necessary, and what traffic management strategies apply. When a road is intended for intermittent use by Highway Legal vehicles and continuous use by other motor vehicles, the route should be designated as both a National Forest System road and a National Forest System trail.

d. Vehicle Characteristics. Physical characteristics of vehicles intended to use the road may affect maintenance levels, management strategies, and the need for traffic regulations which may differ from State laws.

e. Traffic Requirements. The volume, composition, and distribution of traffic may indicate the need for orders and traffic control devices, appropriate maintenance levels, and so forth.

f. Safety. Providing for safety often requires examining for hazards and taking corrective actions. Traffic control devices and/or road user restrictions may be needed to provide for acceptable passage of traffic.

g. Economics. To minimize total transportation costs, it may be necessary to restrict a particular use or user, or change (reduce or upgrade) the standard or maintenance level of a road.

4. Although the criteria identified in road management objectives are often common for transportation system design, operations, and maintenance, the application may differ. For example, in design, traffic requirements (volume, composition, and distribution) could be used to determine the number of lanes. In operations, these same criteria could be used to determine the need for use restrictions or traffic control devices.

5. While road management objectives (RMOs) provide the corporate record of decisions that collectively establish the intent, purpose, and resource constraints for individual roads, they are not decision documents themselves. Actual decisions must be made through appropriate processes (FSM 7715), including public involvement when appropriate. Line officer approval of RMOs certifies that management objectives are correctly documented rather than as a record of a new decision.

11.2 - Coordination of Uses on National Forest System Roads

Designations of roads for motor vehicle use may result in situations requiring coordination of uses on roads. This may include mixed use of Highway Legal and Non-Highway Legal vehicles. Document needs for coordinated uses in road management objectives. Guidance regarding coordination of uses is found in section 52.

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CHAPTER 10 - ROAD MANAGEMENT****11.3 - Documentation**



Document road management objectives (RMOs) as a permanent record that is readily available for use. Use the "RMO Module" of Infra Travel Routes to record data. Exhibit 01 is a sample of an RMO developed through the module. Display of the data as shown in the exhibit is not mandatory, as the RMO module provides both flexibility and extensibility. The documentation should include a summary of management area direction, needs for coordination of uses (11.2), and access management objectives, as well as the specific design, operation, and maintenance criteria.

While the electronic record in Infra is used for day-to-day road management, the completed road management objectives must be printed and signed in ink by the certifying line officer. Road management objectives (RMOs) are a key part of the Government's defense in the event of claims and litigation under the Federal Tort Claims Act. Courts generally do not accept electronic documentation as part of the defense. The written copy must be retained in the forest's files for a minimum of 5 years past date of any revision to the RMO.

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11.3 - Exhibit 01

Sample of a Road Management Objective Developed Through Infra Travel Routes

	RMO001L - Road Management Objectives	
	Page: 1 of 5	
	Report run on: December 12, 2007 1:12 PM Database:	

ID: 1000 Name: MOOSE CR
BMP: .0000 EMP: 6.3220 Admin Org: 010202
Begin Termini: HWY 274
End Termini: SW SEC 24
Comments: Beginning Route TRS: T02NR12WS01
EMP changed from 4.6 to 6.322 as per GPS road log of
8/27/99

Prepared By:
Reviewed By:
Reviewed By:
Approved By:

DRAFT

Route Basics

Location Design Elements	Value	BMP	EMP
ADMN_ORG	010202	.0000	6.3220
CONGRESSIONAL DISTRICT	MT - 01	.0000	6.3220
COUNTY	MT - DEER LODGE	.0000	6.3220
MILEAGE SOURCE	GPS - GLOBAL POSITIONING	.0000	6.3220
QUAD	455211300 - LINCOLN GULCH #H7	.0000	6.3220
ROUTE STATUS	EX - EXISTING	.0000	6.3220

General Management Direction

Recreation Opportunity Spectrum (ROS)

Code	Remarks	Description	BMP	EMP
RN - ROADED NATURAL			.0000	6.3220

General Recreation Considerations

Dispersed Activity

Code	Remarks	Description	BMP	EMP
H KING HUNTING			.0000	6.3220

General Soils/Geological Considerations

Soil erosion is critical around streams

BMP EMP

Clay soils are slick on steep grades when wet. Place surfacing on steep grades BMP 0 EMP 2.4

General Timber Considerations

...Continued

emphasize management of hardwood species. Road system to emphasize log transport. Confine timber sale activities to May-October to avoid rainy season. BMP EMP

Timber Details	Remarks	Description	BMP	EMP
CURRENT ENTRY	0.5 mmbl FY 08			
HARVEST	0.5 mmbl FY 16			

General Wildlife & Aquatic Considerations

Designated wildlife management area - featured species is bear. Minimize human disturbance; minimize roads open to motorized vehicles

BMP EMP

Provide for fish habitat, leave vegetation intact along streams

Provide for fish passage on stream crossing at Hall Creek. Remove crossing structure between uses. BMP EMP

General Plant Considerations

General ATM Considerations

TRAFFIC MANAGEMENT STRATEGY: Prohibit by not designating for motorized use on motor vehicle use map. Eliminate use between sales to preclude need for scarce law enforcement resources

BMP EMP

Area closed to recreational motor vehicle use. No designation for motorized other than on roads.

Minimum spacing of local roads designated for motor vehicle use is 1 mile. No more than 20% of any new local roads are to be designated for motor vehicle use in area.

BMP EMP

Current Traffic Management

Use Type	Strategy Code	Mode of Travel	BMP	EMP	From Date	Thru Date
Restricted	PROHIBIT	1 MOTOR VEHICLE	0	6.322	01/01	12/31
Restricted	PROHIBIT	3.1 MTR OVER-SNOW VEHICLE	0	6.322	01/01	12/31

General Design/Mitigation Considerations

Compare total construction cost of road with resource benefits. Determine most cost-effective stream crossing at Hall Creek considering road use, traffic service level, and intermittent service life. BMP EMP

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11.3 - Exhibit 01 - Continued

Sample of a Road Management Objective Developed Through Infra Travel Routes

General Design/Mitigation Considerations ...Continued

Design Linear Events

Linear Event	Value	BMP	EMP
DESIGN SPEED	10	.0000	5.3220
DESIGN TRAFFIC	LOGT - LOGGING TRUCK	.0000	5.3220
LANES	1 - SINGLE LANE	.0000	5.3220
SURFACE TYPE	NAT - NATIVE MATERIAL	.0000	5.3220

General Operation Criteria and Safety Considerations

Subject to the Highway Safety Act

TRAFFIC CONTROL DEVICES: Road will be gated by purchaser during sale; provide gate markings for safety. After sale, purchaser to remove gate, remove bridge, storm-proof road, and construct barrier to eliminate motor vehicle traffic. Forest Service installs vertical route number.

Safety - intersection with county road; use warning signs during timber activity. Effectively block road between sales to minimize traffic hazards on the County road. BMP EMP

Operation Linear Events

Linear Event	Value	BMP	EMP
FUNCTIONAL CLASS	L - LOCAL	.0000	5.3220
JURISDICTION	FS - FOREST SERVICE	.0000	5.3220
MANAGING_ORG	010202	.0000	5.3220
ROUTE STATUS	EX - EXISTING	.0000	5.3220
SERVICE LIFE	I - INTERMITTENT TERM SERVICE	.0000	5.3220
SYSTEM	NFSR - NATIONAL FOREST SYSTEM ROAD	.0000	5.3220

Traffic Details

Traffic Count or Composition	Count/Period	Count/Period	Remarks	BMP	EMP
ADMINISTRATIVE	1 DAY		estimated travel only during sale	.0000	5.3220

General Maintenance Considerations ...Continued

Purchaser responsible for all maintenance during sale. Purchaser responsible for installing, maintaining, and removing gate. Purchaser responsible for removing bridge and storm-proofing road after use. Surface can be maintained for high clearance vehicles. During sale; M.L. 2. After sale; M.L. 1 BMP EMP

Maintenance Linear Events

Linear Event	Value	BMP	EMP
OBJECTIVE MAINT LEVEL	2 - HIGH CLEARANCE VEHICLES	.0000	5.3220
OPER MAINT LEVEL	1 - BASIC CUSTODIAL CARE (CLOSED)	.0000	5.3220
PRIMARY MAINTAINER	FS - FOREST SERVICE	.0000	5.3220

Local Linear Events

Linear Event	Value	Remarks	BMP	EMP
RPA RES ELEMENT	TIMBER - TIMBER		.0000	5.3220

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20.1 - Authority

20.11 - Laws

1. Act of July 16, 1866 (43 U.S.C. 932). Section, R.S. § 2477, authorized rights of ways for construction of highways by public road authorities over public lands not reserved for public uses. Rights of ways are perpetual unless abandoned by the public authority to which they were granted. The Statute remained in effect until it was repealed by Public Law 94-579, title VII, § 706(a), Oct. 21, 1976, 90 Stat. 2793.
2. The Organic Administration Act of June 4, 1897 (16 U.S.C. 478). Confers statutory right of access over National Forest lands for persons living on private lands within the National Forests and provides for "wagon roads and necessary improvements" across National Forests to access homes and utilize property, subject to rules and regulations of the Secretary.
3. Cooperative Funds Act, Act of June 30, 1914 (16 U.S.C. 498). Authorizes and appropriates contributions toward cooperative work on Forest development roads. Moneys are to be held in a special fund and expended for protection or improvements. Authorizes refunds to contributors of charges in excess of their fair share of costs.
4. Granger-Thye Act, Act of April 24, 1950 (16 U.S.C. 572). Authorizes cooperation and assistance to public and private agencies, organizations, and persons in performing work on land situated within or near National Forests. Moneys deposited are held in special fund for payment of work done by the Forest Service or refunded to cooperator.
5. Multiple Use-Sustained Yield Act, Act of June 12, 1960 (16 U.S.C. 530). Authorizes cooperation with State and local governments and others in development and management of the National Forests.
6. National Forest Roads and Trails Act, Act of October 13, 1964 (43 U.S.C. 1702, 1761, 1764, 1765). Authorizes acquisition, construction, and maintenance of National Forest System roads, to include cooperative financing with public and private agencies and persons. Authorizes Secretary to require users of Forest development roads to maintain roads commensurate with use and to construct/reconstruct roads necessary to accommodate use. Authorizes deposits to cover cost of maintenance and reconstruction.
7. Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1701). Requires that the United States receive fair market value for the use of public lands and authorizes the issuance of easements and permits for transportation purposes.
8. Alaska National Interest Lands Conservation Act of December 2, 1980 (16 U.S.C. 3210). Directs the Secretary of Agriculture to assure access to non-Federally-owned lands within the boundaries of the National Forest System.

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20.12 - Regulations

1. Travel Management, Title 36, Code of Federal Regulations, Part 212, subparts A, B, and C. These regulations address the planning, programming, construction and maintenance, management, and rights-of-way acquisition for National Forest System

Roads and Trails and management of motorized uses on National Forest System lands in general.

2. Minerals, Title 36, Code of Federal Regulations, Part 228. These regulations regulate and establish procedures for managing the surface of National Forest lands in connection with mineral activities. Of particular interest to this direction is section 228.12, Access.

3. Prohibitions, Title 36, Code of Federal Regulations, Part 261. Subpart A of these regulations identifies a broad range of activities that are prohibited on National Forest lands, specify applicable penalties, prescribe the procedures for informing users of prohibited activities, and set forth penalties. Subpart B of these regulations identifies additional activities that may be prohibited in an area by order of the Chief, Regional Foresters, or Forest Supervisors.

The Chief, regional foresters, station directors, and forest supervisors are authorized to issue orders closing or restricting the use of any National Forest System road (36 CFR 261.50). See also FSM 1013, which covers policy and responsibilities for issuance of such orders.

4. Title 36, Code of Federal Regulations, section 261.70. These regulations authorize the issuance of additional regulations pertaining to National Forest System roads and indicates the procedures for establishing such orders.

Exhibit 01 lists the prohibited activities related to transportation and the section of the regulation where the prohibition is set forth.

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20.12 - Exhibit 01

Prohibited Activity. Title 36, Code of Federal Regulations, Part 261, subpart A-General

Prohibitions and subpart B-Prohibitions Prohibited by Order.

Construction or maintenance without specific authorization.	36 CFR 261.10(a)
Activities that are prohibited on National Forest System roads.	36 CFR 261.12
Limits use of motor vehicles on National Forest System lands to roads, trails, and areas shown on a Motorized Use Map. Exceptions are allowed for administrative uses, contracts, permits, and so forth.	36 CFR 261.13
Limits use of over-snow vehicles to designated roads, trails, and areas when over-snow use is restricted or prohibited.	36 CFR 261.14
Prohibited uses and practices on National Forest System roads.	36 CFR 261.54

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20.13 - Comptroller General Decisions

Comptroller General Decision B-150239 of April 24, 1963, ruled that the Forest Road Agreement granted proper authority to protect the interests of the United States.

20.4 - Responsibility

20.41 - Regional Foresters

It is the responsibility of the regional forester to:

1. Issue orders under Title 36, Code of Federal Regulation, Part 261 to establish State-wide traffic rules for National Forest System roads that differ from State traffic laws if needed.
2. Manage the bridge program in accordance with FSM 7736.04b.
3. Establish minimum maintenance cost guidelines for application to Road Use Permits (sec. 24.1).

20.42 - Forest Supervisors and Managers of Other Administrative Units of the National Forest System

It is the responsibility of forest supervisors and administrators to:

1. Operate and maintain roads under Forest Service jurisdiction to meet National Forest management direction.
2. Issue and post orders closing or restricting use on National Forest System roads under 36 CFR 261.54. Terminate previously issued orders when no longer applicable. This authority may not be delegated. (23.2)
3. Execute cooperative agreements with State, county, or local road agencies for the maintenance of roads under their jurisdiction that are not on the National Forest System transportation system.
4. Issue road use permits.
5. Issue permits for overweight and oversize vehicles. Follow procedures established by the regional forester for review of applications for permits to move oversize loads over bridges.
6. Designate issuing officers for road use permits.

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20.43 - District Rangers

It is the responsibility of the district ranger to:

1. Operate and maintain roads under Forest Service jurisdiction to meet National Forest management direction.
2. Complete the "Report on Application" portion of form FS-7700-40, Application for Permit Non-Federal Commercial Use of Roads Restricted by Order.
3. Post Forest Supervisor orders closing or restricting use on National Forest System roads. (23.22)

21 - JURISDICTION

Jurisdiction is the legal right to control and regulate the use of a transportation facility (23 CFR 660.103 and FSM 7705). Roads on National Forest lands are under the control of the Forest Service, except for public roads established under the Act of July 26, 1866, private roads, roads for which the Forest Service or the U.S. Department of Transportation has granted rights-of-way to private landowners or public road agencies, and roads whose use and rights pre-date the National Forest. Other factors may affect jurisdiction on acquired lands or easements. Review the granting document and obtain appropriate legal opinion for these cases, when necessary.

There are roads on the transportation system where the Forest Service has limited rights of use and jurisdiction over the traffic, such as private road systems and many States, county, or township roads.

21.1 - Determination of Jurisdiction

Determine jurisdiction in accordance with FSM 7703.3 to identify who can exercise traffic control and regulate use of the facility. When there is doubt, request a legal opinion from the Office of the General Counsel before initiating any action.

21.2 - Expenditure of Forest Service Funds

Forest Service funds may be spent on roads under the jurisdiction of the Forest Service, and on roads under the jurisdiction of a public agency with which the Forest Service has a Cooperative Forest Road Agreement (FSM 7703.4) for reconstruction or maintenance. (Roads under public road authority jurisdiction included in the "Schedule A" of Forest Road Agreements are considered to be on the Forest transportation system.)

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Funds appropriated for National Forest System Roads and Trails under authority of Title 23, United States Code, Section 205a may not be spent for maintenance of private roads. Other Federal funds may be spent for such maintenance when there is an appropriate agreement, and road use is needed for National Forest purposes.

Roads for which a local public road authority has established a prescriptive right can, through agreement, be maintained for National Forest purposes. Forest Supervisors can enter into a cooperative agreement to improve such a public road provided work is limited to the area identified by the prescriptive right.

21.3 - Applicability of State Law and Federal Regulation

State traffic laws apply to National Forest System Roads unless in conflict with designations or orders under Title 36, Code of Federal Regulations, Part 261. Review the local situation to determine applicability. When orders for prohibitions or restrictions (36 CFR 261.50) supersede State laws, enforce these Federal orders only on roads for which the Forest Service has jurisdiction.

22 - ACCESS RIGHTS

Permit reasonable access, either permanent or temporary, including access to mineral rights, to private landholders whose land is entirely or partially surrounded by National Forest System lands. These rights may be exercised on National Forest System Roads open to unrestricted motorized public use without a written authorization. Authorize reasonable use in writing if the use conflicts with designation, road regulations, or orders.

22.1 - Rights of Forest Service

Access rights to National Forest System land for administration and utilization may be permanent or temporary. The Forest Service has access rights on public roads and on other roads where jurisdiction or agreement provides such rights. See FSM 5460, FSM 7703.3, and FSH 5409.17, Right-of-Way Acquisition Handbook, for rights-of-way acquisition direction and procedures.

The Forest Service may have rights stemming from:

1. Reciprocal Grants. In areas of intermingled ownership, the Forest Service may jointly develop and maintain a road or road system with private landholders (FSM 5467), through the exchange of easement deeds. Cost-share cooperators retain the rights to use the roads across their lands, but these roads are under the jurisdiction of the Forest Service. Specify all activities allowed in a right-of-way easement. Check easement documents closely for reservations or restrictions by the grantor.

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2. Appropriation. Before World War II, rights-of-way for roads built with Federal funds were obtained by appropriations. The Government occupied the land for road purposes, and landowners gained compensation by applying to Federal District Court for redress. Once occupied, a right-of-way became the property of the United States and, if built for Forest Service purposes, the road came under unrestricted Forest Service jurisdiction. However, the right-of-way width is limited to the traveled way. The Forest Service can maintain and use the road but cannot reconstruct it without obtaining an easement from the landowner or through appropriate court action.
3. Act of July 26, 1866. Roads built on public domain for public purposes are public roads. A public road existing on public domain that was later reserved as National Forest System land and whose jurisdiction was never assumed by the county is under the jurisdiction of the Forest Service, and can be maintained and reconstructed by the Forest Service for Forest Service purposes.
4. Public Roads Under Public Road Authorities. The Forest Service has the same rights to use public roads as the general public. The Forest Service can maintain and improve public roads on the Forest development system through a Forest Road Agreement with the agency that has jurisdiction. However, the Forest Service may have limited jurisdiction to control traffic on these roads even when they are on National Forest land. State statutes and easement deed restrictions govern the jurisdictional authority of public roads.

23 - TRAFFIC RULES, DESIGNATIONS, AND ORDERS

Regulate or control traffic to:

1. Prevent damage to the roadway,
2. Mitigate unsafe conditions,
3. Limit the use of vehicles that exceed design capacity,
4. Require road investment and maintenance sharing,
5. Reduce maintenance costs, or
6. Implement a specific resource management activity.

One means for regulating traffic is through implementation of requirements set forth in Title 36, Code of Federal Regulations, section 212.5. The regulations include traffic rules that automatically apply to all National Forest System roads (36 CFR 261.12), a prohibition on use off the designated system (36 CFR 261.13), and optional traffic rules that can be implemented with the issuance of orders (36 CFR 261.54).

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The wording of orders is important and must be precise. Coordinate closely with Forest Service law enforcement personnel and local magistrates in the writing, posting, and enforcement of orders.

23.1 - Traffic Rules

Traffic rules consist of limitations placed on the operation and use of vehicles. Rules can be issued for individual roads or a group of roads. Limitations may be applied to vehicle characteristics, vehicle operation, vehicle classes, or types of traffic.

Prohibition (d) of Title 36, Code of Federal Regulations, section 261.54 contains the phrase, "or other limitations specified by the order." This wording allows an order to be prepared to regulate or control any aspect of vehicle operations on a National Forest System Road. Use this as the authority for all orders written to regulate traffic on or use of National Forest System Roads, except as provided in Title 36, Code of Federal Regulations, section 261.70.

Title 36, Code of Federal Regulations, section 261.70(a) provides the authority to issue a new regulation. The issuance of a new regulation requires public involvement with a notice published in the Federal Register. Publish the final regulation in Title 36, Code of Federal Regulations, section 271.70 under a region-by-region heading and only where special or unique regulations are necessary. Consult with the Office of the General Counsel prior to initiating action pursuant to this regulation.

Many commonly used traffic rules are shown in exhibit 01, along with the authority for their implementation.

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23.1 - Exhibit 01

Traffic Rules

<u>Code of Federal Regulations Citation</u>	<u>Rule</u>	<u>Order Required</u>
261.12(a)	Control the weight, height, and length of vehicles within State law requirements.	No
261.12(d)	Control hazardous parking or vehicles blocking a road.	No
261.13	Limit motor vehicle use to designated roads, trails, and areas as shown on a use map.	No
261.14	Limit over-snow vehicles on roads as shown on a use map.	No
261.54(a)	1. Prohibit the operation of certain types of vehicles at night.	Yes
	2. Prohibit use of vehicles not licensed for highway use by a State and/or driven by persons without current State operator licenses.	Yes
261.54(b)	1. Prohibit commercial hauling on a road.	Yes
	2. Prohibit public use on a road.	Yes
261.54(c)	Prohibit commercial hauling without a permit or authorization.	Yes
261.54(d)	1. Supersede the State law for allowable vehicle weight on NFS road or bridge.	Yes
	2. Establish an enforceable speed limit	Yes
261.54(e)	Close a road to all motorized vehicle use.	Yes
261.54(f)	Prohibit reckless driving.	Yes

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23.2 - Orders

Impose traffic rules on National Forest System roads by issuing orders. Most road orders are prepared at the forest level and are issued by the forest supervisor because of the localized needs of the road system.

23.21 - Writing Orders

See FSM 1010 and Title 36, Code of Federal Regulations, section 261.50(c) for requirements for writing orders. Accurately reflect the prohibitions in orders. Orders may be written for individual roads, for a grouping of roads, for all roads in an administrative unit, or for all roads in a State. Ensure that the description states which prohibitions apply to individual roads. Orders applicable to individual roads or groups of roads should list each road to which the order applies.

Consider exemptions when preparing an order, such as persons with permits specifically authorizing the prohibited act, owners or lessees of land in the area, residents in the area, members of rescue or fire fighting organizations in the performance of their official duties, persons engaged in business or trade in the area, or others meeting the exemption requirements specified in the order.

In order to eliminate any conflict with current direction, check travel management plans and Motorized Use Maps before preparing orders. Show road restrictions instituted through orders on Motorized Use maps.

The following are optional items for inclusion in an order:

1. A numbering system.
2. A penalty statement (36 CFR 261.1b). If a penalty statement is included, use the wording shown in the example.
3. A termination date. See section 23.23 for details about terminations.

Exhibit 01 illustrates a sample format to use for orders.

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23.21 - Exhibit 01

Sample Format for Orders

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

P.O. Box 4040

Foresttown, California 96007

Order of the Forest Supervisor

SMOKEY NATIONAL FOREST

FOREST SUPERVISOR'S ORDER NO. 67

April 2, 1990

Pursuant to 36 CFR 261.50(b), it is hereby ordered that the prohibitions hereinafter set forth apply to NFSR 210, Roaring River Road, on the River Ranger District, Smokey National Forest:

1. Parking on the paved part of the roadway.
2. Logging trucks and other trucks with a GVW over 30,000 lbs. being on the road Saturdays and Sundays from Memorial Day to Labor Day and from October 10 to November 1 annually.
3. Logging trucks and other trucks with GVW over 30,000 lbs. being on the road on Memorial Day, July 4, and Labor Day.
4. Commercial timber sale and other vehicles larger than tandem, tri-axle, or self-tracking trailer without pilot vehicle.

Violation of this order is prohibited by the provisions of the regulations cited, and under 16 USC 551 and 7 USC 1011(f). Any violation is subject to punishment by a fine of not more than \$500 or imprisonment of not more than six months, or both.

/s/ Samuel Forester

SAMUEL FORESTER, Forest Supervisor

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23.22 - Posting

Posting is a requirement for the legal enforcement of an order (36 CFR 261.51).

Posting provides notification to the road user of the prohibition that applies to a road. Posting is not necessary for the local authorities to enforce State laws on National Forest System roads or for State laws that the Forest Service has the authority to enforce (36 CFR 261.12).

Place a copy of the order in the ranger district and the forest supervisor offices. In addition, bring the prohibition to the attention of the affected users through the use of letters, news releases, posters, and so forth. The following are some posting methods for specific prohibitions:

1. Prohibiting Any Type of Vehicle or Traffic, or Commercial Haul Without a Permit. Posting is normally accomplished by onsite signs. The type of vehicle being prohibited should be readily evident at the road entrance. An option is to notify the vehicle owners by certified letter with return receipt, in lieu of a sign. However, the latter option negates any enforcement rights on users who have not been notified.
2. Operating a Vehicle in Violation of the Specified Speed, Vehicle Characteristics, or Other Limitations. Establishing a speed limit on a road requires engineering judgment and use of onsite signing as required by the Manual on Uniform Traffic Control Devices (FSM 7731.15). Changing the State law for a vehicle characteristic, such as weight or length, should also involve onsite signs, although the option of individual owner notification of a prohibited vehicle is possible. Signs are preferred because vehicle characteristic changes often involve safety concerns; signing is the only sure method of notification. Post all bridges that have a restricted load capacity (FSM 7736.52).
3. Being on the Road. This restriction applies to motor vehicle use only. Normally, posting consists of installing a sign at the point of closure that indicates acceptable and prohibited uses.

23.23 - Termination

Terminate orders if they are no longer necessary or enforceable. The termination may be declared by a fixed date in the original order or by a separate termination order.

Remove signs related to the prohibitions when the termination goes into effect. Treat notifications and news releases about the termination in the same manner as the original order (sec. 23.22).

Exhibit 01 shows a sample of a termination.

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23.23 - Exhibit 01

Sample of Termination Orders

REMOVAL OF AN ORDER

By virtue of the authority vested in me under the Regulations of the Secretary of Agriculture, Title 36, Code of Federal Regulations, section 261.50, the prohibition(s) listed in an order dated July 14, 1977, and signed by I.M. Forester, Forest Supervisor, is (are) hereby terminated on the following road(s) on the Northern National Forest.

<u>Road and Bridge Name</u>	<u>Road and Bridge No.</u>	<u>Length Termini</u>	<u>(Miles)</u>
Sams Creek	155	MP 10.0 to MP 12.0	2.0

Date: January 19, 1990 By /s/ V.J. Summers
Forest Supervisor

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24 - PERMITS FOR ROAD USE

Rules in Title 36, Code of Federal Regulations, sections 261.10(a), 261.12(a), and 261.54(c) provide for issuance of permits for National Forest System roads.

The format of road permits varies from a Road Use Permit, form FS-7700-41, to a simple letter of authorization, depending on the particular situation. The issuing officer (sec. 20.4) may include in any permit conditions necessary for the protection of resources and administration of National Forest System lands or for the promotion of public health, safety, or welfare. To be effective and enforceable, both the permittee and the issuing officer for the Forest Service shall sign a permit.

24.1 - Road Use Permits

Use a Road Use Permit, Form FS-7700-41, Road Use Permit (Authority), to authorize non-Federal commercial use of a National Forest System road.

1. Require the proposed permittee to provide the Forest Service with the following:
 - a. A completed form FS-7700-40, Application for Permit: Non-Federal Commercial Use of Roads Restricted by Order.
 - b. A written plan of construction, rehabilitation, operation, and maintenance indicating the work to be done and the work schedule.
 - c. When permittee's proposal involves use of an Intermittent Service Road or use of a Continuous Service Road during times of the year that public use is normally restricted, require the proposed permittee to make financial arrangements for completion of environmental analysis in accordance with FSM 7731.16.
2. Control permitted road use and share in road improvements or maintenance through issuance of road use permits in the following situations:
 - a. A private landowner's travel contributes significantly to the use of the National Forest System road, or the landowner's needs require maintenance or improvements above that necessary for National Forest purposes. Normally a permit should not be issued to a cooperator who has entered into a Road Right-of-Way Construction and Use Agreement for use of a road within the agreement area.
 - b. A subdivider within the National Forest wishes to improve a road to a subdivision, but the county or local road agency does not accept the road.

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3. The form, Road Use Permit FS-7700-41, is available electronically on the Forest Service Web site at http://fsweb.wo.fs.fed.us/im/forms/fs_forms/index.htm. Complete all blanks on clauses used and delete inapplicable sentences and phrases except those indicated as mandatory in section 24.11. Print out the finished Road Use Permit for approval by the issuing officer.

24.11 - Instructions for Certain Clauses

The following instructions are provided for use of form FS-7700-41.

1. Section I. General Terms. The clauses in this section are mandatory.
2. Section II. Operations.
 - a. Annual Operating Plan Clause II-A. This is a mandatory clause.
 - b. Holder's Representative Clause II-B. This is a mandatory clause.
 - c. Use Records Clause II-C. Use this clause only when traffic volume is sufficient to warrant the keeping of records. Entries shown should specify reporting intervals and method of measurement. Specify a date in the clause providing sufficient time to identify the effects of the permittee's use on other National Forest traffic and to permit computation of new maintenance deposits when required.
 - d. Public Safety, Clause II-D. This is a mandatory clause.
 - e. Traffic Rules and Restrictions, Clause II-E. Rules 1, 2, 3, and 5 are applicable to almost every road and should not be changed. Rule 4 may be deleted when permits do not involve log haul. Rule 6 should only be used when a permit authorizes off-highway haul. Additional rules may be added as appropriate. Regions and forests may develop specific supplemental rules to fit their situation.
 - f. Driver's Copy, Clause II-F and Load Marking, Clause II-G. These clauses may be deleted when permits do not involve log haul.
3. Section III. Performance and Cost Recovery. The clauses below are complimentary. A permittee may be required to reconstruct roads, maintain roads, and/or deposit funds with the Forest Service as necessary.
 - a. Reconstruction Required to Accommodate Use, Clause III-A and Reconstruction Schedule, Plans, and Specifications Clause III-B. Use these clauses when construction or reconstruction work is planned under the permit. Describe the work required of the permittee to accommodate permittee's traffic. This may include such

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items as replacement of drainage structures, reconstruction of all or part of a road to a higher standard, or surfacing. Clearly describe the work (drawings, specifications, and so forth) in a separate attachment to the permit. Include a schedule for work required in an attachment.

b. Commensurate Share, Clause III-C. This is a mandatory clause.

c. Performance Bond for Road Maintenance, Clause III-D. Use this clause when the permittee is performing work on the road, and the risk and consequences of permittee failure to perform in a timely manner are unacceptable. Base the value of the performance bond on not less than \$1,000 per mile of road and round the total bond value to the nearest thousand dollars.

The following may be added to clause III-D.:

Notwithstanding the provisions of this item, approved letters of irrevocable credit may be used in lieu of a surety bond for performance bond purposes. Such letters of irrevocable credit must be subject to Forest Service approval.

See the Servicewide Finance and Accounting Handbook, FSH 6509.11k, chapter 80, for the procedural requirements.

d. Payment in Lieu of Performance, Clause III-E. Delete this clause unless maintenance deposits are required. This is the total payment required from permittee including cost recovery, cash deposit in lieu of work, and maintenance fees. Cash deposits are preferable when there are multiple permittees using a road and/or contributing to work or when the Forest Service performs a major share of the work itself.

Use a payment guarantee in the event the permittee prefers to pay as use occurs in lieu of advance cash deposit. The payment guarantee clause is an integral part of clause III-E. and is only used with this clause.

4. Section IV. Requirements for Conducting Maintenance.

a. In General, Clause IV-A. Use when permittee is required to perform maintenance commensurate with permittee's use. Policy on maintenance sharing is found in FSM 7732. Include maintenance specifications in the permit when the permittee performs any maintenance. Include specific requirements for deposits in Clause III-E.

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Use common sense in application of the requirements in Clauses III-E and IV-A. It should not cost more to collect deposits than the amount of the deposits. Neither should it cost the permittee more to move equipment in and out than the value of maintenance work performed by the equipment.

b. Snow Removal, Clause IV-B. Use when snow removal is required. Regions and forests may supplement to fit their situation.

5. Section V. Investment Sharing. Cost recovery is a form of investment sharing under Section 4 of the Forest Roads and Trails Act, Title 16, United States Code, section 535 which occurs when the facility has already been constructed by the Forest Service and there is no work needed to accommodate permittee's use. Cost recovery may also be necessary when the permittee is unwilling to contribute toward the construction or reconstruction of roads to standards necessary to accommodate both permittee and Forest Service traffic. See FSM 7731.03 for policy and chapter 30 of this handbook for application of investment sharing. Cost recovery is not preferred because all cash is deposited with the Treasurer of the United States and is not available to the Forest Service to offset costs of construction and maintenance.

Use one of the two options below when a hauler is subject to investment sharing:

Option 1 (Cooperative Agreement). For use when the permit holder and Forest Service have entered into a cooperative agreement under authority of section 1 of the Cooperative Funds and Deposits Act, Title 16, United States Code, section 565a-1, for the agency to recoup the holder's share of the construction costs that were borne by the agency. The permittee may use cooperative work as a means of offsetting its share of costs. Such work can be done entirely by a permittee or permittee funds joined with appropriated funds and other cooperative (CWFS) funds deposited for the same purpose. The permittee may perform the work or deposit funds for Forest Service performance as agreed with the issuing officer. Require a cooperative agreement when the permittee deposits funds with the Forest Service for Forest Service performance of the work. Reference the cooperative agreement in the text of this clause.

Option 2 (Cost Recovery). For use when the permit holder and Forest Service have not entered into a cooperative agreement for the agency to recoup the holder's share of the construction costs that were borne by the agency. The holder's share may be recovered through work, performance, payments, or combinations thereof. The value of work required may exceed the holder's share; however, where the Forest Service does not need the improvements for its use, the permittee is entirely responsible for any additional cost. Collect on a lump-sum basis when the volumes of products being hauled are minor.

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6. Section VI. Rights and Liabilities. The clauses in this section are mandatory.

The values included in Insurance, Clause VI-I must not be less than the amounts established by State law, any applicable cooperative agreements, or easements issued for the roads on which use is to be authorized, whichever is greatest. Where permittee traffic creates an extraordinary hazard to the traveling public or Government facilities, the amount of the insurance should be adequate to cover the maximum reasonable amount of damage that may occur.

7. Section VII. Revocation, Suspension, and Termination. The clauses in this section are mandatory.

8. Section VIII. Miscellaneous Provisions.

a. Members of Congress, Clause VIII-A and Current Address, Clause VIII-B are mandatory.

b. Superseded Permit, Clause VIII-C. Delete if not applicable.

c. Superior Clauses, Clause VIII-D is mandatory.

24.12 - Supplemental Clauses

Regions and forests may supplement permit clauses and add additional permit clauses as necessary to accommodate local situations. Supplementation must be coordinated with required clauses as noted above.

24.2 - Oversize and Overweight Permits

Use written authorizations to permit the moving of vehicles that are in excess of the legal size and weights established in the State Vehicle Code or other limits established under Title 36, Code of Federal Regulations, section 261.13 and Title 36, Code of Federal Regulations, section 261.54d. Limits established under the latter take precedence. Such written authorization is not required where over-legal size and weights are authorized in road easement rights, road use permits, road operation agreements, contracts, other written agreements, or for emergency vehicles operating under emergency conditions. (Exception: An emergency does not negate the need for overload rating of bridges to determine whether proposed loads can be safely accommodated.)

24.21 - Short-term Permits

Authorize special one-time or short-term uses, such as periodic movement of yarding, drilling, mining, and construction equipment or materials during the course of a project, by a written permit, identifying the permittee, the location of use, the type of use, the time of use, and any

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other applicable limitations or restrictions. Regions and forests may develop and use locally produced forms to facilitate preparing the necessary authorizations. Consider modeling these forms after similar forms used by State Departments of Transportation.

24.22 - Long-term Permits

A user may request the use of a Forest Service road for continuous commodity hauling with loads exceeding State legal limits in length, height, width, or weight, commonly called off-highway haul (OHH) (FSM 7731.17).

24.3 - Other Permits

See FSM 7731.16 for specific uses and purposes of permits.

25 - TRAFFIC CONTROL DEVICES AND MANAGEMENT STRATEGIES

Traffic management strategies may be used effectively to achieve road management objectives.

25.1 - Signs and Traffic Control Devices

The need for traffic management and control varies significantly from road to road depending on the uses and constraints. The design of individual signs and traffic control devices on National Forest System roads must comply with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). Selection of signs and devices used on roads in operational maintenance levels 3, 4, and 5 should be in accordance with requirements of MUTCD advising selection and use of signs and devices in particular situations. The selection of individual signs and devices must be advised by engineering judgment.

25.11 - Road Signs and Markings

See Engineering Manual EM-7100-15, "Sign and Poster Guidelines for the Forest Service," for specific policy and guidelines regarding the planning, acquisition, design, installation, and maintenance of road signs, gates, traffic control devices, and markings.

25.12 - Nonsign Devices

Nonsign traffic control devices include berms, scratch ditches, earth mounds, vegetation screens, and different surface textures or materials. These devices may convey the intended message as effectively as signs but are often less obtrusive to the landscape. Their use is most appropriate for local, maintenance level 1 and 2 roads.

Use berms and ditches for delineation, access control, and attenuation devices. Design and construct berms to meet the need without creating a hazard. When a road closed to highway vehicles is open to winter or summer motorized trail use, assure that ditches and berms do not pose a hazard to trail traffic.

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Surface texture may be used as a traveled-way delineation. Surface smoothness can be used to encourage traffic on major routes, while surface roughness can be used to discourage travel by standard passenger cars.

25.2 - Traffic Management Strategies

Use traffic management strategies in a consistent manner to provide for acceptance and understanding by road users. Apply the five traffic management strategies identified in FSM 7731.11 (encourage, accept, discourage, eliminate, and prohibit). Any strategy can be used to influence all or only certain types of users.

25.21 - Application of Traffic Management Strategies to Roads Not Subject to the Highway Safety Act

See chapter 40 of this handbook for discussion of the Highway Safety Program. Manage roads not subject to the Highway Safety Act for use by high clearance vehicles. Use a limited number of traffic control devices. Route markers for these roads should have numbers and/or letters arranged vertically.

Warning and regulatory signs used on these roads must conform to EM-7100-15, "Sign and Poster Guidelines for the Forest Service," and the Manual on Uniform Traffic Control Devices requirements.

Nonsign devices can be used with the intent of restricting or discouraging use by standard passenger cars (sec. 25.12). Use signs when these devices are neither adequate nor cost effective.

When necessary, prohibit use of these roads by standard passenger cars through special local designation on the motor vehicle use map.

Manage use by high-clearance vehicles through the following strategies individually or in combination:

1. Encourage High-Clearance Traffic. Include destination signing at the entrance to the road in conjunction with the vertical route marker. Show the road on forest visitor maps.
2. Accept High-Clearance Traffic. Provide only a vertical route marker at the entrance. Routes may be shown on forest visitor maps if map clarity can be maintained.
3. Discourage High-Clearance Traffic. Do not use this strategy. Roads must either be shown on the Motor Vehicle Use Map or not shown. When shown, an "Accept High-Clearance" strategy is required. When not shown, a "prohibit" strategy is automatically in effect. Permits should be used to authorize appropriate high-clearance traffic on roads not shown on the Use Map.

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4. Eliminate High-Clearance Traffic. Use berms, gates, barriers, woody debris, plantings, entrance camouflaging, or other devices to physically block access to the road to eliminate use. Provide warning signing, if necessary, to warn of hazards presented by the blocking devices to road or trail traffic (sec. 25.12).
5. Prohibit High-Clearance Traffic. Do not show objective maintenance level 1 roads on Motor Vehicle Use Maps. Public use of roads not shown on Use Maps is prohibited by Title 36, Code of Federal Regulations, section 261.13. Do not install permanent signing other than route numbers on these roads. If roads are collocated with National Forest System trails, trail signing may be appropriate.

25.22 - Application of Traffic Management Strategies to Roads Subject to the Highway Safety Act

Manage roads subject to the Highway Safety Act to accommodate passenger car use in conjunction with other uses through implementation of the following strategies individually or in combination. See chapter 40 of this handbook for additional information on the Highway Safety Program.

1. Encourage Passenger Car Traffic. Portray these routes as more desirable on Forest visitor maps using standard map symbols and map keys. Use additional route, direction, and advisory signing to invite the desired use.
2. Accept Passenger Car Traffic. Show these routes as suitable on Forest visitor maps using standard map symbols and map key. Use standard route and direction signing.
3. Discourage Passenger Car Traffic. Inform potential users, through signs, maps, or other information sources of road or traffic conditions that may detract from the experience that they may be seeking when visiting the National Forest.
4. Eliminate Passenger Car Traffic. Incorporate devices that are suitable for the closure, such as gates or barricades for short-term closures and other devices (sec. 25.21) for long-term closures. Provide adequate warning signs and devices and consider use of travel management signing that explains closure.
5. Prohibit Passenger Car Traffic. Enforce the closure legally through designations on the motor vehicle use map or by preparing appropriate orders (sec. 23.2). Use information signing with the road closure message. Where adequate compliance cannot be obtained through signing, use permanent closure devices such as gates, berms, barriers, and so forth.

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26 - SPECIAL CASES

26.1 - Control of Specially Authorized Use

Special cases, such as roads covered by Road Right-Of-Way Construction and Use Agreements (FSM 5470 and the Rights-of-Way Acquisition Handbook, FSH 5409.17, ch. 60) and roads used for mineral access and off-highway haul have unique needs for regulation or control. See FSM 7731.13 for direction about traffic control on specially authorized roads.

26.11 - Roads Covered by Road Right-Of-Way Construction and Use Agreements

Roads under Right-Of-Way Construction and Use Agreements are jointly owned, but the Forest Service has jurisdiction. Coordinate regulation of traffic with the cooperator to protect the cooperator's rights. Road regulation requirements and reservation of rights are set out in the easement deed or permit. The cooperator owns reserved rights, and any reduction in those rights caused by the Forest Service may make the Government subject to a claim. However, ensure that the cooperator's activities do not diminish the rights of the Government. Research the cooperator's reserved rights before imposing orders on these roads. Refer to FSM 5467 and the Rights-of-Way Acquisition Handbook, FSH 5409.17, chapter 60, for additional information.

26.12 - Roads Used for Mineral Access

Regulate traffic on National Forest System roads used for mineral access (including oil and gas) through close coordination with approved plans of operation. Require all users of National Forest System roads to comply with State traffic laws and Federal regulations unless otherwise approved by permit. Document and authorize use, maintenance, and reconstruction of National Forest System roads in a Plan of Operations pursuant to Title 36, Code of Federal Regulations, Part 228, subpart A, regardless of whether the road is on or off the claim or lease area. See FSM 7730 and the Road Use Permit, form FS-7700-41, for the standard requirements to be considered when National Forest System roads are used or impacted. The Road Use Permit, form FS-7700-41, can be incorporated into the Plan of Operations to document the authorized activities (FSM 2730).

The user is responsible for the cost of special hauling requirements, such as increased structural section for heavy hauling vehicles, or for damage caused. Require the user to perform or pay for road maintenance commensurate with use. Refer to FSM 7732.2 for commensurate share policy and section 63 of this handbook for commensurate share determinations.

26.2 - Off-Highway Haul

Grant authorization for off-highway hauling through easement provisions, by permit, or through a road order. Use the easement provision method only in situations involving Road Right-Of-Way Construction and Use Agreements (FSM 7731.17).

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27 - WEIGHT CONTROL

Determine if a weight control program is necessary before implementing. The objective of weight control programs is normally to protect the road or drainage structures along a route or in an area. Consider safety of other users, the effect on the design life of roads and structures, the cost of implementing a control program, and damage currently occurring to roads and structures from overweight vehicle use.

Administer weight control programs through contract and permit administration before using law enforcement techniques.

Select the most cost-effective solution for the identified degree of control. This could be as simple as contacting the persons suspected of causing the overloads, starting a monitoring plan to determine the actual problem, or implementing a full weight control program. Conduct weight measurements in a manner consistent with the objectives of the weight control program.

Certify any equipment used and provide training for employees involved in weighing vehicles. If there is doubt about the accuracy or training required, confer with the contracting officer, responsible official, or Federal magistrate, whoever is involved in determining penalties.

Several different methods are available for weight control on National Forest System Roads. Managers should select the method or methods that meet management objectives. Some methods are:

1. Contractual requirement. This is a provision in a contract that can be enforced to control weight.
2. Permanent scales. In some areas with large volumes of truck traffic, a permanent site should be considered.
3. Portable scales. This method provides flexibility of movement to control weights at numerous locations.
4. Cooperation with State or local agencies. When haul involves use of National Forest System roads and roads under jurisdiction of public road authorities, notifying the public authority weighmasters regarding when to expect overweight traffic on their roads may achieve desired weight control. Some States or local agencies may be willing to enforce weights on National Forest System roads.
5. Volume to weight conversion. Logs may be scaled or the volume of ore or mineral measured in the truck and converted to weight using unit weights common to the area or material being hauled. Although this method is not enforceable, it may be an indicator to initiate other methods.

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6. Use of State scales and enforcement personnel. Where weight control stations are established and Forest-generated traffic enters State highways or local public roads, cooperate with State or local weight enforcement agencies to obtain scaling results.

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Commercial users of National Forest System roads are formally assigned their proportionate share of the Government's investment in a road or roads by the execution of a Road Right-of-Way and Use Agreement and accompanying supplements (FSM 5467).

Investment sharing does not deal with maintenance responsibilities but only with the construction or reconstruction costs. Maintenance sharing direction is in FSM 7732 and chapter 60 of this handbook.

30.1 - Authority

1. Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1701), authorizes the Secretary of Agriculture to acquire access over non-Federal lands to units of the National Forest System by purchase, exchange, donation, or use of eminent domain and to grant, issue, or renew rights-of-way for roads.
2. Title 36, Code of Federal Regulations, section 212.5, authorizes sharing of construction and reconstruction costs with commercial users of National Forest System roads who haul products to or from private lands:
3. Comptroller General Decisions of July 3, 1961, and March 2, 1962, stated that the Government could require benefiting users to bear their proportionate share of road construction and reconstruction costs.

30.2 - Objective

To return to Government, the portion of costs incurred during construction, reconstruction, or purchase of a road that is properly attributable to benefiting non-Federal commercial users.

31 - PROCEDURES

31.1 - When to Establish Investment Sharing

Require investment sharing when the value of the computed investment share exceeds the cost of establishing, conducting, and monitoring the program. Exempt incidental use from investment sharing, unless the share was already calculated and borne by the Government as part of a calculation in a supplement to a Right-of-Way Construction and Use Agreement.

Investment sharing is only applicable to roads where Forest Service has jurisdiction to control and regulate road use.

31.2 - With Whom to Establish Investment Sharing

31.21 - Commercial Hauling

Share costs with non-Federal commercial haulers including:

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1. Commercial haulers of non-Federal products, commodities, and materials from non-Federal lands. Incidental hauling of livestock or crops is considered to be public service traffic. Ranchers and farmers are not charged for such use.
2. Commercial haulers of minerals, industrial or manufactured products, and nonrenewable resources.
3. Commercial haulers of commodities or products in connection with hauling for construction of large projects and other business on private land.
4. Haulers under contract to State and local government agencies.
5. Haulers of timber, minerals, or other commodities from either Indian tribal or individual Indian allotment lands (considered a non-Federal commercial use).
6. Haulers from lands of a noncooperating landowner whose share the Government has assumed in road Right-of-Way Construction and Use Agreements.

31.22 - Other Commercial Uses

In addition to commercial hauling, other commercial uses could be sufficient to be subject to investment sharing. These uses include the following:

1. Recreation use at a private facility within the National Forest.
2. Construction traffic from power lines, dams, and so forth.

When the commercial use originates on private land, use a Road Use Permit, FS-7700-41, as the authorizing document. If the commercial use is a permitted operation, such as a ski area or an outfitter, the investment sharing may be made a part of the special-use permit.

31.3 - How to Establish Investment Sharing

Follow this process to institute investment sharing:

1. Delineate those areas with planned or existing road systems that serve intermingled or adjacent landownerships, and from which significant commercial use could reasonably occur in the future. Occasionally, it may be necessary to include a road where no intermingled landownership is involved if a non-Federal use occurs. Examples are hauling ore from unpatented mining claims or permitted commercial ventures.

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2. Gather complete data for all roads and areas where investment sharing should occur. As a minimum include:

- (a) Government investment in roads,
- (b) Status of lands within the area, including rights-of-way,
- (c) Reservations held by grantors or easements to the Forest Service, and
- (d) Past road improvements and contributions by landowners or users to the roads in the area.

3. Determine the costs to be borne by the users considering that users shall not be granted an ownership interest in the road or roads; that is, easements must not be granted to the users. Use the Government's actual investment in all situations except when an easement is granted.

If a user is required to reconstruct a road as a condition of use, consider the user's reconstruction work in determination of the user's investment share. Do not include maintenance activities as investment sharing.

4. Do not consider the value of roads built by trespass, off-road vehicle use, or roads intended for temporary use but not actually decommissioned, as a Government investment. Also, do not consider road costs contributed by States, counties, or other taxing districts. However, consider roads constructed by another Federal agency such as the Bureau of Land Management or Corps of Engineers as a Government investment. Roads built by agencies such as Bonneville Power Administration (BPA) or Tennessee Valley Authority (TVA) would not qualify for sharing, because they recover the cost of roads through their rate structures.

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The Forest Service works with the Federal Highway Administration under the authority of the Highway Safety Act of 1966 (P.L. 89-564) to make travel on National Forest System roads as safe as practicable.

40.1 - Authority

1. The Highway Safety Act of 1966 (P.L. 89-564) established a national highway safety program directed by the Secretary of Transportation. The act authorized the Secretary of Transportation to make arrangements with other Federal departments and agencies for assistance in the preparation of uniform guidelines for the highway safety programs and in the administration of such programs.
2. Title 23, Code of Federal Regulations, Part 655, subpart F, section 655.603 makes the Manual on Uniform Traffic Control Devices (MUTCD) the national standard for all traffic control devices installed on any street, highway, or bicycle trail open to public travel and specifically approves the MUTCD for use in federally administered areas where a Federal department or agency controls the highway or supervises the traffic operations.
3. Title 23, Code of Federal Regulations, section 500.108 contains requirements for a safety management system for highways.
4. Title 36, Code of Federal Regulations, section 212, subpart B, section 212.52 requires responsible officials to immediately close National Forest System roads when officials determine that motor vehicle use on roads will cause immediate adverse impacts on public safety.

40.2 - Objective

See FSM 7733.02 for general objectives of the safety provisions on National Forest System roads.

40.3 - Policy

1. Safety is the predominant consideration in road operation and maintenance and takes priority over biological or other considerations.
2. Roadways must be managed for safe passage by road users. This includes management of hazards associated with roadside vegetation, including identification and mitigation of danger trees.

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3. Identification of danger trees must be performed by qualified persons.
4. When high priority hazards to road users are identified on National Forest System roads and those hazards cannot be immediately mitigated, the roads must be closed.

40.4 - Responsibility

FSM 7733.04 assigns responsibilities for safety measures on National Forest System (NFS) roads. This includes specific forest supervisor responsibilities for identification of aspects of NFS roads which are potentially high hazard, developing prioritized corrective measures for identified hazards, eliminating hazards to the extent permitted by funding levels, and providing for trained personnel to make periodic road safety inspections.

40.4a - Regional Forester

It is the responsibility of regional foresters:

1. To provide regional guidance regarding identification and prioritization of danger trees.
2. To provide technical assistance to national forest staffs regarding danger tree evaluation.

40.4b - Forest Supervisor

It is the responsibility of forest supervisors:

1. To ensure that a qualified person is available to assess danger trees along NFS roads and to recommend mitigation for hazards associated with trees so identified.
2. To ensure that road segments identified as having high priority danger trees are closed to public use until hazards are mitigated.

40.5 - Definitions

For the purpose of this section, the following terms are synonymous:

1. Danger tree.
2. Hazard tree (previously used terminology).

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Danger Tree. A standing tree that presents a hazard to people due to conditions such as, but not limited to, deterioration or physical damage to the root system, trunk, stem, or limbs and the direction or lean of the tree (FSH 6709.11, Glossary).

Qualified Person. A person who has knowledge, training, and experience in identifying danger trees.

41 - HIGHWAY SAFETY PROGRAM COMPONENTS

The Forest Service highway safety program is composed of the following components.

41.1 - Traffic Engineering Services

Utilize traffic engineering skills and techniques to reduce the number and severity of crashes on National Forest System Roads as follows:

1. Engineering skills. Provide traffic engineering skills to all forests (FSM 7733.04b and FSM 7733.04c)
2. Engineering principles and road safety audits. Use traffic engineering principles in the design and maintenance of roads and in the application of traffic control devices. Utilize road safety audits to review road construction or reconstruction projects at the design stage for safety standards compliance.
3. Establish a traffic control devices plan. Maintain an inventory of signs and traffic control devices in Infra Travel Routes. Make certain that signs and traffic control devices are periodically inspected and replaced as necessary to assure road user safety.

41.2 - Identification, Investigation, and Surveillance of Accident Locations

Guidelines for the identification, investigation, and surveillance of accident locations are in section 51 of this handbook.

41.3 - Design and Construction

1. Design Standards. Use FSM 7720 and FSH 7709.56, Road Preconstruction Handbook, for design standards for construction and reconstruction of National Forest System roads.
2. Temporary Traffic Control at Construction Sites. Require compliance with the Manual on Uniform Traffic Control Devices (MUTCD), Part 6 for temporary traffic control signs, devices, and procedures (including flagging) on construction zones in all construction projects on "roads open to public travel." Any signs or devices used in construction on other roads must also meet MUTCD requirements.

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41.4 - Roadside Design

On National Forest System roads with 400 average daily traffic (ADT) or less, it is generally not appropriate to make special provision for roadside design features, such as clear zones and barriers, intended to minimize the consequences of run-off the road accidents. Such features may be incorporated in designs when advised by engineering judgment. On roads with more than 400 ADT, the procedures in the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide should be followed.

41.5 - Highway-Rail Grade Crossings

Identify all highway-rail grade crossings on National Forest System roads and, in consultation with the States, develop a program for eliminating hazards and dangerous crossings. Sign all railroad grade crossings in accordance with the MUTCD. The Forest Service and/or its cooperators and contractors are usually responsible for all associated costs, as railroads were usually built before roads. In the event of construction of new railroads, seek to eliminate highway-rail crossings through use of structures.

41.6 - Roadway Maintenance

Maintain roadways and roadsides for movement of traffic commensurate with the annual operational maintenance level assigned to the road (ch. 60). Temporary traffic control measures during roadway maintenance operations must comply with MUTCD, Part 6. Road maintenance includes removing danger trees that threaten safe use of the transportation system.

41.7 - Hazard Identification and Correction

1. General.

Analyze road features and traffic operations that have caused or have the potential to cause accidents as part of planning and programming for road development and maintenance projects and as part of periodic condition surveys.

On low-volume roads, crash history is seldom a reliable indicator of significant safety problems. Making comparative analyses between hazardous sites also may be difficult because of the infrequency of accidents. Accordingly, use common sense and judgment to determine safety deficiencies and the priority for corrective action. Accident rate comparison formulas commonly used for high-volume highways are not appropriate.

Roads that are open should have a condition survey at least annually. Roads that have been closed should be checked for obvious hazards prior to being opened. Roads open to travel should also be checked following major storms or similar events that could significantly affect their condition, result in changes in their traffic service level, or have created new safety hazards.

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Establish processes for road users, both administrative and public, to report road hazards. Reports of unsafe conditions should be promptly investigated.

2. Danger Trees.

a. Danger tree hazards on roads will be prioritized by high, medium, and low categories.

b. Roads or segments thereof identified as high priority constitute a considerable adverse effect on public safety (36 CFR 212.52 (b) (2)) and thus require prompt action. The level of exposure is time-critical. Action must not be delayed to accommodate commercial removal of trees. Acceptable actions are:

(1) Mitigate danger trees which have been determined as likely upon failure to fall on or roll into the traveled way. Schedule work to eliminate danger trees in the areas of highest exposure first.

(2) Close the road segment if the hazards cannot be mitigated. (sec. 40.4)

c. Roads identified as medium to low priority are not considered time critical. Strategies utilizing the sale of forest products, including commercial timber sales and land stewardship contracts, may be employed to mitigate roadside danger trees along these roads.

d. The priority of danger tree hazards may increase as trees deteriorate with time.

(1) Road segments identified as having low and medium priority danger tree hazard should be monitored for increases in hazard due to ongoing tree deterioration.

(2) When a road segment moves from medium to high priority status, prompt action shall be taken as described in this section.

(3) In situations where road segments do not currently have high priority tree hazards, may be predicted to have such hazards resulting from ongoing tree deterioration at a future point in time, and strategies utilizing the sale of forest products are being employed to mitigate the hazards before they become high priority, include a determination by a qualified individual of the date when high priority hazards are likely to occur in the project file. Planning of sales must be accomplished in a manner that will result in tree hazard mitigation by the identified date.

e. Procedures for environmental analysis and decision making regarding danger trees.

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(1) Road maintenance, including treatment of danger trees, may be categorically excluded from analysis and documentation in an environmental assessment or environmental impact statement under certain circumstances. See FSH 1909.15, chapter 30 for guidance concerning categorical exclusions and specifically section 31.12(4).

(2) When preparing documentation for projects where a qualified individual has identified that tree hazards will reach high priority status by a future point in time, clearly display the determination in the publicly available project file as well as the policy requirement that roads with high priority safety hazards must be closed to public traffic (sec. 40.4).

f. Consider all available methods for mitigation and treatment of danger trees and apply them as appropriate to local situations. These methods include, but are not limited to, commercial timber sales, land stewardship contracts, burned area emergency rehabilitation funding, personal use firewood sales, and appropriated funds.

g. When mitigation and treatment of danger trees are a significant impact on a forest's annual program of road maintenance work, include specific references to the resources needed for ongoing danger tree mitigation in the annual road maintenance plan. (FSM 7732.11)

41.8 - Incident Management

Temporary traffic control measures during incident management activities must comply with the MUTCD, Part 6.

41.9 - Forest Service Employees and Forest Service-Owned Equipment

Requirements for the safe operation of Forest Service-owned or -leased vehicles and equipment by Forest Service personnel on National Forest System roads are found in FSH 6709.11, Health and Safety Code Handbook, chapter 10 and the Driver-Operator Guide, EM-7130-2.

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CHAPTER 50 - TRAFFIC STUDIES AND OTHER ROAD OPERATIONS CONSIDERATIONS**

This chapter describes traffic studies for use in road operations and provides additional information for other road operations factors such as coordination of uses.

51 - TRAFFIC STUDIES

This section describes traffic engineering studies that are frequently used in transportation system operations. Results of these studies may apply to design and maintenance, as well as to operations.

Traffic studies should be oriented toward achieving specific objectives. Before initiating traffic studies, develop an objective statement identifying the purpose of the study and the use to be made of the collected data. Such a statement facilitates designing an effective study.

51.1 - Traffic Surveillance

Traffic surveillance provides insight into the relative magnitude of road use. Traffic is measured and analyzed to determine the volume and/or classification of road uses.

Traffic surveillance is typically used to:

1. Identify current traffic to establish design, operation, and maintenance criteria.
2. Estimate recreation visitor usage, such as camping, fishing, hunting, and wilderness visits on National Forest land.
3. Determine weights and repetitions of vehicle axle loads for structural design.
4. Set priorities for investments.
5. Determine accident rates.
6. Determine the financial responsibility of the various road users for road investments and road maintenance (FSM 7731.3, 7732.2, and ch. 30 and 60 of this handbook).

Traffic surveillance may require long-term analysis. Consider the purpose of the study, the means of carrying it out, the need to provide continuing information, and the method of financing it.

When a description of the character of traffic is needed, conduct a classification survey to identify vehicle types and uses. Origin-destination and travel time studies provide information for special transportation analysis purposes.

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51.2 - Accident Surveillance

The Forest Service Highway Safety Program (FSM 7733.2) requires a program for the identification and surveillance of crash locations. The objectives of this program are to reduce accidents, reduce accident severity, and prepare engineering investigations necessary to establish facts pertinent to potential tort claims and litigation.

The following are minimum requirements for the accident surveillance program:

1. Develop a procedure to identify and inventory accident locations.
2. Coordination with State and local law enforcement authorities, as they often have records of crashes the Forest Service does not.
3. Emphasize surveillance of high frequency and severity (serious bodily injury or death) accident sites.
4. Develop procedures to analyze the design, maintenance, and operating features associated with accident locations.
5. Identify and prioritize actions for eliminating or mitigating hazards to reduce accidents. Assign highest priority to those actions making the greatest reductions in frequency or severity of crashes per dollar of funds spent.
6. Develop measures to evaluate the effectiveness of the program.

51.3 - Accident Investigations

As a minimum, obtain a copy of investigation reports prepared by Forest Service, State, or local law enforcement authorities. In the case of severe accidents (potentially disabling injury, multiple injuries, or death) additional accident investigations should be conducted by either Forest Service personnel with professional engineering registrations or legally recognized experts, such as State or county investigators and private consultants. Additional investigations should be done while evidence at crash sites still exists, normally within 24 hours of the accident.

1. Accident Data. At a minimum, gather the following information:
 - a. Time and location.
 - b. Driver and passengers: age, condition (any obvious factors such as pre-existing physical impairments or use of alcohol or drugs), and injuries.

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- c. Vehicles: type, condition, and damage.
- d. Other modes: such as pedestrians, bicycles, ATVs, snowmobiles, and so forth.
- e. Weather conditions.
- f. Daylight or dark.
- g. Road surface conditions (wet/dry, roughness, ice/snow, and so forth) and geometrics (measurements).
- h. Probable causes and accident sequence.
- i. Diagrams and photos.
- j. Names of witnesses, attending medical personnel, and responding law enforcement and rescue personnel.

2. Road Data. As part of the accident investigation, obtain and include in the report information about the road's characteristics and its operation. Some of this information may be available from previous studies, inventories, and project records retained on the forest. The rest should be developed in the field. The information includes the following:

- a. Copy of approved road management objectives (FSM 7714).
- b. Design elements and standards.
- c. Traffic volumes and characteristics.
- d. Traffic control devices (warning signs, striping, guardrail,) and their condition at time of accident.
- e. Traffic engineering studies and resulting sign warrants.
- f. Maintenance standards (operational and objective maintenance levels), maintenance records for the specific site, and current approved road maintenance plan for the unit.
- g. Crash history data from accident surveillance records and any on-site evidence of prior crashes.
- h. Improvements that have been programmed.

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- i. Commercial haul, commercial maintenance, or commercial work zone activity present at time of accident. Obtain copies of applicable contract documents or permits.
3. Recommendation to Correct Deficiencies. In the event an investigation identifies conditions that require immediate correction to prevent further severe crashes, these should be documented in the report and discussed with both the forest supervisor and the Office of General Counsel. The conditions must be corrected as soon as possible.
4. Record Retention. Retain all accident investigation information for at least 5 years. Consider including copies of applicable FSM and FSH direction and Regional and Forest supplements.
5. Freedom of Information Act. Investigation reports are not available through the Freedom of Information Act. They are part of the Government's defense in the event of claims and litigation and are considered attorney-client privileged. Engineers preparing reports should be prepared to testify regarding findings in potential litigation.

52 - COORDINATION OF USES

52.1 - Consistency

Regulation of use on National Forest System roads should be consistent with State laws. Provide consistent road user information (signs, maps, enforcement) within the same political jurisdiction (that is, State) to avoid confusing users and other agencies that assist in administering and enforcing laws and regulations on National Forest lands. When deviating from State law by an order, the Forest Service accepts the enforcement responsibility for that order.

52.2 - Mixed Use on National Forest System Roads

Motor vehicle use on National Forest System roads must be in accordance with designations on the motor vehicle use map. Not all roads are designated as open to motor vehicles. Roads may be designated open to "Highway Legal Vehicles" (FSM 7710.5) with licensed operators only, or open to "Mixed Use," which includes both "Highway Legal" and "Non-Highway Legal" motor vehicles. Policy regarding analysis procedures for making recommendations regarding designations for Motorized Mixed Use is found in FSH 7709.55, chapter 30.

52.3 - Advance Notice of Changes

Provide advance notice of planned use changes on roads. Notify the public when the decision is made to implement changes in road use. If feasible, allow adequate time for users to make alternative travel plans. Emergency or unexpected changes in road availability or condition may require the use of news releases or spot announcements on radio or television.

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Use the forest visitor map and special travel maps to provide travel information to users. Assure that route numbers on maps match route number signs on the ground. Use appropriate guide signs when an "encourage use" travel management strategy is in effect. Portray information on maps and signs in a consistent and understandable manner. Signing should follow the guidelines and procedures in EM-7100-15.

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This chapter provides guidelines for determining road maintenance criteria, using the Forest Service Road Maintenance Management System, for sharing road maintenance responsibilities and obligations with other road users, and for planning for emergency situations.

61 - MAINTENANCE CRITERIA

Maintenance criteria describe how a road is to be maintained. The criteria include:

1. Requirements for the protection of adjacent resources or improvements such as streams, lakes, vegetation, and facilities.
2. Smoothness required for desired operating speed and for user comfort and convenience. The level of smoothness should be consistent with the road design.
3. Acceptability of dust.
4. Season of use and approximate volumes and types of traffic.
5. Current and future road operation and maintenance strategies.

Continually review and update information to ensure that maintenance criteria remain consistent with management area direction, resource program needs, road management objectives, and available resources. Line and interdisciplinary staff participation in this process is essential.

Document road maintenance criteria through road management objectives (ch. 10).

62 - ROAD MAINTENANCE MANAGEMENT SYSTEM

The Road Maintenance Management System provides a systematic process for field units to effectively and efficiently manage their road maintenance programs. Use the Road Maintenance Management System to set priorities, plan, budget, schedule, perform, monitor, and evaluate maintenance of forest roads.

Select road maintenance levels consistent with road operation and maintenance criteria. Perform condition surveys, as necessary, to determine existing road conditions. Develop maintenance prescriptions to correct identified deficiencies. Rank maintenance prescriptions in order of priority.

Combine maintenance prescriptions to develop the annual Forest Road Maintenance Plan (FSM 7732.11). Consider all National Forest System roads and other Forest Service-maintained roads. As a minimum, the plan should document the following:

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1. Work to be accomplished (maintenance activities).
2. Who will perform the work (Forest Service, timber purchaser, county, cooperator, and so forth).
3. Estimated cost of the work.
4. How will the work be financed (Federal appropriations, purchaser deposits, and so forth).
5. How will the work be accomplished (force account, contract, and so forth).
6. When will the work be accomplished.
7. What needed work will not be accomplished.

Modify the plan as necessary to balance requirements with available resources. For example, if estimated costs exceed available funding, it may be necessary to defer work, reduce maintenance frequencies, close roads, or allow roads to deteriorate. Correlate modifications with resource program needs and road operation and maintenance criteria. Obtain line approval of the proposed maintenance plan (FSM 7732.04c).

Schedule and accomplish work in accordance with approved plan. Continually evaluate work accomplishments; make needed revisions and report accomplishments. Use the current year's program evaluation as input to develop future years' programs and update maintenance activity standards.

62.1 - Scope

Road maintenance includes any expenditure in the repair or upkeep of a road necessary to perpetuate the road and provide for its safe use. Work items may include surface rock replacement, seal coats and asphalt overlays, bridge replacement, slide removal, and other items that contribute to the preservation of the existing road. Road maintenance is not intended to substantially improve conditions above those originally constructed; however, there may be a need for adding to or modifying the original conditions without increasing service provided. Typical examples of these activities include installing additional minor culverts and traffic control devices, implementing traffic management strategies, placing small quantities of spot surfacing, and revegetating cut and fill slopes.

Some roads may be allowed to disinvest to allow uncompensated deterioration of assets gradually over time. For example, a road may need to be operated and maintained at a higher level during periods of commercial use than is required at other times.

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Other situations may require that a road be stabilized to preserve the road structure and/or to reduce erosion and then stored (maintenance level 1) between use cycles. Some maintenance work activities may be deferred while the road is in a planned disinvestment or a stored cycle.

This work may be accomplished at some future date through maintenance or reconstruction, depending on complexity and extent. Opening a stored road is normally considered maintenance. Work performed to raise a stored road's service level above that to which it was originally constructed is considered to be road reconstruction and should be financed accordingly.

Decommissioning and/or returning a roadway to resource production is not considered maintenance. Funding for such work is a resource program responsibility. Appropriated road maintenance funds may be used for decommissioning if authorized by Congress in annual appropriations bills.

62.2 - Information Requirements

Record current inventory data road management objectives in Infra Travel Routes. Maintain a permanent road file to document, on an as needed basis, other pertinent road maintenance information such as maintenance criteria, traffic data, traffic accident records, road logs, condition surveys, as-built drawings, and final construction reports.

62.3 - Maintenance Levels

Maintenance levels define the level of service provided by, and maintenance required for, a specific road. Maintenance levels must be consistent with road management objectives and maintenance criteria.

62.31- Factors

Consider the following factors when selecting maintenance levels:

1. Road Management Objectives.
2. Road investment protection requirements.
3. Service life and current operational status.
4. User safety.
5. Volume, type, class, and composition of traffic.
6. Surface type.
7. Travel speed.

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8. User comfort and convenience.

9. Functional classification.

Roads may be currently maintained at one level and planned to be maintained at a different level at some future date. The operational maintenance level is the maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns; in other words, it defines the level to which the road is currently being maintained. The objective maintenance level is the maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. The transition from operational maintenance level to objective maintenance level may depend on reconstruction or disinvestment.

62.32 - Maintenance Level Descriptions

Maintenance levels 1-5 (operational and objective) are described in the following paragraphs:

1. LEVEL 1. These are roads that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate" all traffic. These roads are not shown on motor vehicle use maps.

Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic but may be available and suitable for nonmotorized uses.

2. LEVEL 2. Assigned to roads open for use by high clearance vehicles. Passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided with the exception that some signing, such as W-18-1 "No Traffic Signs," may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to:

- a. Discourage or prohibit passenger cars, or
- b. Accept or discourage high clearance vehicles.

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3. LEVEL 3. Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. The Manual on Uniform Traffic Control Devices (MUTCD) is applicable. Warning signs and traffic control devices are provided to alert motorists of situations that may violate expectations.

Roads in this maintenance level are typically low speed with single lanes and turnouts. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

4. LEVEL 4. Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. Manual on Uniform Traffic Control Devices is applicable. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

5. LEVEL 5. Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. Manual on Uniform Traffic Control Devices is applicable. The appropriate traffic management strategy is "encourage."

62.33 - Management Decisions About Maintenance Levels

Roads assigned to maintenance levels 2-5 are either constant service roads or intermittent service roads during the time they are open to traffic.

Roads closed to public motor vehicle use, but which receive Forest Service administrative traffic, are constant service roads and are thus not level 1. The need to maintain a road for the effects of traffic is not a function of vehicle ownership.

The distinction between maintenance levels 1 and 2 is sharply defined. Level 1 roads are roads placed in storage with all vehicular traffic eliminated. Level 2 roads are passable by prudent drivers in high clearance vehicles.

The distinction between maintenance levels 2 and 3 is also sharply defined. Level 2 roads are not maintained to be passable to standard four wheel passenger cars. No provision is made for user comfort, user convenience, and speed of travel. Neither is any provision made to warn users about changing conditions and safety concerns on the road ahead. On the other hand, level 3 roads are passable to prudent drivers in passenger cars. Users can reasonably drive with expectations of predictable road conditions and can expect warning signs and traffic control devices meeting Manual on Uniform Traffic Control Devices standards when hazards are present.

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The distinctions between maintenance levels 3, 4, and 5, which are roads managed as public roads (FSM 7730.5), are not sharply defined. Some parameters overlap. Select maintenance levels based on the best overall fit of the parameters for the road in question. In those situations where the parameters do not indicate a definite selection, use the desired level of user comfort and convenience as the overriding criteria to determine the maintenance level.

Road surface smoothness and speed of travel are not the only factors that determine operational road maintenance level. The economics of commercial haul may result in the surfaces of level 2 roads being maintained in a very smooth and dust free condition. Such roads can be driven at high rates of speed. However, unless engineering studies have been performed to identify whether any warning signs and traffic control devices are needed for a mix of all vehicle types at 85th percentile speeds and any needed signs and devices have been installed, a "discourage passenger car" traffic management strategy must remain in place, and the road still should be considered operational level 2.

62.4 - Maintenance Activities and Maintenance Standards [RESERVED]

62.5 - Condition Surveys

Perform condition surveys as needed to provide up-to-date knowledge of the road condition. Itemize and rank deficiencies needing correction, make recommendations for developing or updating the maintenance prescription, and provide information for traffic management decisions. Frequency and intensity of condition surveys will vary with the road maintenance level and the risk involved.

62.6 - Maintenance Prescription

Maintenance prescriptions identify the type and extent of tasks, location, frequency, and constraints in sufficient detail to contract work, schedule crew and equipment, and purchase materials. They form the basis for the annual forest road maintenance plan. Update maintenance prescriptions as needed to reflect changes in management objectives, maintenance criteria, funding, and condition survey findings. Prescription detail will vary depending on the tasks to be done, road maintenance level, materials, environment, and terrain. In the prescription, document work to be done annually, and work needed on a multi-year cyclical schedule.

62.7 - Maintenance Plans

Prepare an annual road maintenance plan based on work described and estimated in the maintenance prescriptions. Organize and integrate the work to be accomplished by the Forest Service and other road users and maintainers, including timber purchasers, cost-share cooperators, local governments, permittees, human resource and volunteer programs, and other Federal agencies.

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62.71 - Plan Contents

Identify for each road or group of roads:

1. Specific work tasks.
2. Quantity of work.
3. Date work is to be accomplished (for example, spring or summer, or May or July).
4. Estimated costs.
5. Funding sources.
6. Work performance responsibilities.

Balance plan detail with the needs of the individual forest and the on-the-ground situation. Consider all National Forest System roads in the plan. Equate individual user's maintenance responsibilities with the requirements in their contract, cost share agreement, permit, or cooperative agreement as appropriate.

62.72 - Plan Development

Develop plans for different administrative units such as National Forests, ranger districts, zones, or counties as appropriate.

Maintenance needs often exceed available resources. In this situation, establish priorities to ensure that available funding is directed to the highest priority work. In adjusting plans to meet available resources, consider:

1. Deferring specific maintenance activities or other actions to reduce resource needs,
2. Implementing seasonal or yearlong road use restrictions,
3. Operating roads at maintenance levels less than objective maintenance levels, and
4. Modify road management objectives and/or land management and resource program objectives when significant changes are necessary.

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62.73 - Plan Approval

Obtain approval in accordance with FSM 7732.04c.

62.8 - Plan Implementation and Monitoring

62.81 - Scheduling

Consider logical sequences of work accomplishments, seasonal limitations, unanticipated work, delays, and weather in developing the maintenance schedule. Unless a more specific schedule is required, schedule work by season (spring, summer, fall, or winter). Monitor and update the schedule to accommodate changes in work requirements, weather, workforce, equipment or materials availability, unanticipated road use, work performance by other maintainers, or emergency situations.

Include provisions in road maintenance contracts, cooperative agreements, and permits to adjust the anticipated work schedule as needed to conform with current needs and constraints.

62.82 - Performance

Perform a confirmation condition survey of the road to be maintained prior to initiating maintenance work to:

1. Confirm that the work activities specified in the maintenance plan still need to be accomplished, and/or
2. Determine if additional work is required. Modify plans and schedules accordingly.

62.83 - Inspection

Review completed work for compliance with maintenance specifications.

62.84 - Monitoring and Evaluation

Monitor work accomplishments and associated costs as needed to address management needs. Include samples of work accomplished by force account, contract, timber purchasers, and others. Summarize and analyze work accomplishment data as appropriate.

Evaluate overall program accomplishment for conformance with the road management objectives. Compare actual costs with estimated costs and budgeted funds.

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Use accomplishment reports and field review reports to:

1. Monitor work performance against planned work program;
2. Make adjustments in the utilization of workforce, equipment, or methods of work;
3. Update maintenance standards; and
4. Estimate future maintenance needs and costs.

63 - MAINTENANCE SHARING

63.1 - Principles

Share financial responsibility for maintaining National Forest System (NFS) roads with cooperators, local governments, road users (commercial and noncommercial), or a combination thereof, commensurate with road use. See FSM 7732.03 for specific policy.

Allocate financial responsibility for costs associated with management of the NFS road system (road management objectives, condition surveys, maintenance prescriptions, traffic counting, maintenance planning, and other associated activities) to the Forest Service except that the financial responsibility for work made necessary by specific users or groups of users may be allocated to those specific users or groups of users. Other financial responsibilities depend, to some degree, on the type of traffic using the road. Exhibit 01 shows allocation of traffic types.

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Traffic Type	Responsibility Allocated To
1. General Use Traffic	State, local government, Forest Service; depending on individual situation (for example: Road jurisdiction, authority, use permits, Memorandums of Understanding, and order prohibitions).
2. National Forest Traffic	
a. Forest Administrative Traffic	Forest Service*
b. Forest Commercial Traffic	Commercial User
c. Forest Visitor Traffic	Forest Service*
3. Non-Forest Service Commercial Traffic	State, local government, Forest Service, commercial user; dependent upon individual situation (for example, road jurisdiction, authority, use permits, Memorandums of Understanding, and order prohibitions).
4. Cooperator (Cost Share) Traffic	In accordance with agreement (FSM 5460).

* Under certain conditions, responsibility is allocated to commercial users. See section 63.4

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63.2 - Sharing Requirements

The legal basis for requiring road users to share in the maintenance of National Forest System roads is found in Title 36, Code of Federal Regulations, section 212.5. Implement these sharing requirements through contracts, permits, and agreements as described in the following sections.

63.21 - Timber Sale and Resource Stewardship Contracts

Provision B/BT5.3 of Timber Sale Contract Forms FS-2400-6/6T, and FS-2400-3/3T, and provision F/FT.3 of Integrated Resource Timber Contract form FS-2400-13/13T, makes timber sale purchasers and stewardship contractors responsible for road maintenance commensurate with their use. Integrated Resource Service Contracts contain a clause similar to the provision in the timber contracts. Include maintenance specifications and/or special requirements in the appropriate C/CT and K/KT provisions of the Timber Sale or Stewardship Contract. See FSH 2409.15, chapter 40, Timber Sale Administration Handbook, and FSH 2409.15, chapter 50, Timber Sale Administration Handbook for specific direction.

63.22 - Cost Share Agreements

Cooperatively maintain the cost share road system to the agreed upon maintenance level in a timely manner to the standards of original construction or reconstruction or as otherwise agreed to in writing (FSM 7732.24). Develop signed maintenance agreements with each cooperator in accordance with the Cooperative Road Maintenance Agreement in FSH 1509.11, section 24.

63.23 - Road Maintenance Agreements

Implement maintenance agreements with State, county or local government agencies, and other Federal agencies to document the sharing of road maintenance responsibilities. See FSM 1530 for policy and model agreement for the exchange of road maintenance responsibilities or maintenance operations between Federal agencies. See FSH 1509.11, Grants and Agreements Handbook, chapter 30, for direction and sample agreement for cooperative maintenance activities with States, counties, or local governments.

63.24 - Road Use Permits

Include appropriate road maintenance requirements in Road Use Permit, form FS-7700-41, when authorizing use of existing National Forest System roads where unrestricted road use has been limited by a road order pursuant to Title 36, Code of Federal Regulations, section 261.54 and where use is not covered by contract, authorization, or agreement.

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63.25 - Special Use Authorizations

Include appropriate road maintenance requirements in special use authorizations used to authorize construction of roads or to grant rights of use in existing roads. See FSM 2730 for specific policy and direction on special use permits.

63.26 - Off-Highway Haul

Limit sharing of road maintenance costs to that associated with standard highway load traffic. Except for unusual situations, the Forest Service does not share in maintenance costs attributable to Off-Highway Haul (OHH) (FSM 7730.5). Assign all maintenance costs attributable to OHH to the user.

63.3 - Methods of Sharing

Road users may redeem their maintenance sharing responsibilities in several different ways. The most common methods are described below.

63.31 - Work Performance

Require road users to perform road maintenance work equal in value to their commensurate road maintenance obligation. This may involve performing all or selected maintenance activities on a continuing or rotating basis.

63.32 - Cooperative Work

Use this procedure when the Forest Service performs or is responsible for performing a portion of the total maintenance job and the cooperator(s) is responsible for performing the remainder of the total maintenance job. This procedure may also apply when the Forest Service agrees to fully maintain one road and the cooperator agrees to fully maintain another road. Use this procedure to enhance program efficiencies with other Federal agencies and local governments.

The policy statement on interagency exchange of road maintenance signed by the Forest Service, Fish and Wildlife Service, Park Service, Bureau of Land Management, and Bureau of Indian Affairs is the enabling document that provides an umbrella for the local officers of these agencies to enter into a yearly, seasonal, or periodic road maintenance agreement. See FSM 1531.07g for Policy and Model Interagency Road Maintenance Exchange Agreement.

Use this process to offset maintenance work on a value-for-value basis with counties and local government agencies. Develop cooperative agreements with counties and local government agencies that provide for the Forest Service to maintain county or local government roads and for

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the county or local governments to maintain National Forest System roads. Ensure that roads are included in the operating plan of the cooperative agreement and that offsetting maintenance work is on a value-for-value basis. When completed, verify that the agreed-to work has been performed and is of equal value.

63.33 - Deposited Funds

Use this procedure in situations where the user's share is relatively small in comparison with the total maintenance job, when it is not feasible for the user to perform the work, or when cyclical work (such as surfacing replacement or brush cutting) will not be required until some future date. Collect from users those funds that are equal in value to their maintenance obligation. Arrange for the maintenance work to be accomplished. See FSM 6510 for fiscal direction on use of deposited funds.

63.34 - Contributed Materials

Users may contribute maintenance materials, equal in value to their maintenance obligation, to the Forest Service. Include these materials in the Forest Service maintenance program either immediately or at some future date. Use this process in situations that require stockpiling of surfacing material, supplying culvert pipe or other drainage materials, supplying dust abatement, or other materials. The Forest Service also may contribute maintenance materials, equal in value to the Forest Service's maintenance obligation, when other users will perform the work.

63.35 - Forest Service Payment

Pay the road user to perform the maintenance work for which the Forest Service is responsible. Follow established procurement procedures (FSM 6510).

63.4 - Commensurate Sharing

Knowledge of road users, types, classes, use season, and volumes of use for each route is necessary to properly assess responsibilities for maintenance.

Determine the amounts of such use by traffic surveillance and analysis. Estimate use if documented traffic data is not available.

Identifying other parties as having financial responsibility for road maintenance does not imply that the Forest Service has relinquished any of its management prerogatives or responsibility to ensure that maintenance is performed to prescribed standards. The Forest Service may authorize the user to actually perform the work or to deposit the monies to pay for performance by the Forest Service or some other party.

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63.41 - Responsibility and Associated Costs

Determine the total costs associated with on-the-ground maintenance performance by computing the total amount of work of each activity to be performed and applying realistic costs. Next, determine each user's commensurate financial responsibility. The preferred procedure for this determination is described below. Other procedures may be used provided the procedures comply with the intent of the Forest Roads and Trails Act of 1964 (16 U.S.C. 532-538) and have been approved by the regional forester. This procedure is not applicable to cost share roads. See section 63.22 for direction on cost share roads. See FSM 2400 and FSH 2409.15, Timber Sale Administration Handbook, for policy and guidelines on timber sale maintenance requirements and allowances.

1. Roads Assigned to Maintenance Levels 1 and 2. Most roads managed in maintenance levels 1 or 2 prior to commercial use, experience only minor noncommercial traffic during periods of commercial use. If noncommercial traffic is significant during periods of commercial use, it may be discouraged with temporary traffic control warning signs about timber harvest activities or regulated by order (36 CFR 261) and signed accordingly. Therefore, the impact of noncommercial traffic on the total maintenance needs during periods of commercial use will usually be insignificant. The Forest Service is financially responsible for maintenance work made necessary due to closure trespass and for road damage caused by public use during periods when public traffic is significant (for example, hunting season).

a. Maintenance Level 1 Roads. The Forest Service is financially responsible for basic custodial care during the nonuse period prior to commercial use, to keep the road stable, drainage functional, and resource damage at an acceptable level.

The commercial user is financially responsible for opening the road and making it ready for use. Maintenance work to prepare a maintenance level 1 road for use is normally limited to removal (opening) of closure devices, brushing, removal and/or repair of minor slides or slumps, cleaning of roadside ditches and drainage devices, and grading of traveled way. Use reconstruction procedures to accomplish work exceeding these guidelines.

The commercial user is financially responsible for maintaining the road during the period of commercial use. The closing of the road, following the period of use, is the financial responsibility of the last commercial user. The commercial user may perform the closure work or, at Forest Service option, deposit funds for the Forest Service to perform the work following completion of post sale activities. If the Forest Service requires the road to remain open for reasons not associated with the commercial activity, the Forest Service becomes financially responsible for closing the road at some future date.

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b. Maintenance Level 2 Roads. Any maintenance work required to be completed prior to the start of commercial use to accommodate such use is the financial responsibility of the commercial user. Use reconstruction procedures to accomplish substantial improvements in road standard, to make extensive repairs, or to raise the traffic service level.

The commercial user is responsible for all required road maintenance during the period of commercial use.

2. Roads Assigned to Maintenance Levels 3, 4, and 5. Generally a mixture of commercial and noncommercial traffic exists on these roads.

a. Routine Maintenance. The financial responsibility for all routine maintenance is shared by the Forest Service and other users. Determine each user's financial responsibility on the basis of traffic units generated by their use. A traffic unit is defined as the average weight of a light, noncommercial vehicle having four or more wheels, passing a given point on a road, moving in either direction. Assign all other vehicles an equivalent traffic unit based on the ratio of their weight to that of the light, noncommercial vehicle. Establish the average weight of light, noncommercial vehicles based on sample traffic counts or other reliable data.

Limit Forest Service financial responsibility to a commensurate share of those maintenance activities required to be performed for the maintenance level assigned to the road prior to commencement of commercial use. For example, if dust abatement was not required prior to commercial use, but is required to accommodate commercial use, it should be financed entirely by the commercial user.

b. Other than Routine Maintenance. Determine the financial responsibility for other than routine maintenance in three different categories as follows:

(1) Surfacing Replacement. Establish surfacing replacement rates based on the best information available. Specify replacement rates by surfacing type and quantify in easily defined common units of measure such as cubic yards or tons of material per thousand board feet or ton-mile of haul. Use the following equation to determine each user's financial responsibility: $\text{User's financial responsibility} = (\text{Amount of haul}) \times (\text{replacement rate}) \times (\text{unit cost of material})$. Unit cost is estimated at the date of application, not to exceed the life of the timber sale, or 5 years for other situations.

The Forest Service is financially responsible for any deficit existing between the amount of funds collected by the above procedure and the total funds required to accomplish the work.

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Commercial users may actually replace the surfacing on existing roads or deposit funds for future replacement by the Forest Service. The procedure to be followed will be determined by the Forest Service on a case-by-case basis.

(2) Maintenance Items with a Work Cycle of 5 Years or Less. The financial responsibility for this work is shared by the Forest Service and other users based on traffic units. Items of work may include brushing, pavement maintenance, and structure maintenance. Use the best information available to project traffic over the work cycle period. Estimate the cost of the work at the time of planned performance.

Also use this procedure in those situations where the life of a timber sale exceeds 5 years.

(3) Maintenance Items with a Work Cycle Exceeding 5 Years. Financial responsibility for this work is normally assigned to the Forest Service. Exceptions can be made, on a case-by-case basis, for unusual high cost items such as painting of large bridges whose work cycle exceeds 5 years.

63.42 - Construction-Induced Maintenance

Construction-induced maintenance includes all maintenance work resulting directly from delivery of materials, equipment, or personnel to, or from, a construction project.

The Forest Service is financially responsible for all construction-induced maintenance on existing National Forest System roads that provide access for Forest Service public works or timber sale contract road construction and/or reconstruction projects. Include construction-induced maintenance as a requirement in the public works or timber sale contract. Except in unusual situations, do not require maintenance deposits from either a public works or timber sale contractor for construction-induced maintenance.

Private parties and other users are financially responsible for all construction-induced maintenance on National Forest System roads that result from their construction activities on either National Forest or non-National Forest lands when such use is restricted by order under Title 36, Code of Federal Regulations, section 261.54. Determine each party's financial responsibility in accordance with the procedures previously described. Maintenance deposits for construction-induced maintenance may be required from private parties and other users.

63.43 - National Forest Administration Generated Maintenance

National Forest administration generated maintenance includes all maintenance work resulting directly from delivery or removal of materials, equipment, or personnel to, or from, resource protection and service contract activities. This includes fire suppression and stewardship service contracts.

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The Forest Service is financially responsible for all National Forest administration generated maintenance on National Forest System roads. Include maintenance for traffic as a requirement in stewardship service contracts and provide for it in the course of fire suppression. Except in unusual situations, do not require maintenance deposits in stewardship service contracts.

64 - EMERGENCY PROCEDURES

Prepare plans as needed to provide direction, guidance, and administrative procedures for dealing with emergency situations such as flood, landslide, earthquake, fire, or acts of terrorism.

The repair of serious damage to National Forest System roads resulting from natural disasters over wide areas or catastrophic failures may qualify for Emergency Relief for Federally-Owned (ERFO) roads through the Federal Highway Administration. See FSM 7732.26 for direction on repairs performed with ERFO funds.