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TRAVEL ANALYSIS (FOREST ROADS)

for the

Natural Turnpike Project

Prepared For
Middlebury Ranger District,
Green Mountain National Forest

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BACKGROUND AND PURPOSE

On January 12, 2001, the Forest Service published its final administrative transportation system policy in the Federal Register (Vol. 66, No.9). Decisions to decommission, reconstruct, construct, and maintain roads are to be informed by a science-based roads analysis. On November 2, 2005 the Forest Service announced release of their final travel management rule (36 CFR parts 212, 251, 262, and 295). This regulation governs the use of motor vehicles, including off-highway vehicles, on National Forest System Lands. One of the purposes of these policies and rules is to insure travel analysis is carried out for Forest roads and trails to provide information needed to ensure the forest transportation system will:

- provide safe access and meets the needs of communities and forest users;
- facilitate the implementation of the Green Mountain National Forest Land and Resource Management Plan (Forest Plan);
- allow for economical and efficient management within likely budget levels; meeting current and future resource management objectives;
- begin to reverse adverse ecological impacts, to the extent practicable.

PROCESS

Travel analysis is a six-step process (see below). The steps are designed to be sequential with understanding that the process may require feedback among steps over time as an analysis matures. The amount of time and effort spent on each step differs by project, based on specific situations and available information. The process provides a set of possible issues and analysis questions for which the answers can inform choices about road system management. Decision makers and analysts determine the relevance of each question, incorporating public participation as deemed necessary.

- Step 1. Setting up the Analysis
- Step 2. Describing the Situation
- Step 3. Identifying Issues
- Step 4. Assessing Benefits, Problems and Risks
- Step 5. Describing Opportunities and Setting Priorities
- Step 6. Reporting

PRODUCTS

The product of this analysis is a report for decision makers and the public that document the information and analyses to be used to identify opportunities and set priorities for future Forest system roads. Included in the report is a map displaying the known road systems for the analysis area, and the needs and opportunities for each road, or segment of road.

THIS REPORT

This report documents the travel analysis procedure used for the Natural Turnpike Travel Analysis Area (analysis area). It was completed during the development of the Natural Turnpike Environmental Assessment (EA). The Natural Turnpike EA project area is somewhat smaller than the Travel Analysis area. This is due to the need to include logically connected transportation routes within the same travel analysis area which may not have been ready for implementation through a

proposed action within an EA. This report is a "living" document and reflects the conditions of the analysis area at the time of writing. The document can be updated as the need arises and conditions warrant.

This report will:

- Identify needed and unneeded roads;
- Identify road associated environmental and public safety risks;
- Identify site-specific priorities and opportunities for road improvements and decommissioning,
- Identify areas of special sensitivity or any unique resource values, and
- Any other specific information that may be needed to support project-level decisions.

PROJECT SCOPE & OBJECTIVES (Step 1)

The Natural Turnpike Travel Analysis Area is located approximately north of Vermont State Route 125, east of the Lincoln-Ripton Road, south of the Village of South Lincoln, and west of the Long Trail within the Breadloaf Wilderness (see Appendix A-1). The analysis area is within the towns of Ripton and Lincoln in Addison County, Vermont. The analysis area encompasses 17,459 acres with 9,162 acres (52%) in private ownership. The remaining 8,297 acres (48%) is National Forest System (NFS) lands administered by the Green Mountain National Forest (GMNF). Elevations in the analysis area range from 2,400 feet along the Cobb Hill ridge to 1,200 feet along Sparks Brook. The northern portion of the area is part of the New Haven River watershed and the southern portion contains the majority of the headwaters of the North Branch of the Middlebury River and Sparks Brook watersheds. The area has an extensive network of Forest Service and Town roads. While development is heaviest around the village centers of Ripton and Lincoln, private residences (some seasonal) are scattered throughout the private lands.

The GMNF is designated to different Management Areas (MAs) with each having a major emphasis and Desired Future Conditions (DFC), and provides specific management direction for activities needed to achieve Forest Plan goals and objectives. Four Forest Management Areas (MAs) are contained in the Natural Turnpike Travel Analysis project area: 3.1 – Diverse Forest Use, 5.1 – Wilderness, 9.4 - Eligible Wild, Scenic and Recreational Rivers, and 9.5 - Wilderness Study Area. The Natural Turnpike EA area consists of all, or portions of, eight Compartments (C) 19, 25, 26, 27, 28, 41, 42, and 43. Forest Compartments are land units averaging approximately 1,500 acres. Compartments are divided into stands which consist of similar vegetation and site conditions (see EA Map in Appendix A-2).

All existing or proposed roads within this area were reviewed and opportunities regarding their future use are stated in accordance with Forest objectives. Other entities, such as towns, having joint, partial, or total road jurisdiction will be consulted during NEPA analysis prior to any final decisions regarding subject roads and trails. Any access requirements off of Town or State roads will also be coordinated with the appropriate authority; and applicable permits obtained. Both the Towns of Ripton and Lincoln have roads in the analysis area. The State has one road (SR125) in the Natural Turnpike area. There are a small number of private roads in the area off Forest land. There are also some unauthorized roads and old skid trails evident. Some of these are included in this analysis, but a complete inventory was not considered necessary for the scope of this project.

The focus of the analysis is limited to the Natural Turnpike Travel Analysis Area (with particular focus on the Natural Turnpike EA project area) for the following reasons:

- A forest scale roads analysis of the primary transportation routes has been completed for the Green Mountain National Forest, however it did not include lower level (4wd and closed) Forest roads or unauthorized roads as part of its analysis.
- This travel analysis is driven by a need to analyze management alternatives at the project scale and make recommendations for the minimum transportation system for the Natural Turnpike Travel Analysis area.

Main objectives of this travel analysis are:

- Identify the need for changes by comparing the current road system to the desired condition;
- Balance the need for access with the need to minimize risks by examining important ecological, social, and economic issues related to roads;
- Furnish narratives, tables, and maps that display transportation management opportunities and strategies that address future access needs, and environmental concerns.
- Make recommendations to inform travel management decisions in subsequent NEPA documents.

MANAGEMENT DIRECTION, DEFINITIONS, AND STANDARDS & GUIDELINES (Step 1 cont.)

Management Area Direction (see Appendices for General Forest Road Standards & Guidelines)

The analysis area is covered by the following four Management Areas established by the Forest Plan and provides direction for roads within these areas. The four Management Areas; 3.1, 5.1, 9.4, and 9.5, cover approximately 8,297 acres. Other ownership lands (private lands/in-holdings) located within the analysis area are not included in the acreage total, approximately 9,162 acres (see the 2006 Forest Plan for more detailed information on these Management Areas):

MA 3.1 – Diverse Forest Use: Vegetation management emphasis is placed on production of high quality sawtimber and other timber products on a sustained yield basis. Management actions provide a mix of habitats for wildlife species, including deer wintering habitat. Habitat at the landscape level will include a sustainable mix of young and mature forests. Permanent upland and temporary openings will occur across the landscape in shapes and sizes that are consistent with visual objectives in the area. Public use is managed to provide a full range of recreation opportunities. Vistas of landscapes with a mosaic of vegetative patterns will be provided along roads and trails. (Forest Plan pgs. 47 and 48). *Roads-* Roads (new and existing) are allowed to provide access to meet land management objectives. Forest-wide standards and guidelines for roads apply.

5.1 – Wilderness: The Wilderness Management Area emphasizes the management and protection of congressionally designated wilderness areas. Management emphasizes the maintenance of wilderness values consistent with the Wilderness Act of 1964 and subsequent legislation. *Roads-* Roads shall be prohibited unless required by law to provide access to private land or easements. Decommissioned roads shall be restored to landscape level or converted to trails. Historically significant roads may be closed, rather than decommissioned, as determined

through SHPO. Actions for closing roads shall follow Forest Service transportation policy. The use of horses, pack animals, dog teams, bicycles, and motorized vehicles in Wilderness shall be prohibited, except for search and rescue operations with Forest Supervisor approval, fire suppression with Forest Supervisor approval, and motorized access to private in-holdings as authorized by law and permits.

MA 9.4 - Eligible Wild, Scenic and Recreational Rivers: The emphasis of this management area is to protect and enhance the “outstandingly remarkable values” (ORVs) that led those rivers and streams within this management area to be determined as eligible Wild, Scenic, and Recreational Rivers (FP p. 105). The project area includes a portion of an eligible Recreational River – the North Branch Middlebury River.

MA 9.5 - Wilderness Study Area: The focus would be on managing these areas to protect wilderness characteristics pending legislation as to their designation, and providing existing uses where compatible with protecting wilderness character. If the area is not designated it remains a WSA as specified in the 2006 Forest Plan until the Plan is amended to change the MA allocation. *Roads-* Existing Forest Service system roads may continue to be maintained, with no increase in maintenance class. Historically significant roads may be closed, rather than decommissioned, thus allowing them to remain a semi-visible part of the landscape.

Road Maintenance Level Descriptions (FSH 7709.58, see Appendices for additional travel management definitions)

Maintenance Level 1 (OML 1). Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. 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." 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 open and suitable for nonmotorized uses.

Maintenance Level 2 (OML 2). Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. 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 (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Maintenance Level 3 (OML 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. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

Maintenance Level 4 (OML 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. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

Maintenance Level 5 (OML 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. The appropriate traffic management strategy is "encourage."

EXISTING ROAD SYSTEM AND HISTORIC USE (Step 2)

The analysis area is located in the Towns of Ripton and Lincoln. Primary access to the area is provided by the east/west State route -VT 125, which connects to north/south State (VT 100) and US (US 7) routes on either side of the Green Mountain range. There are also a few Class 2 and 3 Town Highways and OML 4 NFS Roads in the project area that provide collector access to the larger State and US routes. These are the Lincoln-Ripton Road, North Branch Road, and East River/South Lincoln Road (Town roads); and NFS 54 Natural Turnpike and NFS 59 Steam Mill Road. Several other NFS roads, Town Highways, and a few private roads; provide the remaining network of motor vehicle access to the project area.

Popular recreation activities within the area include hiking, fishing, dispersed camping, target shooting, hunting, and viewing wildlife and natural features. Forest Roads 54 and 59 (FR54 and FR 59) serve as portals to the west side of the Breadloaf Wilderness Area for those choosing to experience solitude and primitive (non-motorized) recreation opportunities in a landscape primarily shaped by the forces of nature. Three trailheads within the project area provide parking and foot access into the Breadloaf Wilderness Area and the Long National Recreation Trail (Burnt Hill on private land, and Skylight Pond and Cooley Glen/Emily Proctor on USFS land) which runs north-south on the eastern edge of the analysis area. There is also NFS parking at the Frost Wayside (NFSR 397) just north of SR125 in Ripton. The Vermont Association of Snow Travelers (VAST) maintains snowmobile trails on private and NFS lands, and the Catamount Trail (CT), a state-wide cross-country ski trail maintained by the Catamount Trail Association (CTA), passes through the area. Currently a VAST snowmobile trail and the CT cross-country ski trail are co-located on FR54 and FR59.

Historically, NFSR 54 and 59 were constructed as timber haul roads, and later provided summer recreation for hikers and campers/hunters, and a winter recreation destination for snowmobile users and cross-country skiers. In Ripton, the USFS has jurisdiction of FR54 except for a 0.15 mile portion that is Ripton Town Highway 22, just south of the Lincoln Town line. The USFS has no jurisdiction of any portion of FR54 within the Town of Lincoln. FR59 has similarly divided jurisdiction with the eastern 3.22 mile and western 0.45 mile portions of the road under Town of Ripton jurisdiction, and the middle 4.61 mile portion under USFS jurisdiction. FR54 and FR59 continue to be important timber haul roads providing access from NFS lands to town and state highways. As is typical with most USFS roads, NFSR54 and 59 were not plowed in the winter for automobiles, but instead made available for winter recreation opportunities such as snowmobiling and cross-country skiing, when logging was not occurring. FR54 and 59 have

been part of the VAST snowmobile trail system since the early 1970's, and part of the Catamount Trail Association (CTA) cross-country ski trail system since the late 1980's. In more recent years, informal requests for dog sledding and skijoring on FR54 and 59 have been received by the USFS and have been allowed to occur.

There are approximately 19 private in-holdings along FR54 and FR233. Several of the inholdings have structures (seasonal camps) and two have been claimed as primary residences. Since 2000, road use permits have been granted to the permanent residents to allow winter access and plowing while the road is closed to public automobile use during the snowmobile season. Several requests from camp owners for winter vehicle access have been denied over the past three years in order to limit safety risks to snowmobilers.

Many heritage resource sites (archeological remains of Native Americans, farmsteads, mills, schools, stonewalls), especially 19th century farmstead remains, occur within the project area. Agricultural land uses of the area are currently limited to a few small farms and residential gardening, while forest management is more commonly practiced in the area by private landowners, industrial forest owners, and the USFS.

Past timber sales comprised of thinnings and regeneration harvests were conducted about every 10 years on NFS lands in Compartments 19, 25, 26 and 42 through the early 1990's. More recent timber sale activity occurred with the North Half Overstory Removal sale in Compartment 42 in 2006. A new, small timber sale is planned for 2007 to occur in Compartment 43, and is called the Turnpike Sale. It is expected that a majority of the vegetative management actions that are to occur within the Natural Turnpike EA project area will occur under winter (frozen ground) conditions.

Table 1 displays all known public roads in the analysis area, their current physical status, mileage, jurisdiction, management area located in, and operational maintenance level (Forest Service jurisdiction only). Information on Town Highways (TH) such as Town, Class, and mileage is provided, and is based on information contained in the State General Highway Map for each Town. Note: there are several numbered Forest Roads (FR) and Forest Highways (FH) in the analysis area that are not under Forest Service jurisdiction.

Table 1 – Natural Turnpike Analysis Area Existing Public Roads and Trails

Road Name	Road ID#	Road Length, Miles	Open Road, Miles	Closed or Stored Road, Miles	Mgmt. Area	FS Jurisdiction, Miles	Local or Other Jurisdiction, Miles	OML (FS) Class (TH)
VT State Highway VT Rte 125	SR 125	3.980	3.980	0	3.1	-	3.980	N.A.
Crystal Brook	FR 34	0.06	0	0.06	3.1	0.06	-	OML 1
Natural Turnpike	FR 54				3.1	3.25	-	OML 4
Natural Turnpike a.k.a. South Lincoln Road	TH 22 FH16/TH 33	7.33	7.33	0	3.1 3.1	Ripton Lincoln	0.15 1.75/3.93	Class 4 Class 3
Steam Mill a.k.a. Natural Turnpike Steam Mill Road	FR 59 FH13/TH 11 TH 20	8.28	8.28	0	3.1 3.1 3.1	4.61 Ripton Ripton	- 2.00/3.22 0.45	OML 4 Class 3 Class 3
Skylight Pond Parking	FR 59A	0.05	0.05	0	9.5	0.05	-	OML 3

Road Name	Road ID#	Road Length, Miles	Open Road, Miles	Closed or Stored Road, Miles	Mgmt. Area	FS Jurisdiction, Miles	Local or Other Jurisdiction, Miles	OML (FS) Class (TH)
Cobb Hill Road	FR 68 TH 32	3.33	2.65	0.68	3.1	0.68 Lincoln	- 2.25/0.60	OML 2 Class 3 / 4
Pearl Lee Road	FR 69 TH 4	1.10	1.10	0	3.1	- Ripton	Town Hwy. 0.50/0.60	N.A. Class 3 / 4
Yellow Birch Road	FR 130	0.56	0	0.56	3.1	0.56	-	OML 1
Short Ridge Road	FR 131	0.30	0	0.30	9.5 / 5.1	0.30	-	OML 1
Poet Road	FR 132	0.50	0	0.50	3.1	0.50	-	OML 1
Big Basin Road	FR 201 TH 36	0.49	0.49	0	9.5	- Lincoln	Town Hwy. 0.36/0.13	N.A. Class 3 / 4
Big Basin Spur Road	FR 201A	0.01	0.01	0	9.5	0.01	-	OML 2
Cobb Hill East Road	FR 205	0.30	0	0.30	3.1	0.30	-	OML 1
Waterbury Road	FR 206	0.34	0.34	0	3.1	0.34	-	OML 3
Sparks Road	FR 233	1.775	1.695	0.08	3.1	1.775	-	OML 3 / 1
Huntley Brook a.k.a. Norton Farm Road	FR 235 TH 10	1.694	1.694	0	9.4 / 3.1	1.549 Ripton	Town Hwy. 0.10 / 0.045	OML 2 Class 3 / 4
Huntley Brook Spur	FR 235A	0.07	0.07	0	9.4 / 3.1	0.07	-	OML 2
Frost House Road	FR 396 TH 19	0.65	0.65	0	3.1	- Ripton	0.53	Class 3
Frost Wayside Road	FR 397	0.054	0.054	0	3.1	0.054	-	OML 4
Lincoln-Ripton Road	TH 1	4.90	4.90	0	3.1	Ripton	4.90	Class 2
Maiden Lane / Peddler Bridge Road	TH 2	1.68	1.68	0	3.1	Ripton	1.68	Class 3
North Branch / Dugway Road	TH 3	3.71	3.71	0	3.1	Ripton	3.71	Class 3
Chandler Hill Road	TH 12	0.40	0.40	0	3.1	Ripton	0.40	Class 3
Robins Cross Road	TH 13	0.66	0.66	0	3.1	Ripton	0.66	Class 3
Peddler Bridge Road	TH 14	0.29	0.29	0	3.1	Ripton	0.29	Class 3
Wagon Wheel Road	TH 15	1.52	1.52	0	3.1	Ripton	0.65 / 0.87	Class 3 / 4
Ira Dow Road	TH 17	0.09	0.09	0	3.1	Ripton	0.09	Class 3
Lincoln-Ripton Road	TH 1	3.08	3.08	0	3.1	Lincoln	3.08	Class 2
TH 31	TH 31	0.13	0.13	0	3.1	Lincoln	0.13	Class 3
County Road	TH 41	1.10	1.10	0	3.1	Lincoln	1.10	Class 3
TOTAL (ROADS)	-	48.433	45.953	2.48	-	14.108	34.405	-


 Portions are Forest Highways.

Table 2 displays the current condition number of acres, miles of existing road, and road density by management area for TH and NFS roads.

Table 2 – Travel Analysis Area Road Density – Existing/Current, All Roads

MA	Approx. Acres	Sq. Miles	Existing Roads, miles	Existing Roads, mi./sq. mi.	Remarks
3.1	15,178	23.721	47.633	2.008	All roads NFS roads only
	6,016	9.402	13.748	1.462	
5.1	1,738	2.716	0.24	0.088	Roads prohibited unless required by law to provide access to private land
9.4	912	1.425	4.63	3.249	MA 9.4 acres overlap MA 3.1 data and most roads in this MA are Town Highways
9.5	543	0.849	0.61	0.719	Existing roads may continue to be maintained, with no increase in maintenance class

The Forest Service uses a nationally recognized classification system called the Recreation Opportunity Spectrum (ROS) to describe different recreation settings, opportunities, and experiences to help guide recreation management activities (USDA 1986). The 2006 Forest Plan refers to ROS in two different ways including the inventoried ROS and desired ROS (Forest Plan FEIS, p. 3-200). The inventoried ROS is the current inventory or existing condition of recreation settings. The desired ROS is the direction recreation management actions take to achieve the desired recreation setting. Each Management Area is assigned a desired ROS in the 2006 Forest Plan. Table 3 displays the differences between the inventoried and desired ROS classes for the Natural Turnpike EA Project Area.

Table 3 – Inventoried ROS and Desired ROS in the Natural Turnpike EA Project Area

Recreation Opportunity Spectrum (ROS) Class	Inventoried ROS acres (percent)	Desired ROS acres (percent)
Primitive (P)	0 (0%)	437 (9%)
Semi-primitive non-motorized (SPNM)	4 (<1%)	0 (0%)
Semi-primitive motorized (SPM)	0 (0%)	0 (0%)
Roaded Natural (RN)	4,670 (99%)	4,274 (91%)
Rural (R)	37 (<1%)	0 (0%)

ISSUES & ASSESSING BENEFITS, PROBLEMS, AND RISKS (Steps 3 & 4)

During the Natural Turnpike EA project development, USFS staff held three meetings with stake-holders, including private landowners, winter recreation groups, and representatives from the Towns of Ripton and Lincoln who were interested in the management of FR54 and other area Forest Roads. In addition, USFS met with Selectboards and Conservation Commissions from both the Towns of Ripton and Lincoln, and the Planning Commission from the Town of Ripton. In early January 2007, a public Open House meeting provided nearly 100 attendees an opportunity to talk with USFS resource specialists and provide input for project development.

Important issues associated with management of Forest Roads in the project area identified from public and local government input and Forest Service management goals include:

- Recreational use conflict between snowmobiles and automobiles, and snowmobiles and cross-country skiers
- Long-term safety risks from increased mixed motorized use
- Providing access to private inholdings (Sullivan and Fitzpatrick)
- Consistency with the Ripton Town Plan regarding future development along FR54.
- Closure of NFS and unauthorized roads in the area to prevent unmanaged motorized use and promote better management of the 5.1 Wilderness MA.
- Retain the Sparks Pit road /area for recreation uses.
- Access for maintenance of existing and proposed wildlife openings.

A complete listing and content analysis of public comments on the Natural Turnpike EA proposed action relating to Forest roads is available in the Natural Turnpike EA document files.

The initial focus of the Natural Turnpike Project was to address safety and user conflicts between multiple demands for winter-use of FR54. In the course of assessing potential solutions to this situation, other opportunities to implement the 2006 Forest Plan and advance the project area toward the DFC became apparent. Looking at all these opportunities at the same time increases the possibilities for public involvement and collaboration with the Towns of Ripton and Lincoln on areas of mutual interest and benefit, as well as provide for efficiencies in planning and analyzing potential management activities.

GENERAL ISSUE STATEMENTS/QUESTIONS (FS-643 ROADS ANALYSIS GUIDE, 1999)

Some of the above issues are addressed in the following assessment of benefits, problems, and risks (please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 29-74 from which these standard set of general issue statements/questions came). They are also addressed in the Natural Turnpike EA (see Section references) and this Reports' list of Opportunities (Step 5) and Recommendations (Step 6).

Ecosystem Functions and Processes (EF)

EF (1): What ecological attributes, particularly those unique to the region, would be affected by roading of currently unroaded areas?

Two roadless areas are located within the analysis area; Steam Mill RA 92023 and Blue Bank RA 92025. No NFS roads are planned for construction in these roadless areas. Two potential

road/trails for access to private land are planned as part of the Natural Turnpike EA. Please see Natural Turnpike EA Section 3.3 for detailed discussion of this private land access issue. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 29-30.

EF (2): To what degree does the presence, type, and location of roads increase the introduction and spread of exotic plant and animal species, insects, diseases, and parasites? What are the potential effects of such introductions to plant and animal species and ecosystem function in the area?

Proposed activities will take necessary precautions according to Forest standards and guidelines to minimize the potential for contamination from outside sources. This includes, but is not limited to, road construction, road maintenance and logging equipment. See also Natural Turnpike EA Section 3.9.

EF (3): To what degree does the presence, type, and location of roads contribute to the control of insects, diseases, and parasites?

Road access obviously facilitates human-conducted controls of pests, but is often not critical to the operation as much of it involves aerial applications. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 33-35.

EF (4): How does the road system affect ecological disturbance regimes in the area?

Please reference the Forest-wide Roads Analysis Process Report, Step 4, p 35.

EF (5): What are the adverse effects of noise, caused by developing, using, and maintaining roads?

Noise from road construction, logging, and maintenance equipment can be distracting when present, but the infrequent and brief activities expected from in analysis area are not considered to present a significant adverse effect. Noise from long term maintenance for the small number and type of roads on Forest land in this area will be negligible. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 35-36.

Aquatic, Riparian Zone, and Water Quality (AQ)

AQ (1): How and where does the road system modify the surface and subsurface hydrology of the area?

On most roads and trails surface water is captured in ditches and transported to culverts or water bars, usually located in grade sags. When built properly and maintained occasionally these provide little change to surface and subsurface hydrology on the type of terrain and road / trails within this project area. See also Natural Turnpike EA Sections 3.8, 3.10 and 3.11.

AQ (2): How and where does the road system generate surface erosion?

Surface erosion and associated sedimentation are related to the effectiveness of road maintenance. Insufficient road maintenance is often accountable for disruptions in harmonious water/road interaction. These disruptions lead to subsequent and more critical disruptions, sometimes resulting in sediment deposits to streams. See also Natural Turnpike EA Sections 3.5, 3.10, and 3.11.

AQ (4): How and where do road-stream crossings influence local stream channels and water quality?

Several crossings over live water are noted to exist within the analysis area on Forest roads. New crossings over live water would only occur during road / trail bridge or culvert construction, and would be coordinated with approval of the State ANR. Any new permanent stream crossings above water will be designed to pass aquatic species. See also Natural Turnpike EA Sections 3.8 and 3.11.

AQ (5): How and where does the road system create potential for pollutants, such as chemical spills, oils, de-icing salts, or herbicides to enter surface waters?

Forest roads and trails within the analysis area pose negligible pollution potential. Forest roads are not typically open to public travel in the winter, are not salted, and do not typically transport commercial traffic (except for occasional timber sales). See also Natural Turnpike EA Section 3.11.

AQ (6): How and where is the road system hydrologically connected to the stream system? How do the connections affect water quality and quantity?

Shorter runoff relief intervals ensure more dispersed runoff, which helps reduce channeling. Outsloped roads and trails are also an effective means of dispersal, but can present safety problems. See also Natural Turnpike EA Section 3.11.

AQ (7): What downstream beneficial uses of water exist in the area? What changes in uses and demand are expected over time? How are they affected or put at risk by road-derived pollutants?

Many projects and changes in management techniques have been directed toward improving aquatic species habitat for more than a decade. Road maintenance activities have been adjusted to minimize the potential for siltation. Continued vigilance, adherence to Forest Plan standards and guidelines, and efforts to enhance water quality within the analysis area will ensure future enjoyment of its downstream beneficial uses. See also Natural Turnpike EA Section 3.8 and 3.11.

AQ (8): How and where does the road system affect wetlands?

Wetlands exist in the analysis area. The Forest road system within the analysis area is not near enough to any identified wetland areas that it would have a significant affect on them. Forest system roads are built and maintained to avoid effects on wetlands. See also Natural Turnpike EA Section 3.11.

AQ (9): How does the road system alter physical channel dynamics, including isolation of floodplains; constraints on channel migration; and the movement of large wood, fine organic matter, and sediment?

Not an issue for this project. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 41 and Natural Turnpike EA Section 3.8.

AQ (10): How and where does the road system restrict the migration and movement of aquatic organisms? What aquatic species are affected, and to what extent?

This issue is being addressed in a forest-level program that has identified and prioritized barrier problems. Funding has been secured to begin the program to design and implement solutions to the problems. Some of these barriers have been identified within the analysis area (though they are not of the highest priority on the Forest). See also Natural Turnpike EA Section 3.8.

AQ (11): How does the road system affect shading, litter fall, and riparian plant communities?

Road maintenance activities are directed toward minimum disturbance of vegetation to meet maintenance objectives. This does not seem to be an issue within the analysis area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 42.

AQ (12): How and where does the road system contribute to fishing, poaching, or direct habitat loss for at-risk aquatic species?

This is not an issue within the analysis area. See also Natural Turnpike EA Section 3.8 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 42-43.

AQ (13): How and where does the road system facilitate the introduction of non-native aquatic species?

This does not seem to be an issue within the analysis area. See also Natural Turnpike EA Section 3.8 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 43.

AQ (14): To what extent does the road system overlap with areas of exceptionally high aquatic diversity or productivity, or areas containing rare or unique aquatic species or species of interest?

This is not an issue within the analysis area. See also Natural Turnpike EA Section 3.8 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 43-45.

Terrestrial Wildlife (TW)

TW (1): What are the direct effects of the road system on terrestrial species habitat?

See Natural Turnpike EA Section 3.2 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 45-48.

TW (2): How does the road system facilitate human activities that affect habitat?

See Natural Turnpike EA Section 3.2 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 45-48.

TW (3): How does the road system affect legal and illegal human activities (including trapping, hunting, poaching, harassment, road kill, or illegal kill levels)? What are the effects on wildlife species?

Roads and trails allow access for hunters within the analysis area. While this is generally not an issue this access can be used for poaching. See also Natural Turnpike EA Section 3.2 and please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 48-49.

TW (4): How does the road system directly affect unique communities or special features in the area?

This is not an issue within the analysis area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 49-51.

Timber Management (TM)

TM (1): How does road spacing and location affect logging system feasibility?

Efficient and economical road spacing for ground based logging systems on terrain found in the project area utilize an average 1300 to 5000 feet skid distance to the farthest harvest unit in order to balance economical yarding cost with road density. In general, close road spacing results in quick turn times and higher production that reduces yarding cost and increases stumping value. Although closer road spacing can increase the total road cost due to more roads, this cost can be reduced with the use of temporary roads. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 52-53.

*TM (2-3): How does the road system affect managing the suitable timber base and other lands?
How does the road/trail system affect access to timber stands needing silvicultural treatment?*

Please reference the Forest-wide Roads Analysis Process Report, Step 4, pp 53-54.

Minerals Management (MM)

MM (1): How does the road system affect access to locatable, leasable, and salable minerals?

There are no known minerals in the project area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 54.

Water Production (WP)

WP (2): How does road development and use affect water quality in municipal watersheds?

Municipal watersheds exist in the analysis area, and are very unlikely to be affected by activities in the project area. See also Natural Turnpike EA Section 3.11.

Special Forest Products (SP)

SP (1): How does the road system affect access for collecting special forest products?

Permits for collecting special forest products are issued to utilize the existing transportation system. Policy dictates that use of a closed road is permitted only if the objective of the closure is not compromised and the task cannot be otherwise accomplished. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 55-56.

Special-Use Permits (SU)

SU (1): How does the road system affect managing special-use permit sites?

Special use permits have, and will continue to exist within the project area, but have not typically been an issue relative to the Forest road system. See also Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, p 56.

General Public Transportation (GT)

GT (1): How does the road system connect to public roads and primary access to communities?

Not an issue for this project area. State and Town highways provide the vast majority of connections and access for the area. Forest roads primarily provide access for recreation, and vegetation management.

GT (2): How does the road system connect large blocks of land in other ownerships to public roads?

FR54, 59, and 233 connect private land to local Town Highways and SR125, though winter access has been limited to permanent residents in the past. Please also reference the Natural Turnpike EA and Forest-wide Roads Analysis Process Report, Step 4, p 57.

GT (3): How does the road system affect managing roads with shared ownership or limited jurisdiction?

The Forest Service has full jurisdiction on all National Forest System (NFSR) roads within the analysis area. Other numbered Forest roads and Forest Highways are under Town jurisdiction. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 57-59.

GT (4): How does the road system address the safety of road users?

FR54, 59, 59A, 206, 233, and 397 are all NFS roads within the analysis area that are maintained for passenger car traffic and subject to the Federal Highway Safety Act. FR 397 is paved and requires little annual maintenance to address safety concerns. FR55, 59, and 59A were last graveled in 2003, and are graded annually. A Motorized Mixed Use Report was produced in 2007 addressing the mixed use of snowmobiles and autos on FR54 in the winter months. Recommendations from that report (including improved signing on FR54) are being implemented. FR 206 and 233 are in need of gravel and grading. Other open NFS roads within the analysis area are maintained for high-clearance vehicles. The Forest Service is responsible for providing for safe travel on these roads as well, but users are expected to be aware of hazards associated with these lower standard roads. Please also reference the Natural Turnpike EA and Forest-wide Roads Analysis Process Report, Step 4, pp 59-60.

Administrative Use (AU)

AU (1): How does the road system affect access for research, inventory, and monitoring?

Road closures within the analysis area have been in place for a decade or more. Research, inventory, and monitoring practices adhere to the policy on administrative use of closed roads. This increases the costs for research, inventory, and monitoring activities. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 60-61.

AU (2): How does the road system affect investigative or enforcement activities?

Unauthorized uses associated with summer off-road vehicles and snowmobiles have been said to occur in the Natural Turnpike area, although the GMNF has no data as to what extent. Field inspections and conversation with Forest Service law enforcement indicate that unauthorized motorized activity in the Natural Turnpike area is incidental and not considered a 'hot spot' for illegal motorized activity on the GMNF. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 61.

Protection (PT)

PT (1): How does the road system affect fuels management?

Not an issue for this project area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 61.

PT (2): How does the road system affect the capacity of the Forest Service and cooperators to suppress wildfires?

Not an issue for this project area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 61.

PT (3): How does the road system affect risk to firefighters and to public safety?

Not an issue for this project area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 62.

PT (4): How does the road system contribute to airborne dust emissions resulting in reduced visibility and human health concerns?

Not an issue for this project area. Please also reference the Forest-wide Roads Analysis Process Report, Step 4, p 62.

Unroaded Recreation (UR)

UR (1): Is there now or will there be in the future excess supply or excess demand for unroaded recreation opportunities?

The demand for unroaded recreation has steadily increased with the use of ATV's, and uncontrolled ORV use is an issue of national urgency. Education and consistent, persistent enforcement will be the key to success. Other unroaded recreation in the analysis area includes hunting, hiking, and skiing to name a few. See also Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, p 62.

UR (2): Is developing new roads into unroaded areas, decommissioning of existing roads, or changing the maintenance of existing road causing substantial changes in the quantity, quality, or type of unroaded recreation opportunities?

Not an issue for this project area. See also Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 62-63.

UR (3): What are the effects of noise and other disturbances caused by developing, using, and maintaining roads on the quantity, quality, and type of unroaded recreation opportunities?

Unroaded recreation experiences are likely to be slightly impacted by noises associated with the use of roads in adjacent roaded areas. See also Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, p 63.

UR (4): Who participates in unroaded recreation in the areas affected by constructing, maintaining, and decommissioning roads?

The primary recreation users of unroaded areas are hikers, skiers, and other non-motorized recreationists. At particular times of year there may also be use by hunters, anglers, berry pickers, birdwatchers and numerous other activities. Many uses, such as equestrian use, are limited by trail restrictions that would restrict riding to roads, unless there is specific approval for individual trails. See also Natural Turnpike EA Section 3.3.

UR (5): What are these participants' attachments to the area, how strong are there feelings, and are alternative opportunities and locations available?

See the Natural Turnpike EA and also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 63-64.

Road-Related Recreation (RR)

RR (1): Is there now or will there be in the future excess supply or excess demand for roaded recreation opportunities?

The supply of roaded recreation seems to meet the demand within the analysis area. See Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 64-66.

RR (2): Is developing new roads into unroaded areas, decommissioning of existing roads, or changing the maintenance of existing road causing substantial changes in the quantity, quality, or type of roaded recreation opportunities?

No. There has been very little new road construction activity on the Forest within the past 10 years. Neither have maintenance levels changed over this period of time, and few roads have been decommissioned.

RR (3): What are the effects of noise and other disturbances caused by developing, using, and maintaining roads on the quantity, quality, and type of roaded recreation opportunities?

Not an issue as there has been little to no activity in the past and any future activity will be minor. See also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 66-67.

RR (4): Who participates in roaded recreation in the areas affected by constructing, maintaining, and decommissioning roads?

Roaded recreation within the analysis area consists mostly of hunting, snowmobiling, and camping. See Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 67-69.

RR (5): What are these participants' attachments to the area, how strong are there feelings, and are alternative opportunities and locations available?

See Natural Turnpike EA Section 3.3 and also reference the Forest-wide Roads Analysis Process Report, Step 4, p 70.

Passive-Use Value (PV)

PV (1): Do areas planned for road entry, closure, or decommissioning have unique physical or biological characteristics, such as unique natural features and threatened or endangered species?

See Natural Turnpike EA Section 3.6 and 3.7 and also reference the Forest-wide Roads Analysis Process Report, Step 4, p 70.

PV (2): Do areas planned for road entry, closure, or decommissioning have unique cultural, traditional, symbolic, sacred, spiritual, or religious significance?

See Natural Turnpike EA Section 3.14 and 3.16 and also reference the Forest-wide Roads Analysis Process Report, Step 4, pp 70-71.

PV (3): What, if any groups of people hold cultural, symbolic, spiritual, sacred, traditional, or religious values for unroaded areas planned for road entry or road closure.

To date, such values have not been specifically identified. See also Natural Turnpike EA Section 3.14.

Social Issues (SI)

SI (1): What are the people's perceived needs and values for roads? How does the road management affect people's dependence on, need for, and desire for roads?

This question is more appropriately addressed at the Forest scale. See the Forest-wide Roads Analysis Process Report, Step 4, p 71.

SI (2): What are the people's perceived needs and values for access? How does the road management affect people's dependence on, need for, and desire for access?

See the Natural Turnpike EA and the Forest-wide Roads Analysis Process Report, Step 4, pp 71-72.

SI (3): How does the road system affect access to paleontological, archaeological, and historical sites?

See the Forest-wide Roads Analysis Process Report, Step 4, p 72 and the Natural Turnpike EA Section 3.14.

SI (4): How does the road system affect cultural and traditional uses, and American Indian treaty rights?

No Native American traditional sites or archaeological sites are known. At this time there is no known affect to Native American sites or traditional uses. Nor do we know of any American Indian Treaty rights which apply to the project area. See also Natural Turnpike EA Section 3.14 and the Forest-wide Roads Analysis Process Report, Step 4, p 72.

SI (5): How are roads that are historic sites affected by road management?

Not an issue for this project area. See also Natural Turnpike EA Section 3.14 and the Forest-wide Roads Analysis Process Report, Step 4, pp 72-73.

SI (7): What is the perceived social and economic dependency of a community on an unroaded area versus the value of that unroaded area for its intrinsic existence and symbolic values?

Not an issue for this project area. This question is more appropriately addressed at the Forest scale. See the Forest-wide Roads Analysis Process Report, Step 4, pp 73-74.

SI (8): How does road management affect wilderness attributes, including natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation?

See the Natural Turnpike EA Section 3.3 and the Forest-wide Roads Analysis Process Report.

OPPORTUNITIES AND PRIORITIES (Step 5)

Summary, Opportunities, and Remarks

Based on the existing and desired road system conditions and issues relative to the proposed project action, the following sets of opportunities were developed (opportunities are not exclusive of each other):

I. Existing National Forest System Roads (NFSR)

<u>Road</u>	<u>Opportunities for consideration</u>
NFSR 34	Decommission entire 0.06 miles of this OML 1 road. This road is bounded by the Breadloaf Wilderness to the north and would not be needed to provide future access to 3.1 MA land along SR125. The road is physically blocked at SR125, has re-vegetated, and would require no additional construction to decommission.
NFSR 54	Keep at OML 4 (3.25 miles) and change RMO to allow for conditional winter auto use for entire length for private landowners. Seek transfer of jurisdiction of entire length to the Town of Ripton to allow for year-round public use. Install a gate just south of Ripton TH22 to prevent winter and mud-season public access from the north and improve signing for motorized mixed use (snowmobiles and automobiles). The District Ranger has determined that conditional winter auto use constitutes reasonable access for landowners in the area under ANILCA (Alaska National Interest Land Conservation Act). This road is expected to see increasing year-round traffic from private landowners living along the road, commuters from Ripton and Lincoln, and possibly snowmobile and ski recreationists (during winter). The Forest Service does not traditionally maintain private or public access on its roads in the winter. Funding for additional gravel replacement and maintenance needs on the road due to winter use is only available at the expense of other higher priority NFS road maintenance needs or through a road use permit with the land owners. The northern portion of the road is a Forest Highway, and if jurisdiction is transferred for the southern portion this designation could be extended for that portion. The road is in a condition that would be equivalent to a well maintained Class 3 Town Highway in most Vermont towns. The road currently functions as a part of the VAST and CTA trail systems in the winter months.
NFSR 59:	Keep at OML 4 (4.61 miles) and change RMO to allow for conditional winter auto use for 0.40 miles from the end of TH11 to NFSR 54 for private landowners. Seek transfer of jurisdiction of this 0.40 length of road to the Town of Ripton to allow for year-round public use. Install a gate just north of the USFS property line at the TH20 end of the road to prevent winter and mud-season access from TH20. The District Ranger has determined that conditional winter auto use constitutes reasonable access for landowners in the area under ANILCA (Alaska National Interest Land Conservation Act). This road is expected to see increasing year-round

traffic from private landowners living along NFSR 54, commuters from Ripton and Lincoln, and possibly snowmobile and ski recreationists (during winter). The Forest Service does not traditionally maintain private or public access on its roads in the winter. The southern portion of the road is a Forest Highway, and if jurisdiction is transferred for the northern portion this designation could be extended for that portion. The road is in a condition that would be equivalent to a well maintained Class 3 Town Highway in most Vermont towns. The road currently functions as access to a parking lot on NFSR 54 for the VAST and CTA trail systems in the winter months.

- NFSR 59A: Keep at OML 3 (0.05 miles).
This road and associated parking lot provides automobile access and parking for the Skylight Pond Trailhead. This is considered an important access point for foot travel into the Breadloaf Wilderness and to the Long Trail.
- NFSR 68: Keep at OML 2 (0.68 miles) and remove or permanently open the existing road gate located just south of the gravel pit.
This road provides access to the northern end of the Alder Brook drainage (west side of Compartments C19 and C25). The existing gate has caused parking and trash issues with private landowners along the road near the gate. The existing roadbed is stable, but would require brushing / mowing and ditch / culvert cleaning prior to opening for public use. Permanently opening or removing the gate would allow easier access for private land to the south of it, and reduce administrative issues / costs to the Forest.
- NFSR 130: Keep at OML 1 (0.56 miles).
This road provides the only access to USFS land in Compartment C47. It is currently gated year-round and there has been little evidence of unauthorized motorized use.
- NFSR 131: Decommission entire 0.30 miles of this OML 1 road.
This road is now bounded by the Breadloaf Wilderness to the east and would not be needed to provide future access to 9.5 MA land along NFSR 59. The road is physically blocked at NFSR 59, has re-vegetated, and would require no or little additional construction to decommission.
- NFSR 132: Keep at OML 1 (0.50 miles).
This road provides the only access to USFS land in Compartment C53. It is currently gated year-round and there has been moderate evidence of unauthorized motorized use. This road also functions as access to a nordic ski area trail system to the west under permit with the GMNF.
- NFSR 201A: Keep at OML 2 (0.01 miles).
This road and associated parking lot provides automobile access and parking for the Cooley Glen / Emily Proctor Trailhead. This is considered an important access point for foot travel into the Breadloaf Wilderness and to the Long Trail.

- NFSR 205: Keep at OML 1 (0.30 miles).
This road provides the only access off NFSR 54 to USFS land in Compartment C27. It is physically blocked year-round and there has been no evidence of unauthorized motorized use. This road is not planned for use under the Natural Turnpike EA project. The USFS owns an easement / road ROW across private lands for the first 0.1 miles of this road.
- NFSR 206: Keep at OML 3 (0.34 miles).
This road provides the only access to USFS land between the North Branch of the Middlebury River and very steep terrain to the south near SR125. The USFS owns an easement / road ROW across private lands for the first 0.3 miles of this road.
- NFSR 233: Keep at OML 3 (1.695 miles); OML 1 (0.08 miles) and change RMO to allow for conditional winter auto use for 1.775 miles from NFSR 54 to property boundary for private landowner use.
The District Ranger has determined that conditional winter auto use constitutes reasonable access for landowners in the area under ANILCA (Alaska National Interest Land Conservation Act). This road could potentially see increasing year-round traffic from the private landowner living at its termination if this land is developed. The Forest Service does not traditionally maintain private or public access on its roads in the winter. Funding for additional gravel replacement and maintenance needs on the road due to winter use is only available at the expense of other higher priority NFS road maintenance needs or through a road use permit with the landowner. This road is in need of gravel resurfacing, but it is low on the priority list as compared to other more significant NFS through roads such as NFSR 10 or 71.
- NFSR 235: Keep at OML 2 (1.549 miles) and install a gate at the end of the road / beginning of FT 259 to prevent unauthorized motorized use of the trail.
This road provides the majority of access to USFS land in Compartment C42 and to dispersed recreation and wildlife openings in the area. This road also functions as a snowmobile system trail in the winter.
- NFSR 235A: Keep at OML 2 (0.07 miles).
This road provides access to USFS land south of NFSR 235 (Stand 105 in C42) and also to dispersed recreation / camping at its terminus.
- NFSR 397: Keep at OML 4 (0.054 miles).
This road and associated parking area provides access and parking for the Robert Frost Wayside just off SR125 to the north. This is a paved road and parking area.

II. Existing Non-NFS Roads on USFS land or off NFS roads

<u>Road</u>	<u>Opportunities for consideration</u>
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- 54E-0.295: Authorize under Special Use Permit for access to the Sullivan parcel of private land. The GMNF is required by law to provide reasonable access to this parcel of private land that is surrounded by USFS land.
This is an existing route from MP 0.295 on NFSR 54 to the Sullivan parcel (0.65 miles in length).
- 54E-0.878: Physically close at NFSR 54 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 54E-1.112: Physically close at NFSR 54 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 54W-1.182: Physically close at NFSR 54 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 54E-1.215: Physically close at NFSR 54 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 54E-1.972: Existing private land access to Fleck parcel.
This is an existing private land access driveway on private land.
- 54W-2.339: Physically close at NFSR 54 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 54W-2.548: Existing private land access to Webb, McEdwards, and other parcels.
This is an existing private land access driveway (Eagles Nest Road) on private land.
- 54W-2.753: Allow continued access to private land on this road which is off the section of NFSR 54 that lies over ROW on the same private land.
This is an old skid road that was physically closed after past private use.
- 54E-3.004: Existing private land access to Fleck, Barrows, Woods, and other parcels.
This is an existing private land access driveway on private land.
- 54E-3.272: Authorize under Special Use Permit for access to the Fitzpatrick parcel of private land. The GMNF is required by law to provide reasonable access to this parcel of private land if the owner can provide evidence that no other legal access is available across other lands (Spruce Lodge).
This is a 0.65 mile route from MP 3.272 on FR 54 (Ripton TH 22) to the Fitzpatrick parcel (0.35 miles of existing skid road and 0.30 miles of potential new construction).
- 54W-3.612: Convert existing skid road to a NFS snowmobile trail as described in Natural Turnpike EA document.
This is an existing skid trail accessing Compartment C26 that would be converted to a snowmobile trail in all of the action alternatives in the Natural Turnpike EA Project.

- 54W-3.652: Existing private land access to Spruce Lodge.
This is an existing private land access driveway on private land.
- 59W-1.460: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59W-2.608: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59E-2.608: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59W-2.630: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59E-3.061: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59N-4.404: Improve physical closure at NFSR 59.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59N-4.900: Improve physical closure at NFSR 59.
This is an old road that accessed the Sparks gravel pit and was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 59N-4.964: Add as NFSR 59B Steam Mill Spur an OML 2 (0.20 miles) road.
This is one of two existing roads to the old Sparks Pit in C43. There was significant public support to retain this route into Sparks Pit for recreational purposes.
- 68E-1.695: Improve physical closure at FR 68.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 68E-1.796: Improve physical closure at FR 68.
This is an old skid road that was physically closed after past use but could use additional work on the closure to better prohibit unauthorized motorized use.
- 68W-3.33: Add as NFSR 68A Cobb Hill Spur an OML 1 (0.50 miles) road.

This is an existing skid road that provides access to land in Compartment C19 west of Cobb Hill Road. It also provides access to proposed wildlife openings in Stands 32 and 17 in C19. Expected limited motorized administrative use for management of the wildlife openings is felt to be significant enough to warrant placing this road onto the NFS system.

- 233W-0.059: Continue as Special Use Permit access to private land (The A. Johnson Co.) or consider seeking longer term easement agreement.
This is an existing access route that has been under past Special Use Permit to The A. Johnson Co. parcel to the west.
- 233W-0.130: Add as NFSR 233A Sparks Landing an OML 2 (0.10 miles) road.
This is a small section of existing road to an existing dispersed camping area, and wildlife opening. Expected limited motorized administrative use for management of the wildlife opening in S27 in C42/43 is felt to be significant enough to warrant placing this road onto the NFS system. Also, this road accesses a popular dispersed recreation area off NFSR 233 and should therefore be open for public use.
- 233E-0.773: Convert existing skid road to a NFS snowmobile trail as described in Natural Turnpike EA document (Alternative B).
This is an existing skid road, providing the major access to Compartments C42 and 25 east of NFSR 233, that would be converted to a snowmobile trail under Alternative B in the Natural Turnpike EA Project.
- 233W-1.270: Physically close at NFSR 233 upon conclusion of any administrative use.
This is an old skid road that was physically closed after past use.
- 233N-1.690: Add as NFSR 233B Sparks Spur an OML 1 (0.20 miles) road.
This is an existing skid road that provides access to land in the northeastern part of Compartment C25 east of Alder Brook. It also provides access to a proposed wildlife opening in Stand 13 of C25. Expected limited motorized administrative use for management of the wildlife opening in S13 is felt to be significant enough to warrant placing this road onto the NFS system.
- 233S-1.775: Existing private land access to Stokes parcel.
This is an existing private land access driveway on private land.
- 235S-1.197: Add as NFSR 235B Huntley Brook Spur an OML 2 (0.13 miles) road.
This is an existing skid road that provides access to land southeast of NFSR 235 in Compartment C42. It also provides access to a proposed wildlife opening in Stand 22 of C42. Expected limited motorized administrative use for management of the wildlife opening in S22 is felt to be significant enough to warrant placing this road onto the NFS system. Also, this route accesses a popular dispersed recreation area off NFSR 235 and should therefore be open for public use.

III. New Temporary Haul Roads to timber landings proposed in Natural Turnpike EA Project

<u>Road</u>	<u>Opportunities for consideration</u>
54W-S10:	Temporary haul road (<0.10 miles long) to proposed landing in Stand S10 in Compartment C43. To be physically closed to motorized use after administrative use.
233W-S9:	Temporary haul road (<0.10 miles long) to proposed landing in Stand S9 in Compartment C25. To be physically closed to motorized use after administrative use.
233W-S8:	Temporary haul road (<0.10 miles long) to proposed landing in Stand S8 in Compartment C25. To be physically closed to motorized use after administrative use.
233W-S10:	Temporary haul road (<0.10 miles long) to proposed landing in Stand S10 in Compartment C25. To be physically closed to motorized use after administrative use.
TH3E-S3:	Temporary haul road (<0.10 miles long) to proposed landing in Stand S3 in Compartment C42. To be physically closed to motorized use after administrative use.

IV. Easements & ROW's and State / Town Road Access needs

<u>Road</u>	<u>Opportunities for consideration</u>
NFSR 54:	Retain existing 66 ft. ROW / Easement for Forest Road over now or former Chatfield / Spruce Lodge Corp. parcels.
NFSR 68:	Retain existing 50 ft. ROW / Easement for Forest Road over now or former Thomas parcel.
NFSR 205:	Retain existing 25 ft. ROW / Easement for Forest Road over now or former Chatfield parcel.
NFSR 206:	Retain existing 33 ft. ROW / Easement for Forest Road over now or former Waterbury parcel.
NFSR 235:	Retain existing 50 ft. ROW / Easement for Forest Road over now or former Foster, James, and Roscoe parcels.
ROW-C19:	Retain existing 0.15 acres for ROW / Easement for skid trail in C19 from S15/32 towards S17/19 over now or former Norris / Bennett parcel.
ROW-C25:	Retain existing 0.15 acres for ROW / Easement for skid trail in C25 from S2 to southwest over now or former McEdward parcel.
TH 3:	New access permit needed for North Branch Road (TH3) from Town of Ripton for temporary haul road to proposed landing in S3 of C42.

TH 32: Renew access permits for Cobb Hill Road (TH32) from Town of Lincoln for temporary haul roads to existing landings in S8, 13, and 28 of C19.

RECOMMENDATIONS (Step 6)

Identification of needed and unneeded roads within the analysis area.

The following table (Table 4) shows existing and proposed NFS roads and recommendations for their status, classification, and maintenance level based on the existing conditions on the ground; transportation needs in the project area; consideration of scoping issues; and assessment of benefits, problems, and risks.

Table 4 – NFS Road System/Classification Review and Recommendations

ROAD ID	ROAD NAME	CURRENT ROAD SYSTEM or CLASSIFICATION	POST-ANALYSIS ROAD SYSTEM or CLASSIFICATION RECOMMENDATION	Miles	Objective Maintenance Level (OML)
NFSR 34	Crystal Brook	National Forest System Road (NFSR)	Decommission	-0.06	-
NFSR 54	Natural Turnpike	National Forest System Road (NFSR)	National Forest System Road (NFSR)	3.25	4
NFSR 59	Steam Mill	National Forest System Road (NFSR)	National Forest System Road (NFSR)	4.61	4
NFSR 59A	Skylight Pond Parking	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.05	3
NFSR 59B	Steam Mill Spur	Gravel Pit Road (Unauth.)	Add to National Forest System Road (NFSR)	+0.20	2
NFSR 68	Cobb Hill	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.68	2
NFSR 68A	Cobb Hill Spur	Skid Road (Unauth.)	Add to National Forest System Road (NFSR)	+0.50	1
NFSR 130	Yellow Birch	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.56	1
NFSR 131	Short Ridge	National Forest System Road (NFSR)	Decommission	-0.30	-
NFSR 132	Poet	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.50	1
NFSR 201A	Big Basin Spur	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.01	2
NFSR 205	Cobb Hill East	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.30	1
NFSR 206	Waterbury	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.34	3
NFSR 233	Sparks	National Forest System Road (NFSR)	National Forest System Road (NFSR)	1.775	3 / 1
NFSR 233A	Sparks Landing	Haul Road (Unauth.)	Add to National Forest System Road (NFSR)	+0.10	2
NFSR 233B	Sparks Spur	Skid Road (Unauth.)	Add to National Forest System Road (NFSR)	+0.20	1

ROAD ID	ROAD NAME	CURRENT ROAD SYSTEM or CLASSIFICATION	POST-ANALYSIS ROAD SYSTEM or CLASSIFICATION RECOMMENDATION	Miles	Objective Maintenance Level (OML)
NFSR 235	Huntley Brook	National Forest System Road (NFSR)	National Forest System Road (NFSR)	1.549	2
NFSR 235A	Huntley Brook Spur	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.07	2
NFSR 235B	Huntley Brook Spur	Skid Road (Unauth.)	Add to National Forest System Road (NFSR)	+0.13	2
NFSR 397	Frost Wayside	National Forest System Road (NFSR)	National Forest System Road (NFSR)	0.054	4
			Total NFSR miles added:	+1.13	
			Total NFSR miles decommissioned:	-0.36	
			Net mileage change:	+0.77	
			Total NFSR Miles Post-Analysis:	14.878	

Identification of road associated environmental and public safety risks.

Road associated environmental and public safety issues and risks are identified throughout the previous discussions (particularly starting with Steps 3 & 4 on page 11). Environmental and public safety risks are also identified in the Natural Turnpike EA document and the Engineering Report for Motorized Mixed Use: Forest Road 54, Natural Turnpike. All roads that are to be physically closed upon completion of administrative use will be closed according to the following design criteria (see also Natural Turnpike EA, Appendix B, page B-12):

Temporary haul or skid roads and other identified unauthorized roads will also be closed off to further motorized use after any activities during project implementation. Access will be restricted at or near the main road entrance by placing large boulders (or similar physical barrier), re-planting some native vegetation, and re-establishing the main road template and / or ditchline as needed. Until the vegetation is established small, temporary travel management signing may be installed to discourage unauthorized use. Small single car pull-off areas will be created (as needed for dispersed recreation at temporary or unauthorized road entrances where pull-off can be located by extending the shoulder of the main road (without cuts or fills) and where they will not be separated by ditches or drainage structures. Law enforcement will monitor the various project locations for illegal use. Road closures with gates or boulders or other restrictive devices will be placed to provide at least 32 inches and no more than 36 inches of clear passage around or through the device to ensure that a person who uses a wheelchair can get beyond the man made barrier but restrict unauthorized motorized vehicles.

Identification of site-specific priorities and opportunities for road and improvements and decommissioning.

Please see the previous discussions under the opportunities and recommendations for needed and unneeded roads within the project area. Needed improvements were identified on several roads. Opportunities were identified for road decommissioning for a small number of Forest jurisdiction

roads (0.36 miles) within the project area. All opportunities listed for: *II. Existing Non-NFS Roads on USFS land or off NFS roads, III. New Temporary Haul Roads to timber landings proposed in Natural Turnpike EA Project, and IV. Easements & ROW's and State / Town Road Access needs under Opportunities and Priorities (Step 5)* are recommended for implementation as needed.

A summary of site specific recommendations for existing and proposed NFS Roads (Table 4) is as follows:

<u>Road</u>	<u>Recommendation (opportunities for road improvements and decommissioning)</u>
NFSR 34:	Decommission 0.06 miles. Documentation only needed. No construction work required.
NFSR 54:	OML 4 for 3.25 miles. Work in the future with Town of Ripton on acquiring jurisdiction and adding as Forest Highway for entire 3.25 miles. Update RMO to allow for conditional winter auto use under a Road Use Permit. Limit motorized mixed use to the greatest extent possible. Improve signing for motorized mixed use. Install an additional gate just south of Ripton TH22. Install traffic counters to monitor auto use in different seasons. Continue to maintain yearly under IDIQ Road Maintenance Contract.
NFSR 59:	OML 4 for 4.61 miles. Work in the future with Town of Ripton on acquiring jurisdiction and adding as Forest Highway for 0.40 miles from TH 11 to NFSR 54. Update RMO to allow for conditional winter auto use under a Road Use Permit for 0.40 miles from TH 11 to NFSR 54. Limit motorized mixed use to the greatest extent possible. Improve signing for motorized mixed use. Install an additional gate north of Ripton TH20. Install traffic counters to monitor auto use in different seasons. Continue to maintain yearly under IDIQ Road Maintenance Contract.
NFSR 59A:	OML 3 for 0.05 miles. Maintain as need arises.
NFSR 59B:	OML 2 for 0.20 miles. Add existing road to NFSR. Maintain first year on system under IDIQ Road Maintenance Contract then as need arises.
NFSR 68:	OML 2 for 0.68 miles. Remove or permanently open road gate south of Cobb Hill gravel pit. Maintain first year on system under IDIQ Road Maintenance Contract then as need arises.
NFSR 68A:	OML 1 for 0.50 miles. Add existing skid road to NFSR. Minor improvements under timber sale then maintain as need arises for wildlife opening maintenance.
NFSR 130:	OML 1 for 0.56 miles. Maintain as need arises.
NFSR 131:	Decommission 0.30 miles. Documentation needed. Remove gate and physically block according to criteria on page 28 (above).
NFSR 132:	OML 1 for 0.50 miles. Maintain as need arises.

- NFSR 201A: OML 2 for 0.01 miles. Maintain as need arises.
- NFSR 205: OML 1 for 0.30 miles. Maintain as need arises.
- NFSR 206: OML 3 for 0.34 miles. Maintain as need arises.
- NFSR 233: OML 3 for 1.695 miles; OML 1 for 0.08 miles. Update RMO to allow for conditional winter auto use under a Road Use Permit. Maintain as need arises. Remove from list of roads receiving yearly grading until road can be resurfaced with gravel. Seek road maintenance aid from Road Use Permit holder.
- NFSR 233A: OML 2 for 0.10 miles. Add existing road to NFSR. Maintain first year on system under IDIQ Road Maintenance Contract then as need arises.
- NFSR 233B: OML 1 for 0.20 miles. Add existing skid road to NFSR. Minor improvements under timber sale then maintain as need arises for wildlife opening maintenance.
- NFSR 235: OML 2 for 1.549 miles. Install gate at the end of the road to prevent unauthorized motorized use off FT 259.
- NFSR 235A: OML 2 for 0.07 miles. Maintain as need arises.
- NFSR 235B: OML 2 for 0.13 miles. Add existing road to NFSR. Maintain first year on system under IDIQ Road Maintenance Contract then as need arises.
- NFSR 397: OML 4 for 0.054 miles. Maintain as need arises.

Identification of areas of special sensitivity, unique resource values, or both.

See previous discussion under Steps 3 & 4 and Natural Turnpike EA, Section 3.6. NFSR 54 and the Ripton / Lincoln road (TH 1) have known populations of Appalachian Jacob's Ladder (a TES plant) along the road edges in wet areas.

Any other specific information that may be needed to support project-level decisions.

Please see the Natural Turnpike EA documents.

Summary of Road Density within the Analysis Area

A summary of road miles and road densities for the existing and future condition is displayed in Table 5. The summary is based on the assumption that all opportunities identified would be brought forward. The table includes only roads under Forest Service jurisdiction. Actual proposed density totals would be finalized based on project alternative development and final decisions during the NEPA process.

Table 5 – Summary of Road Density (NFS Roads only) by Management Area

Management Area	Sq. Miles	Existing Condition		Future Condition	
		Miles	Miles/sq mi.	Miles	Miles/sq mi.
3.1 - Open Roads	9.402	12.298	1.308	12.678	1.3484
3.1 - Closed Roads	9.402	1.5	0.1595	2.14	0.2276
3.1 – All Roads	9.402	13.748	1.4622	14.818	1.5760
5.1 - Open Roads	2.716	0.000	0	0.000	0
5.1 - Closed Roads	2.716	0.240	0.0884	0.000	0
5.1 – All Roads	2.716	0.240	0.0884	0.000	0
9.4 - Open Roads	1.425	0.170	0.1193	0.170	0.1193
9.4 - Closed Roads	1.425	0.000	0	0.000	0
9.4 – All Roads	1.425	0.170	0.1193	0.170	0.1193
9.5 - Open Roads	0.849	0.060	0.0707	0.060	0.0707
9.5 - Closed Roads	0.849	0.060	0.0707	0.000	0
9.5 – All Roads	0.849	0.120	0.1413	0.060	0.0707

From Table 5 we see that the recommended changes to NFS roads within the analysis area is minor, and that the additional 1.13 miles of NFS Road miles recommended to be added (see page 27) will result in a very minor increase (1.4622 miles/sq. mile existing vs. 1.5760 miles/sq. mile future) for roads in the 3.1 MA. Also, NFS road miles / sq. mile will be reduced in the 5.1, Wilderness (0.0884 vs. 0) and 9.5, Wilderness Study Area (0.1413 vs. 0.0707) MA's. There are a number of temporary spur haul roads (approximately 0.50 miles total) and skid trails recommended (see pages 25-26 and the Natural Turnpike EA) for vegetation management; but any affects from these will be reduced significantly because of project implementation in most areas during winter (frozen ground) conditions and their temporary nature (see Design Criteria in Appendix B-12 of the Natural Turnpike EA).

LITERATURE SITED / REFERENCES

- Green Mountain National Forest Land and Resource Management Plan, 2006, USDA Forest Service
- Roads Analysis Process (RAP) Report –Green Mountain National Forest, January 2003, USDA Forest Service
- Engineering Report for Motorized Mixed Use: Forest Road 54, Natural Turnpike, 2007, USDA Forest Service
- FS-643 Roads Analysis: Informing Decisions About Managing the National Forest Transportation System, August 1999, USDA Forest Service

- Federal Register, Part IV Department of Agriculture, Forest Service, 36 CFR Parts 212, 251, 261, and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule, November 9, 2005
- ANILCA (Alaska National Interest Land Conservation Act)
- Natural Turnpike Project Environmental Assessment (EA)
- Vermont General Highway Map, Towns of Ripton and Lincoln; prepared by the Vermont Agency of Transportation in cooperation with the US DOT and FHWA.
- Forest Service Manual (FSM) and Forest Service Handbook (FSH) applicable sections related to roads and trails.