



Memorandum

U.S. Department
of Transportation

**Federal Highway
Administration**

WESTERN FEDERAL LANDS HIGHWAY DIVISION
610 EAST FIFTH STREET
VANCOUVER, WA 98661-3801

INFORMATION: Montana Forest Highway 59
Beartooth Highway, US Highway 212, M.P. 0.0 to 8.4
Reevaluation of the Environmental Assessment/FONSI

Date: June 6, 2002

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Refer to: HFL-17
#23913M_RLB

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The following is a reevaluation of the Environmental Assessment (EA), amended in May 1998, and the May 1998 Finding of No Significant Impact (FONSI) for a road improvement project on Montana Forest Highway 59, also known as the Beartooth Highway. This memo describes the methods and results of the reevaluation performed by the Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA).

BACKGROUND

The Beartooth Highway begins at the Northeast Entrance to Yellowstone National Park (YNP) and extends easterly 103 kilometers (64.0 miles) from Montana into Wyoming and back into Montana ending at Red Lodge, Montana. The proposed project is to upgrade a segment of the highway in Montana (known as Segment 1) from the YNP Northeast boundary at MP 0.0 to the Wyoming state line at MP 8.4. An EA for the reconstruction of Segment 1 of the Beartooth Highway was distributed for public comment in August 1997, and resulted in an amended EA in May 1998. A FONSI was prepared and approved by WFLHD in May of 1998.

As originally proposed, the project involved reconstructing, widening, and paving the existing 6.1 meter (20 foot) road to obtain a 9.6-meter (32.0-foot) roadway width, which includes two 3.6-meter (12.0-foot) lanes with 1.2-meter (4.0-foot) shoulders on each side. Approximately 0.5 mile of FH-59 is within the limits of Cooke City and already has a 50 foot paved width to accommodate roadside angle parking and pedestrians. This width would remain through town and the pavement would just be rehabilitated. The design speed in Segment 1 was proposed at 70 km/hr (43 mph). Road improvements would follow the existing alignment except in one section east of Cooke City from MP 4.6 to MP 5.9 and another section east of Colter Pass from MP 7.1 to MP 8.2 near the Wyoming/Montana border.

In these areas, the road alignment would be shifted to flatten curves, minimize speed changes and improve safety. Segment 1 is a State Highway under the jurisdiction of the Montana Department of Transportation (MDT) and is maintained by the National Park Service (NPS).

Project development activities have advanced to a point where the design is over 90% complete. The project was pre-advertised in the summer of 2001 and formal advertisement for construction was to have started in November of 2001. Applications for water-related permits based on the 9.6-meter (32.0-foot) roadway design have been submitted but are on hold pending the completion of the reevaluation. Right-of-Way (ROW) acquisition efforts by MDT are also on hold. As of April 2002, acquisition had been completed on 18 of 48 needed parcels. Basic agreement has been reached on another 18 parcels, but condemnation may be required on the remaining 12 parcels. Acquisition was based on the 9.6-meter (32.0-foot) roadway design.

What was good public support for the road improvement project during the EA process changed as MDT began the ROW acquisition process in early 2001. Private property owners adjacent to the Beartooth Highway between Silvergate and Cooke City (M.P. 1.0 to M.P. 3.4) became very concerned about the impacts the proposed road improvement project would have on their property. The wildfires of 1988 had burned down to the back side of most of the residences on the north side of the highway. From the landowners' perspective, the trees and vegetation from their residences to the highway were the only vegetative buffer left to maintain the rural scenic character of the highway from Silvergate to Cooke City. During the ROW acquisition process and the related field staking, the impacts to the vegetative buffer became more apparent. The road construction would cause the removal of some trees and vegetation, which was seen by the landowners as a reduction of the visual and noise screen that shielded their homes from the highway. There was also concern that the widened and improved roadway would encourage speeding in what the landowners considered a residential area. The Beartooth Alliance and several private landowners, previously very supportive of the project, began writing to FHWA, MDT, WFLHD, and Congressmen expressing their concerns. A petition to have the project re-designed to minimize impacts was circulated around Cooke City and gathered several hundred signatures. Local newspapers were alerted to the controversy and several articles and letters to the editor were published. The Alliance promised to challenge the project in every way it could unless the design was changed between Silvergate and Cooke City.

In the fall of 2001, WFLHD and its partner agencies (FS and Montana DOT) re-examined the proposed road design in Segment 1 and its related traffic, safety and environmental issues. After coordinating with members of the affected public, the selected alternative was then adjusted by narrowing the roadway width to 8.4 meters (28 feet) from M.P. 0.0 to 3.4.

In an entirely separate action, Central Federal Lands Highway Division (CFLHD) of FHWA began conducting initial environmental studies for a proposed project to upgrade Segment 4 of the Beartooth Highway, within Park County, Wyoming. A Notice of Intent to prepare an Environmental Impact Statement was published in the Federal Register on September 3, 1998. Segment 4 begins at MP 24.5 and ends at MP 43.1 on the Wyoming/Montana state line. The Draft Environmental Impact Statement (DEIS) is scheduled to be circulated for public review in June 2002. Jurisdiction of the Beartooth Highway in Segment 4 is not currently established. Segment 4 is maintained by YNP through an agreement with the Forest Service. The proposed road improvement project is funded in part under TEA 21's High Priority Projects (HPP). Although the HPP identified \$20 million in funding, the cost of the entire Segment 4 project may be over \$50 million and additional funding will be required to complete the entire segment. An important issue to recognize is that the road improvement project in Segment 1 is distinct and separate from the Segment 4 project, although both upgrade portions of the same highway route.

Not only do the Segment 1 project activities predate the Segment 4 study by five years, the Montana segment has its own logical termini, independent utility and separate funding. The logical termini involve jurisdictional boundaries and major changes in the condition of the existing highway. The west termini is at the connection to the Park Road system in YNP and the east termini is at the Montana-Wyoming boundary where it ties into the upgraded highway in Wyoming. These termini are also chosen because the finances for this project are tied to Montana Forest Highways and this segment is the total contiguous route of the highway that is both outside of the YNP and within the State of Montana (the highway reenters Montana 56 miles away after traversing through portions of Wyoming). The project has independent utility; that is, the project will serve the transportation needs along this portion of the route whether or not any other segments of the highway are improved. The need for the project is to improve physical deficiencies and safety along this corridor. WFLHD is aware of no reasonable alternatives that would be foreclosed by the selection of this segment of highway for study and improvement. Finally, along with the independent utility of this project, the project also will not result in the irretrievable commitment of federal funds for any closely related project. While YNP has a long term plan to upgrade the NE Entrance Road in 2018, the decision whether to do so or not will rest totally independent of what is done to this segment of the road. Further, the project will have no effect on whether or not Segment 4 is upgraded.

YNP completed a roadway rehabilitation project on the 29-mile NE Entrance Road in 1999. The project was completed as an interim road improvement to preserve the existing 6.0-meter (20-foot) pavement structure. YNP plans future projects in 2018 to reconstruct and widen the NE Entrance Road to 9.0 meters (30-foot), which is the standard width for major YNP roads.

The easternmost 0.5-mile portion of the Northeast Entrance Road between the YNP Visitor Entrance Station east to the park boundary is being reconstructed with the upgrading of Segment 1 of the Beartooth Highway. This combination of improvements has been a part of the Beartooth project for many years.

FINDINGS

The WFLHD reevaluation of the amended EA/FONSI was conducted in cooperation with partner agencies (USDA Forest Service, MDT and Park County, Montana) and included input from other affected publics. The reevaluation addressed changes in the proposed project and highway corridor as described in the following categories:

- Project Need
- Selected Alternative
- Affected Environment
- Impacts
- Mitigation

The results of the reevaluation will be published in several local newspapers and sent to other affected agencies and local interested parties.

Project Need:

The overall need for the highway improvements has not changed since the 1998 amended EA. However, there has been a reduction in current and future traffic volumes within Segment 1.

Traffic:

- Traffic Background

The amended EA utilized traffic information from the early to mid 1990s. A 1994 traffic count of 490 was inflated at 3.4% annually to 1999 (579 ADT) and then inflated at 3.4% to 2019 (1130 ADT). The resultant ADT utilizing this method was then doubled to establish a Seasonal ADT (SADT) of 2260. The SADT was used for roadway design purposes because the Beartooth Highway is open from May to November and the SADT is more representative of the traffic load during that period. A portion of Segment 1 [from YNP Boundary through Cooke City (MP 0.0 – MP 4.0)] is open year around, but traffic volumes are much lower through the winter months.

A review of subsequent traffic count data from the MDT and YNP in or near Segment 1 for the past seven years indicates a lower ADT and SADT than originally projected. This trend indicates that traffic growth has slowed in this part of the Beartooth Highway.

The lower growth rate has resulted in a substantially lower SADT volume projected into the design year 2020. An SADT of 1180 has now been determined to be the design SADT on Segment 1. This projection is consistent with traffic counting and growth rates now being used by YNP and MDT.

Major physical and operational deficiencies in the existing facility:

The physical and operational deficiencies in the existing highway remain the same as those identified in the EA/FONSI.

Safety Records

The traffic accident history in Segment 1 since the 1998 EA indicates a lower accident rate than before the EA, which was 2.7 accidents per million vehicle miles.

- *Section 1 (MP 0.0 – MP 3.6):* The accident rate for this section is 0.45 for the period 1998 – 2001, less than half of the statewide average of 1.59.
- *Section 2 (MP 3.6 – 4.1) through the town of Cooke City:* There are no accidents documented in this section.
- *Section 3 (MP 4.1 – 8.4):* The accident rate for this section is 1.71 for the period 1998 – 2001, which is higher than the statewide average. As documented in the EA/FONSI, the safety records for this section show many injury accidents related to road deficiencies and a cluster of accidents between MP 5.0 and 5.5 where the alignment is the worst, and another cluster between MP 7.8 and 8.1.

Road Uses

Road uses as described in the 1998 EA have not changed along Segment 1 of the Beartooth Highway.

Selected Alternative:

The proposed road improvements have moderately changed from those described as the selected alternative in the FONSI and the preferred alternative in the 1998 amended EA. The area of change only involved roadway width.

- In Section 1, the paved roadway width is now proposed to be 8.4-meters (28-foot), consisting of 2 - 3.3-meter (11-foot) lanes and 2 - 0.9-meter (3-foot) paved shoulders. This reflects a 4-foot reduction in width from the 9.6-meter (32.0-foot) roadway originally contained in the EA/FONSI. The slightly narrower highway is still a substantial improvement from the existing 6.1 meter (20 foot) highway, and it better minimizes roadside visual impacts while still satisfactorily addressing the physical and operational needs of the highway. Options to maintain the original roadway width approved in the EA were studied for this 3.6-mile section of the road. Consideration was given to use of retaining walls, steepened slopes and/or modifying the alignment to avoid and minimize the impacts to private property. These options were determined to be infeasible due to the high number of private approaches requiring access on both the north and south side of the highway. In almost all cases, use of retaining walls and/or shifting of the alignment would result in greatly steepened driveway approaches and an unsafe condition for access to and from private property along this section of the route.
- In Sections 2 and 3, the paved roadway width remains the same as the selected action in the EA, which is a 9.0-meter (30-foot) road width plus 10 feet of parking on either side through Cooke City in Section 2, and a 9.6-meter (32-foot) road width in Section 3, from Cooke City to the Wyoming state line.

Application of reduced road width:

The 1998 EA indicated roadway design standards for the Beartooth project are to be based on AASHTO guidelines and be consistent with MDT standards. Based on the ADT of 2260 and a design speed of 70 km/hr (43 mph) cited in the EA, full AASHTO standards would require an 11-meter (36-foot) roadway width. The selected alternative in the EA/FONSI contains a 32-foot roadway width, which is a design exception to the full AASHTO standards. This narrower width was considered to be the best balance among the needed highway improvements, cost of ROW and construction, and environmental impacts.

Reducing the future SADT to 1180 resulted in the full AASHTO roadway width requirements being lowered to 34 feet. The 28-foot roadway width continues to be a design exception to full AASHTO standards, but it reflects a different balance among highway safety needs, ROW issues and environmental impacts. The 28-foot roadway width does meet the minimum recommended MDT highway standards for a rural arterial functional classification on this portion of the Beartooth Highway. Route continuity is maintained by closely matching the road widths in reconstructed segments in Wyoming and proposed future reconstruction within YNP.

The 28-foot width is within a 4-foot range (28 to 32 feet) that has been used on recently upgraded and planned improvements to highways in the area. These include the Northeast Entrance Road in YNP (30 feet); the past Beartooth Highway improvements from M.P. 8.3 to 24.5 (30 – 32 feet); planned upgrading from M.P. 24.5 to 43.1 (28 – 32 feet) and the recently completed Chief Joseph Highway in Wyoming (28 – 32 feet). These roadway widths are fairly consistent, even though they reflect situations where localized road conditions, traffic issues and environmental constraints require some adjustments.

Affected Environment:

Some minor changes to the affected environment have occurred since the amended EA. The Beartooth Highway was designated as a National Forest Scenic Byway in 1989. Subsequent to the EA/FONSI, the entire highway received the nomination and designation as an All American Highway in 2000. The Forest Service, civic groups, and the Wyoming Division of FHWA

prepared the original proposal. After the initial nomination and designation, the MDT and MT Division of FHWA retracted the designation from Montana portions of the highway. In January 2002, after completion of a corridor management plan, and adjustment of the proposed All American Highway termini within the state of Montana, the MDT submitted an All American Highway nomination through the MT Division of FHWA. The Montana portions of the All American Highway are proposed to run from Colter Pass to the Montana State line (M.P. 6.5 to M.P. 8.4) and from the Wyoming state line to south of Red Lodge, MT (MP 45.0 to MP 61). The nomination for the Montana portion is expected to be approved in June of 2002. The 1.9-mile portion of the proposed All American Highway is within Segment 1 of the Beartooth Highway.

Environmental Justice

Moderately affluent people populate the project area, and many are retired. Since much of the commercial business is associated with tourism and recreation, there is a high portion of the summer seasonal population who work in service-related jobs. The demographics of the project area are similar to other rural areas within the state of Montana. There are no known minority or economically disadvantaged groups in the area.

Impacts:

The only changes in impacts to the project corridor are directly related to the landowner concerns along the section of highway from M.P. 0.0 to M.P. 3.4 that includes Silvergate to Cooke City. Since many landowners felt the original EA did not fully describe the impacts from roadside clearing and grading, design efforts were made to better quantify these effects. These effects proved to be more common and substantial than originally determined at the time of the 1998 EA. Now, since the proposal has been revised to construct only a 28-foot wide highway, the project's "footprint" of disturbance has been reduced. Originally, additional right of way strips from 48 private parcels were needed for widening the highway to a 32-foot width in the 3.4-mile section. Now, ROW strips will be needed from only 31 of those parcels. This also represents a 20% reduction in total ROW area needed for the project. The construction disturbance will be confined to mostly within existing road ROW. This does not eliminate the clearing and grading in this highway section, but it is more contained.

Secondary Impacts

This project does not create any substantial secondary impacts in the area. There are no changes in land use or proposed access as a result of the project. There are no planned changes in the use or character of the road over the long term. This project is not expected to alter the normal growth of traffic or change the users of the road. It is expected to better accommodate bicycle and pedestrian traffic. It will remain a moderate scale double-lane paved highway and extensive efforts will be made to retain its scenic values when improvements are made.

Cumulative Impacts

- **Other Proposed Actions**

In the 1998 EA, the possible upgrading of the Beartooth route in Wyoming (Segment 4) was briefly described. In addition to the proposed improvements on the Beartooth Highway in Wyoming, activities closer to Segment 1 include the Forest Service's on-going mine reclamation work at several sites within the New World Mine complex, which are accessed off of the Beartooth Highway near Colter Pass. The Forest Service is also planning some minor rehabilitation work in campgrounds along the route. YNP plans to install interpretive signs at some existing pull-offs. YNP also plans to reconstruct and widen the NE Entrance Road to 9-meters (30-feet) in two phases, with

Phase 1 beginning in 2018. The cumulative impacts of these ongoing and pending or proposed actions do not, when added to the direct impacts of the project, significantly change the direct impacts of the project.

- Water Resources

Soda Butte Creek runs parallel to the Beartooth Highway for approximately 4 miles (6.4-km) from Cooke City to the Park Entrance. It then parallels the NE Entrance road for approximately 14 miles. The creek is a 303(d) listed stream with impaired water quality. As described in the EA, there will be some short-term increases in sediment yield and turbidity from the construction of Segment 1. Also, the runoff will be increased due to a wider road surface and new cut and fill slopes that take a few years to fully revegetate. The Forest Service campground work is expected to have negligible impacts to the stream. The mine reclamation work would have a long-term positive impact on the water quality in Soda Butte Creek when it is completed. There will be short-term increases in sediment yield and turbidity due to the YNP widening projects in 2018. Those projects are scattered in time and location so that impacts would not tend to have the linkage necessary to be considered truly cumulative. The short and long term impacts will not tend to overlap or mutually feed off of each other. In any event, the total cumulative impacts would be considered negligible.

- Economic

While improved highways normally have a positive effect on the local economy, highway construction activity and delays can be discouraging to local traffic, especially tourists. Even though the road improvements in Segment 1 may take up to four seasons to construct (starting in 2003) because of the high elevation, rugged terrain and harsh climate, short-term impacts to the local economy should not be substantial. There is a chance that the construction of Segment 4 of the Beartooth Highway could commence as early as 2004 and it could take up to five or six years to complete, depending on funding availability. Even though these projects are over 16 miles apart, having active construction projects in both segments could cause increased delays and disruption to through traffic. These delays might cause minor economic impacts to local businesses in the Cooke City and Silvergate area if some tourists choose to avoid the highway and tourist services during construction. Those impacts will be offset by short-term positive impacts due to the influx of construction workers into the project area, who will need food, lodging, fuel, and recreational facilities.

In conclusion, there are no substantial changes in impacts and related environmental effects due to the revision of the selected alternative. In fact, the reduction in the roadway width in Section 1 will lessen the overall impacts in the project corridor.

Mitigation:

The mitigation measures outlined in the 1998 EA to minimize project impacts are still applicable and valid. Additional mitigation proposed as a result of the change in the selected course of action represents a refinement of the measures identified in the EA/FONSI.

Minimizing Construction Impacts

Construction impacts (traffic delays and disruption caused by construction activities) will be minimized by coordinating all construction along the route and providing highway users with early, detailed information of construction schedules and delays. The traffic control plan will include posting messages at both ends of the highway and at the beginning of the Chief Joseph Highway to alert motorists of the location and duration of any potential delays. Also, the use of

AM radio messages can even more clearly describe the construction project and potential delays and disruption. Careful design of traffic control plans and limiting closure periods can also serve to encourage highway users to continue driving the highway during construction.

Economic

The minor impacts to economic interests in Cooke City and Silvergate will be mitigated in large part by the presence of construction workers who will need food, lodging, fuel, and recreational outlets for the four seasons during the construction of Segment 1.

CONCLUSION

This reevaluation of the 1998 EA/FONSI for upgrading Segment 1 of the Beartooth Highway did not find any changes in the project need, selected alternative, affected environment, impacts and mitigation that invalidate the existing NEPA approvals or that warrant a new or supplemental environmental assessment or other NEPA document. The modification to the proposed road improvements in Section 1 by reducing the roadway to an 8.5-meter (28-foot) road width consisting of 2 – 3.3-meter (11-foot) lanes and 2 – 0.9-meter (3-foot) paved shoulders better serves the public interest and creates a better balance between the need for a safe and efficient transportation system and the social, economic, and environmental impacts of the proposed improvement. As of March 2002, the upgrading of Segment 1 of the Beartooth Highway and the related impacts and mitigation are still satisfactorily addressed in the 1998 EA/FONSI as further described in this reevaluation. The selected alternative still meets the purpose and need of the project.

RECOMMENDED BY:

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