L7617 PIN 10058

FINDING OF NO SIGNIFICANT IMPACT

REPAIR OF UNSTABLE ROADBED AT MILEPOST 270.3

North Carolina Blue Ridge Parkway USDI, National Park Service

INTRODUCTION

The National Park Service (NPS) has prepared an Environmental Assessment (EA) that evaluates the proposed repair of approximately 200 linear feet of unstable roadbed on the Blue Ridge Parkway (Parkway) at Milepost 270.3. This project consists of the remediation of an active fill embankment slide that has experienced frequent instability since approximately the mid-1970's. The intent of this project is to develop corrective measures that will either arrest the slide movement to stabilize the slope using a system of anchor blocks or to stabilize the road bed by spanning the slide with a bridge. The project will alleviate continuing safety concerns and maintenance efforts on this portion of the Parkway.

The Parkway is the most frequently visited NPS area with an annual visitation of over 21 million visitors. The Parkway road inventory consists of over 525 lineal miles of asphalt pavement located at elevations that in some areas exceed 5,000 feet above sea level. All road areas are subject to extreme weather conditions, including freezing and thawing, which causes rockslides and other surface failures. As the slide area that is the cause of the unstable road bed at MP 270.3 continues to move, the roadway embankment shifts, thus causing the roadbed to settle and to damage the pavement surface. The two reasons the fill is moving are that the fill is placed on an existing steep rock slope without proper benching of the rock slope, and that the existing rock slope is yielding subsurface water at the interface of the fill and the rock slope and the fill. As water continues to penetrate the structural foundation of the road base, deterioration is accelerated.

The short section of Parkway at MP 270.3 has high potential for catastrophic failure and is rated a traffic safety problem due to uneven pavement caused by continued settlement. Visitor complaints of near accidents have been received as the underlying slope and fill materials continue to move and road surfaces deteriorate. As a result this area is considered an extremely high priority. Efforts to repair the road have been made intermittently for the past 30 years; however, none has proven effective.

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The NPS has prepared an EA to look at alternatives for stabilization in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 et seq.), the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations 1500 through 1508) for implementing NEPA, and the NPS NEPA compliance guidance handbook (Director's Order (DO)-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*). The EA was released on February 1, 2007 for a 45-day agency review and public comment period.

PREFERRED ALTERNATIVE

The NPS has selected Alternative B (Anchor Blocks) as the NPS Preferred Alternative. Under this alternative, the area around the unstable roadbed will be retained with an anchor block system. The active slope will be stabilized using concrete anchor blocks with tendons anchored to rock beneath the slip plane. The anchor block system will be installed on slopes below the Parkway and may include installation of additional subsurface drainage beneath Parkway fill embankment and pavement. The 2008 cost estimate for this alternative is \$2.7M.

Anchor blocks will be completely buried and placed in a zone below the Parkway to the east between 30 and 200 feet from the road edge. Placement of the anchor blocks could involve placing four or five rows of evenly spaced concrete anchor blocks located one-third to one-half way up the slope from the toe of the slide. There could be a total of eighty-eight to ninety-six 8 feet x 8 feet or 10 feet x10 feet blocks. Each row could be approximately 25 to 40 feet apart, and the area of coverage could be 200 feet long by 150 feet deep. Each row could likely have 20 to 24 anchor blocks. The anchor blocks will be placed in a wedge excavated from the slope so that a leveled bench can be created. Once the anchor blocks are placed in rows in an upright position with rock anchor cables in place, the slope wedges with the anchor blocks will be stabilized by a heavy cable that will be drilled down and into competent rock outside of the slide zone.

Subsurface drain piping has been installed in the past that remains in place today, with the intent to drain off some of this subsurface water from beneath the Parkway. The current underdrainage PVC pipes vary in diameter, with most being 1 inch to 2 inch, and are placed over bedrock and beneath the fill soil layer where it is believed most of the subterranean water flow is. This system of piping is meant to collect the water from this plane of flow and redirect it to daylight on the face of the slope or into spring boxes then to the face of the slope. The underdrain pipes that discharge in the spring boxes are directionally drilled towards each 36-inch diameter vertical shafts which are backfilled with aggregate that aide in directing water flow to the underdrain pipes.

The existing under-drain piping system may need to be upgraded and/or replaced in the anchor block system alternative because drainage relief is inadequate to prevent slide movement. An observed flow rate from individual outlet pipes has been observed to be approximately 2 gallons per minute. The anchor blocks to be installed will likely damage or completely destroy the existing piping and outlet distribution of the existing system of piping since the location of this piping is not known. If additional subsurface drainage piping is to be included it will be of a design similar to the existing system. There will only be piping installed to collect and redirect subsurface drainage at the fill slope slip plane (between fill and competent rock) as does the existing piping system and there shall be no aggregate filled trenches that feed the under drain piping, which is not considered geotechnically feasible. Additional drainage piping may need to be installed on both the cut (Pkwy R) and fill slopes (Pkwy L) depending on updated and final geotechnical analysis and design development of the anchor block system. If geotechnical analysis can validate that the anchor block system can completely subside further slide movement with repairs to the existing subsurface piping system alone, then the anchor block system will be installed retaining the existing subsurface drainage pipe system, making repairs to pipe only where necessary. However, every effort will be made to retain the integrity of the existing subsurface drainage.

Subsurface drainage relief is considered an asset and facilities to capture surface drainage may be included in detailed design of the anchor block system if deemed necessary and could contribute to the future stability of the slope. However, it is not at this time considered a geotechnical necessity in the anchor block system design. If the subsurface drainage system is extended, replaced, or repaired, additional excavation or area disturbance will not be expanded.

The subsurface drainage system will continue to be evaluated with the design of the anchor block system to ensure a sustainable geotechnical solution to stabilizing the slide from further movement. A means of reducing the contributing causes for slide movement should provide the ideal geotechnical engineering solution. The anchor block system will retain the slope embankment and the subsurface drainage piping will redirect and reduce subsurface water flow at the plain of movement between the embankment and bedrock. Additional geotechnical analysis will be necessary to demonstrate that the anchor block system is in itself an adequate solution to stabilizing slide movement. Additional analysis will determine any need to increase the amount of or otherwise make improvements to the existing subsurface drainage piping system.

Surface drainage will be handled by a system of culverts to channel flow, much as it is in most other areas on the Parkway. For the anchor block system, culverts beneath the Parkway will channel run off from natural drainage swales. The existing culvert system design (size, construction, material, and placement) may be adequate, but replacing defective culvert may be necessary.

The roadway is to be reconstructed within the slide zone. The existing pavement is in disrepair due to continued settling and movement of the slide. Additionally, the approaches to the reconstructed pavement will be milled. Reconstruction will involve repaying the road surface with little disturbance to roadway subgrade, although it will be subject to erosion for a short time. The asphalt will be disposed of properly.

Because of the weight, anchor blocks will be staged and stored off the Parkway. The contractor will stockpile the anchor blocks off of US 421 and transport the blocks to be used that day to the construction site. When delivered to the site, the blocks will be placed along one lane of the Parkway ready for installation.

Construction will occur over a period of seven months between November 1 and June 1. The Parkway at the project site will be closed, with a detour, during the winter months (November 1 thru April 15), consequently expediting the work. From April 15 until project completion (less than 2 months), construction will require a single lane closure of the Parkway. Complete Parkway closure will be required daily for ½ to 1 hour to transport anchor blocks from storage to the slope location where they will be installed. Single lane closure will be controlled with flagmen, lights, and signs.

It is estimated that a total of 0.78 acres will be disturbed, of which 0.68 acres is forested. Although the anchor blocks will be buried, they will probably impact future tree growth. Therefore, of the total disturbed area, 0.32 acres will not be able to support tree growth in the area directly over set in place anchor blocks. Native tree sprigs will be planted over the covered anchor blocks, between the rows, to revegetate the forested area.

Most waste material to be excavated will be clean fill dirt and rock. Some of this material could be used to construct an access road to the site where anchor blocks will be placed. Other excavated material could be used to cover anchor blocks. It is anticipated that there will be minimal to no excavated waste that will need to be exported. Approximately 100 yards of topsoil material from an offsite borrow pit may need to be imported, but some topsoil could likely be reserved for use from forest clearing.

OTHER ALTERNATIVES CONSIDERED

The EA prepared for this project analyzed the NPS Preferred Alternative described above, a No-Action Alternative, and two other action alternatives.

Alternative A (No Action)

Under the No Action Alternative, the unstable roadway at MP 270.3 would be left as is, roadbed movement would continue due to the slow moving slide, and the road would not be substantially repaired. However, this alternative would require continued cyclic maintenance to keep the road operational.

Alternative C (Bridge with Paved Shoulders)

Under Alternative C a single span bridge with paved shoulders and abutments with pile foundations would be constructed to span the unstable slide area. Installation of the bridge requires some slope excavation that would unload some of the unstable fill material when placing the bridge and obliterating the existing roadway. The 2008 cost estimate for this alternative is \$4.4M. The cost for this option includes bridge construction, roadway approach work, and slope excavation below the bridge. The bridge would be built on long piles due to deep bedrock and there would be a traditional concrete deck.

This bridge alternative would likely have little effect on the system of subsurface drain piping and is less dependent on its existence than the anchor block alternative since spanning the slide area negates the need for the function it provides. If additional subsurface drainage piping is to be included it would be of a design similar to the existing system. The bridge would be open allowing sheet flow to continue to flow naturally under the bridge. Any concentrated flows would need to be collected and transported down the slope through swales or pipes. There would be drainage scuppers or ports placed beneath the parapet wall so that sheet drainage on the bridge deck can drain through.

Construction would require complete closure of the road at the project site for 1 year, and possibly 2. A Parkway detour would be in place for that time period. It is estimated that a total of 0.33 acres of unpaved area would be disturbed. Little to no forest area would be disturbed, though a few trees (.05 acres) may be removed on the cut slope side of the Parkway to create ground clearance for the bridge. Approximately 250 yards of excavated soil and rock material would be exported and disposed of off site. Approximately 30 yards of topsoil beyond the material that can be salvaged from the site would be imported from an outside source, mixed with grass seed, and placed along the road shoulder approaches on either side of the bridge. Any grassed or forested area cleared of vegetation would be seeded to fescue grasses as per the Parkway standard.

Alternative D (Bridge with Grass Shoulders)

Under Alternative D a bridge would be constructed to span the unstable slide area similar to the bridge described in Alternative C but with grassy shoulders. The 2008 cost estimate for this alternative is \$5.0M. The cost for this option includes bridge construction, roadway approach work, and slope excavation below the bridge. The cost also includes a bridge deck that continues the grassy shoulder and asphalt roadway across the bridge. This requires an additional steel beam to support the additional weight. Timing of construction, road closures, area of disturbance and all other aspects other than bridge shoulders would be the same as for Alternative C.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in NEPA, which is guided by the CEQ. The CEQ provides direction that "the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA (Section 101(b))." The six NEPA goal statements include:

- (1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- (3) Attain the widest range of beneficial uses of the environment without degradation, risk to health and safety, or other undesirable and unintended consequences;
- (4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain wherever possible, an environment which supports diversity and variety of individual choice;
- (5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- (6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Following environmental analysis, the environmentally preferred alternative is the alternative that causes the least damage to the biological and physical environment or that best protects and enhances the natural, historic, and cultural resources of the site. As evaluated against the CEQ regulations, Alternative B (Anchor Blocks) is the Environmentally Preferred Alternative.

The No Action Alternative represents the current situation of an unstable roadbed, has high potential for catastrophic failure, and is a traffic safety problem due to uneven pavement caused by continued settlement. This alternative would not uphold the NPS mandate to administer and protect the Parkway for the enjoyment of natural, cultural, and scientific resources in a manner that leaves these resources unimpaired, while maintaining the Parkway as a safe road.

The Environmentally Preferred Alternative is Alternative B because it surpasses the No Action Alternative and the other action alternatives in realizing the full range of national environmental policy goals as stated in §101 of NEPA. Alternative B would stabilize the moving slope with an anchor block system and effectively eliminate the public safety issues associated with the area. The estimated area of disturbance would be greater under Alternative B than Alternatives C and D (0.78 vs. 0.33 acres); however, a difference of less than half an acre would not be considered biologically significant for this area. Additionally, slide movement after implementation of Alternative B is very low, thus no additional natural resources would be impacted, while slide movement would still be possible after implementation of Alternatives C and D, thus disturbing additional forested areas. More potentially significant is the possible disturbance of the cerulean warbler during two breeding seasons under Alternatives C and D, compared to possibly only one breeding season under Alternative B. Alternative B would also have the least visual impact on the cultural landscape as the road would not be altered and the forest would eventually return to similar current conditions. Finally, risk factors under Alternative B (very low for both slope and Parkway) would be more favorable than under the No-Action Alternative (high for both slope and Parkway) and Alternatives C and D (low for slope, and very low for Parkway).

MITIGATION

For the Preferred Alternative, best management practices and mitigation measures will be used to prevent or minimize potential adverse effects associated with road repairs at MP 270.3. These practices and measures will be incorporated to reduce the magnitude of impacts and ensure that major adverse impacts will not occur. Mitigation measures undertaken during project implementation will include, but will not be limited to, the following:

Soils, Vegetation, and Wildlife

- Limiting the area of disturbance. For example, heavy construction equipment will be kept on the road surface to the extent possible (i.e., when performing excavation adjacent to the roadway).
- Construction areas will be identified by and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications, and workers will

be instructed to avoid construction activities beyond the construction zone, as delineated by the construction zone fencing. Construction materials will be stored in previously disturbed areas.

- Best management practices will be implemented during construction to prevent soil erosion due to wind and rain. The erosion prevention practices will include using silt screening around any disturbed areas, mulching all exposed slopes, placing staked hay bales in drainages, and sprinkling exposed soil to prevent wind erosion. Upon completion of the construction project, all disturbed soils will be revegetated to prevent erosion.
- If erosion matting/netting is required, a biodegradable type with mesh that is small enough (1/2 inch or less) to not entangle snakes and other animals shall be used.
- Removing and stockpiling topsoil for reapplication to disturbed areas when construction is complete.
- Restoring disturbed areas to natural contours to the extent possible to reduce the potential for erosion and revegetating with native species from genetic stocks originating in the Parkway, or from plants previously removed from the construction area whenever possible. Revegetation efforts will be designed to reconstruct the natural spacing, abundance, and diversity of native plant species.
- Subsequent to project completion, Parkway staff will monitor and require removal of any invasive species observed.
- Mitigation for the minor loss of habitat will include the use of native plants in revegetation and removing the nuisance exotic vegetation in the remaining habitat.
- Obtaining gravel and fill for construction or maintenance from certified noxious weed-free sources. Gravel pits and fill sources will be inspected to identify weed-free sources. There will be no quarrying of construction materials from inside the Parkway.
- To the extent possible, construction activities will be timed to avoid sensitive wildlife periods, such as breeding season.
- Construction vehicles could leak fluids into the soil, introduce noise pollution, and emit pollutants to the atmosphere. To minimize this possibility, equipment will be checked frequently to identify and repair any leaks, mufflers will be checked for proper operation, and only equipment that is within proper operating specifications will be used.
- Providing fuel and oil services for construction machinery in a designated area away from channels or drainages. This will include secondary containment for all fuel storage tanks and on-site availability of a specialized "spill kit" with capacity to contain a 95-gallon fuel spill.

- Construction activities could introduce dust to the atmosphere. To minimize this possibility, best management practices for dust control, such as covering piles of excavated material with fabric and using water to limit dust during excavation activities, will be used.
- All debris will be removed from the Parkway for legal and proper disposal.

Visitor Use and Experience and Human Health and Safety

- Providing signs to warn travelers about road construction and traffic delays; the use of alternative routes and destinations may be encouraged.
- Using well-tuned construction equipment with properly operating mufflers and performing work during low visitation periods.
- During construction activities, traffic flows and safety will be maintained by keeping construction equipment as far off the road as possible and by providing flag bearers to assist traffic negotiating through construction areas.
- Minimizing adverse impacts to visitor use and experience of the natural landscape. These measures could include the use of rock facing on bridge abutments, and the use of coloring on constructed elements to blend their appearance with the surrounding landscape.
- Monitoring the slide area for movement during construction and reacting to any unexpected movements.

Cultural Resources

Mitigation measures for the cultural landscape will include minimal disruption and disturbance of local vegetation, dust abatement, and re-planting and re-landscaping any areas affected by construction activities.

If previously unknown archeological resources are discovered during construction, all work in the immediate vicinity (600 feet) of the discovery shall be halted until the resources are identified and documented and an appropriate mitigation strategy developed, if necessary, in accordance with pertinent laws and regulations, including the stipulations of the 1995 Programmatic Agreement Among the NPS (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined by 40 CFR 1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse and which on balance may be beneficial, but that may still have significant adverse impacts, which require analysis in an Environmental Impact Statement (EIS).

No major adverse or beneficial impacts were identified that will require analysis in an EIS. Resource topics that were addressed in the EA were soils and geology, water resources including wetlands, vegetation, wildlife including T&E species, visitor use and experience including recreation and visual resources, cultural landscapes, and human health and safety. All other resource topics were dismissed from further evaluation in the document because the associated impacts will be negligible or less.

The Preferred Alternative will have minor, short-term, localized, direct adverse impacts on soils from compaction, erosion, and removal during construction activities, and negligible, long-term, localized direct adverse impacts on geology from drilling of bedrock. Impacts on water resources will be minor, short-term, localized, direct and adverse impacts from possible sedimentation and contamination during construction activities. There will be minor, short-term, localized, direct adverse impacts on vegetation from trampling and clearing during construction activities. Impacts on wildlife and habitat will be minor, short-term, localized, direct and adverse from disturbance during construction activities. Noise, changes in visual resources, and inconvenience during construction will cause minor, short-term, direct adverse impacts on visitor use and experience. Negligible, short-term, localized, direct adverse impacts on the cultural landscape will occur from vegetation removal and construction grading. Human health and safety will have moderate, long-term, beneficial, direct impacts due to the stabilization of the moving slope and roadway.

Degree of effect on public health and safety.

The NPS selected alternative will have a beneficial impact on overall public health and safety. The anchor blocks that will be installed to stabilize the existing slow moving slope at MP 270.3 will increase the safety of the road; visitors who drive the section of road at MP 270.3 will have considerably reduced risk for auto accidents from uneven road surfaces or slope failure.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

As discussed in the EA, there are no prime farmlands, wild and scenic areas, or ecologically critical areas that would be affected by implementation of the Preferred Alternative.

As described in the EA, the Parkway constitutes a cultural landscape of which the roadway and the historic buildings and structures are the dominating cultural features. Furthermore, a draft historic resource study recommends that the Parkway be nominated as a National Historic Landmark (NHL). Under the Preferred Alternative, the road would be repaired but not altered,

and 0.78 acres at the project site would be disturbed, including vegetation removal and regrading of the hillside below the Parkway to install anchor blocks. However, ground disturbance would be temporary and the area would be revegetated so that it would eventually look similar to its current appearance. There would not be any impact on eligibility for NHL designation as the Parkway would still meet the criteria for designation. For purposes of Section 106, the determination of effect would be no adverse effect.

Adjacent to a small stream located about 20 feet below the surface of the road on the downhill side of the Parkway in the project area is a very small wetland. This wetland is best described as a perennial seep. It is partially fed by a pipe coming out of the bank. It is narrow, not more than 4 feet wide on the slope, but extends more than 100 feet to the base of the slope. No known wetland areas have been delineated within 2 miles of the project site. The EA found that there would be short-term, minor, negative impacts on water resource; however, the area and function of the wetland near the stream adjacent to the project area would remain unchanged. The NPS, working with the Eastern Federal Lands Highway Division shall submit an application for a storm water permit prior to construction.

As the EA states, the project site is not considered to be biologically significant; however, cerulean warblers (*Dendroica cerulea*), a Federal species of concern and significantly rare in North Carolina, are known to breed within 0.2 to 0.5 miles of this site. The cerulean warbler nests and raises young in large tracts of deciduous hardwood forests that have tall, large diameter trees with an open understory. Such habitat occurs near the project area.

Degree to which effects on the quality of the human environment are likely to be highly controversial.

There were no controversial impacts identified during either preparation of the EA or the public review period. Eight comment letters were received from interested parties during this review period. The US Fish and Wildlife Service (USFWS) concurred with the NPS determination that the proposed project will not affect endangered or threatened species or their habitats. Several comments pointed out that they agree with implementing the Preferred Alternative, none disagreed. Many comments included recommendations for mitigation and some pointed out permit requirement prior to implementing the project. Concerns were expressed about impacts on streams and wetlands, wildlife, and vegetation.

Degree to which the possible effects on the quality of the human environment are highly uncertain, or involve unique or unknown risks.

There were no highly uncertain or unique or unknown risks identified during preparation of the EA or the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Preferred Alternative does not establish a precedent for any future actions that may have significant effects, nor does it represent decisions about future considerations. Future NPS actions will be evaluated through additional, project-specific planning processes that incorporate the requirements of NEPA and NPS policies.

Whether the action is related to other actions with individually insignificant, but cumulatively significant, impacts.

Impacts of the NPS selected alternative to soils, water resources, vegetation, wildlife, visitor use and experience, cultural landscapes, and human health and safety were identified. As described in the EA, cumulative impacts were determined by combining the impacts of the NPS Preferred Alternative with other present and reasonably foreseeable future actions. The impacts of other present and reasonably foreseeable future actions on resources, in conjunction with the impacts of the NPS Preferred Alternative, will result in both beneficial and adverse cumulative impacts ranging in intensity from negligible to minor. Therefore, the NPS Selected Alternative will not contribute or result in significant cumulative impacts.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places (NRHP) or may cause loss or destruction of significant scientific, cultural, or historical resources.

As described in the EA, the Parkway constitutes a cultural landscape of which the roadway and the historic buildings and structures are the dominating cultural features. Furthermore, a draft historic resource study recommends that the Parkway be nominated as a NHL. Under the Preferred Alternative, the road will be repaired but not altered, and 0.78 acres at the project site will be disturbed, including vegetation removal and re-grading of the hillside below the Parkway to install anchor blocks. However, ground disturbance will be temporary and the area will be revegetated so that it will eventually look similar to its current appearance. As concurred by SHPO, there will not be any impact on eligibility for NHL designation as the Parkway would still meet the criteria for designation. For purposes of Section 106, the determination of effect would be no adverse effect.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat.

The USFWS concurred with the NPS determination that the proposed project will not affect endangered or threatened species or their habitats. Cerulean warblers (*Dendroica cerulea*), a Federal species of concern and significantly rare in North Carolina, are known to breed within 0.2 to 0.5 miles of this site. The Preferred Alternative limits the disturbance of this species to a single season and vegetation clearing will be timed to avoid periods when cerulean warblers are known to nest.

Whether the action threatens a violation of Federal, State, or local environmental protection law.

The implementation of the Preferred Alternative violates no Federal, State, or local environmental protection laws.

IMPAIRMENT

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the Preferred Alternative will not constitute an impairment to the Parkway's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies 2006. As described in the EA, implementation of the Preferred Alternative will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Blue Ridge Parkway; (2) key to the natural or cultural integrity of the Parkway or to opportunities for enjoyment of the Parkway; or (3) identified as a goal in the Parkway's General Management Plan or other relevant NPS planning documents.

PUBLIC INVOLVEMENT

The NPS conducted public scoping for the proposed action in June and July 2006. The Parkway's Superintendent mailed a scoping letter and brochure announcing the beginning of the planning process to individuals and organization on the Parkway's planning mailing list. A public notice/news release was published in local newspapers requesting public and agency comments. In addition, the scoping brochure was posted and available on the Internet at the park's web site. Through scoping and the public review process, the planning process was conducted in consultation with affected Federal agencies, State and local governments, tribal groups, and interested organizations and individuals.

As a result of the scoping effort, five scoping comment letters were received. All comments were reviewed and analyzed to determine agency and public concerns. Based on scoping comments, and applicable Federal law, regulations, and executive orders, the NPS determined that an EA, not an EIS, was the appropriate level of compliance for the Repair of Unstable Roadbed at Milepost 270.3. Public scoping comments and issues raised by NPS and FHWA staff provided input used in the alternative development process and in the analysis presented in the document.

The Environmental Assessment, prepared in accordance with NEPA, CEQ regulations, Section 106 of the NHPA, and DO #12, was made available for a 45-day public review and comment period beginning February 1, 2007, and closed March 15, 2007. A press release announcing the document's availability was published in local newspapers and on the park website. Copies of the document were sent to certain agencies and interested parties; made available at the Parkway's visitor center; and posted on the internet at the NPS Planning, Environment, and Public Comment website (http://parkplanning.nps.gov/). Eight comment letters were received during this review period.

Public review and comments did not result in any changes to the information and findings presented in the EA or to the NPS Preferred Alternative. A summary of issues raised and NPS responses to substantive comments are included in Attachments A and B.

CONCLUSION

With guidance from NPS Management Policies 2006, natural and cultural resources information, professional judgment, consideration of agency and public comments, the NPS has decided to implement the Preferred Alternative (Alternative B – Anchor Blocks) to arrest the slide movement and stabilize the slope at Milepost 270.3, alleviating continuing safety concerns and maintenance efforts on this portion of the Parkway.

The Preferred Alternative does not constitute an action that normally requires preparation of an EIS. The Preferred Alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are negligible or minor and temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the NRHP, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any Federal, State, or local environmental protection laws.

Based on the foregoing, it has been determined that an EIS is not required for this proposed project on NPS lands, and thus, will not be prepared. Implementation may take place immediately after the date of this decision.

Recommended:

Superintendent, Blue Ridge Parkway

Approved:

Director.

Southeast Regional Office

Finding of No Significant Impact Blue Ridge Parkway Repair of Unstable Roadbed at Milepost 270.3

ATTACHMENT A

PUBLIC COMMENTS CONTENT ANALYSIS REPORT for the REPAIR OF UNSTABLE ROADBED AT MILEPOST 270.3 EA

		Number of
Code	Description	Comments
AL001	Alternative A: No Action	0
AL002	Alternative B: Anchor Block System	6
AL003	Alternative C: Bridge with Paved Shoulders	0
AL004	Alternative D: Bridge with Grass Shoulders	0
AL006	Mitigations	28
AL010	Impacts to natural resources	0
PM001	Permits	13
AE5000	Affected Environment: Wetlands	0
AL2000	Alternatives: Alternatives Eliminated	0
AL3000	Alternatives: Envir. Preferred Alt./NEPA § .101&102	0
AL4000	Alternatives: New Alternatives Or Elements	3
CC1000	Consultation and Coordination: General Comments	24
CR4000	Cultural Resources: Impact Of Proposal And Alternatives	0
ED1000	Editorial	0
GR4000	Geologic Resources: Impact Of Proposal And Alternatives	0
MT1000	Miscellaneous Topics: General Comments	0
ON1000	Other NEPA Issues: General Comments	0
PO4000	Park Operations: Impact Of Proposal And Alternatives	0
SE4000	Socioeconomics: Impact Of Proposal And Alternatives	0
TE1000	Threatened And Endangered Species: Guiding Policies, Regs And Laws	0
TE4000	Threatened And Endangered Species: Impact Of Proposal And Alternatives	4
VE4000	Visitor Experience: Impact Of Proposal And Alternatives	0
VR4000	Vegetation And Riparian Areas: Impact Of Proposal And Alternatives	1
VS4000	Visitor Conflicts And Safety: Impact Of Proposal And Alternatives	0
VU4000	Visitor Use: Impact Of Proposal And Alternatives	0
WH4000	Wildlife And Wildlife Habitat: Impact Of Proposal And Alternatives	4
WQ4000	Water Resources: Impact Of Proposal And Alternatives	6
WQ40011	Impacts to streams and wetlands	11

Comment Distribution by Status

Status	Number of Comments
Coded	43
Total	43

Correspondence Distribution by Correspondence Type

Туре	Number of Correspondences
Letter	7
Web Form	1
Total	8

Correspondence Signature Count by Organization Type

Organization	
Туре	Number of Correspondences
County	1
Government	
Federal	2
Government	
State	4
Government	
Unaffiliated	1
Individual	
Total	8

Correspondence Distribution by State

		Number of
State	Percentage	Correspondences
NC	100.00%	8
Total		8

Correspondence Distribution by Country

		Number of
Country	Percentage	Correspondences
United States	100.00%	8
of America		
Total		8

ATTACHMENT B

NPS RESPONSES TO PUBLIC COMMENTS AND ERRATA for the REPAIR OF UNSTABLE ROADBED AT MILEPOST 270.3 EA

In response to the Repair of Unstable Roadbed at Milepost 270.3 EA, the NPS received eight comment letters. Described below are the substantive comments and the NPS responses. The comments identify the parties making the comment.

Comment 1

Review of the project reveals the presence of surface waters that drain to waters classified as ORW, Outstanding Resource Waters of the State in the project study area. The water quality classification ORW is one of the highest classifications in the State. DWQ is extremely concerned with any impacts that may occur to streams with this classification. It is preferred that these resources be avoided if at all possible. If it is not possible to avoid these resources, the impacts should be minimized to the greatest extent possible. Given the potent for impacts to these resources during the project implementation, the DWQ requests that the applicant strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0124) throughout design and construction of the project. Pursuant to 15A NCAC 2H.1006 and 15A NCAC 2B.0224, the applicant will be required to obtain a State Stormwater Permit prior to construction. (North Carolina Division of Water Quality)

Topographic mapping indicates that the nearest drainage swale (no open stream course) is located approximately 4000 feet from the project site. The nearest potential perennial stream course is located approximately 7000 feet or approximately 1 1/3 mile from the project site. A farm pond is located approximately 2 miles from the site and no known wetland areas have been delineated within 2 miles of the site. The project will be designed to meet the NC Design Standards for Sensitive Watersheds. The National Park Service (NPS), working with the Eastern Federal Lands Highway Division (EFLHD) shall submit an application for a storm water permit prior to construction.

Comment 2

Environmental assessment alternatives should consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives should include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ Stormwater Best Management Practices, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc. (North Carolina Division of Water Quality)

EFLHD shall provide a detailed drainage plan designed to NC DWQ Stormwater Best Management Practices. The land clearing shall be designed for stormwater erosion protection using silt fencing, catch basins, buffer areas, check dams, and other erosion protection measures as appropriate to prevent erosion run-off. The slope shall be revegetated with native tree sprigs where trees must be cleared.

Comment 3

After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the applicant is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {I5A NCAC 2H.0506 (h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation. (North Carolina Division of Water Quality)

The slope shall be revegetated to replace tree species (in-kind) to restore the cleared slope back to a similar forest ecosystem type. The nearest potential wetland to this site is located over 2 miles in distance.

Comment 4

In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506 (h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation. (North Carolina Division of Water Quality)

The nearest potential perennial stream to this site is located approximately 9000 feet in distance from the nearest edge of the project site. If mitigation is required the plan shall be designed to replace the appropriate lost ecological functions and values.

Comment 5

Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require a Nationwide (NW) application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the applicant and written concurrence from the NCDWQ. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate. (North Carolina Division of Water Quality)

If a Nationwide (NW) application to the Corps of Engineers and corresponding 401 Water Quality Certification is required, it is agreed a formal application shall be submitted with design and before construction.

Comment 6

If concrete is used during construction, a dry work area should be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete should not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. (North Carolina Division of Water Quality)

Agreed, the concrete anchors shall be pre-cast panels transported to the site. There shall be very little to no cast-in-place concrete construction on this project and no chance that curing concrete shall be in direct contact with stream waters.

Comment 7

If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas should be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance. (North Carolina Division of Water Quality)

A temporary road shall be required to access the lower extents of the project site. This temporary road shall be fully protected from silt runoff and shall require a complete erosion protection plan as required by the State of North Carolina, utilizing erosion protection devices such as silt fencing and/or catch basins and shall be designed to replace the appropriate lost functions and values. Excavation required to install the anchor blocks on the slope will prevent retention of most tree stumps. However, where possible it is agreed tree stumps shall be retained and where it is not possible tree sprigs of a similar or identical species shall be planted between anchor block rows and between anchor blocks within a row to the greatest extent possible. Trees shall be planted in a natural pattern to replace the forest ecosystem with similar or identical native species to trees that must be cleared.

Comment 8

All work in or adjacent to stream waters should be conducted in a dry work area. (North Carolina Division of Water Quality)

Agreed. Topographic mapping indicates that the nearest drainage swale (no open stream course) is located approximately 4000 feet from the project site. The nearest potential stream course is located approximately 7000 feet or approximately 1 1/3 mile from the project site. A farm pond is located approximately 2 miles from the site.

Comment 9

If not already done, the BRP should contact state and federal agencies that are experienced with scarps, earthquakes and landslides in the mountains of North Carolina. The NC Geological Survey (NCGS) within the NC Division of Land Resources (919-733-2423) in Raleigh may be able to provide additional information. Mr. Rick Wooten (828-296-4632) in the Asheville Regional Office may be contacted for site consultations and evaluations. It is our understanding that NCGS has extensive experience and knowledge about scarping and landslide events associated with recent catastrophic storms. We believe that Appalachian State University Geology Department (ASUGD) cooperates with NCGS. ASUGD may have additional insights that could help evaluate site conditions and stabilization options. (North Carolina Wildlife Resources Commission)

The anchor block slope stabilization project shall be designed by qualified Geotechnical Engineers with EFLHD, who may consult with the references listed.

Comment 10

We have reviewed the subject documents and determined that based upon the information provided, it appears that construction of the proposed work may result in impacts to jurisdictional waters of the United States, which are subject to our regulatory authority pursuant to Section 404 of the Clean Water Act. However, please note that the EA submitted with your letter did not include data forms or other information necessary to verify the size and type of wetland and/or functional capacity of the stream present within the project area. Also lacking from the EA was an estimate of the amount of impacts, temporary or permanent, proposed for the project under each alternative. The type of Department of the Army (DA) authorization required (i.e., nationwide or individual permit) will be determined by the location, type, and extent of jurisdictional area impacted by the project, and by the projects; extent of fill work within the waters of the United States, including wetlands; construction methods and detours. (US Army Corps of Engineers)

Topographic mapping indicates that the nearest drainage swale (no open stream course) is located approximately 4000 feet from the project site. The nearest potential stream course is located approximately 7000 feet or approximately 1 1/3 mile from the project site and there are no known wetland areas within 2 miles of this site. A farm pond is located approximately 2 miles from the site. The project will be designed to meet the NC Design Standards for Sensitive Watersheds. Since these open surface water courses were some distance outside of the construction limits of this project and shall include an erosion control plan it is estimated this project shall have no potential or cumulative impact to jurisdictional waters.

Comment 11

Any open burning associated with subject proposal must be incompliance with 15 A NCAC 20.1900. (North Carolina Department of Environment and Natural Resources)

Open burning shall not be permitted on this project.

Comment 12

Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. (North Carolina Department of Environment and Natural Resources)

Agreed. There is no known source of asbestos on or near the project site.

Comment 13

We would also encourage siting of construction materials and vehicular access from the north of the construction area, further minimizing the effects of noise and activity on the [cerulean warbler] breeding group. (Audubon North Carolina)

NPS will advise EFLHD that the temporary road needed to access the slope below the anchor block installation be constructed from the North end of the project as requested. The North end of the project provides the greatest opportunity for access with minimal impact to slope clearing and grading. As a mitigation measure, NPS will provide a time schedule to clear vegetation to avoid periods of time Cerulean Warblers are known to nest.