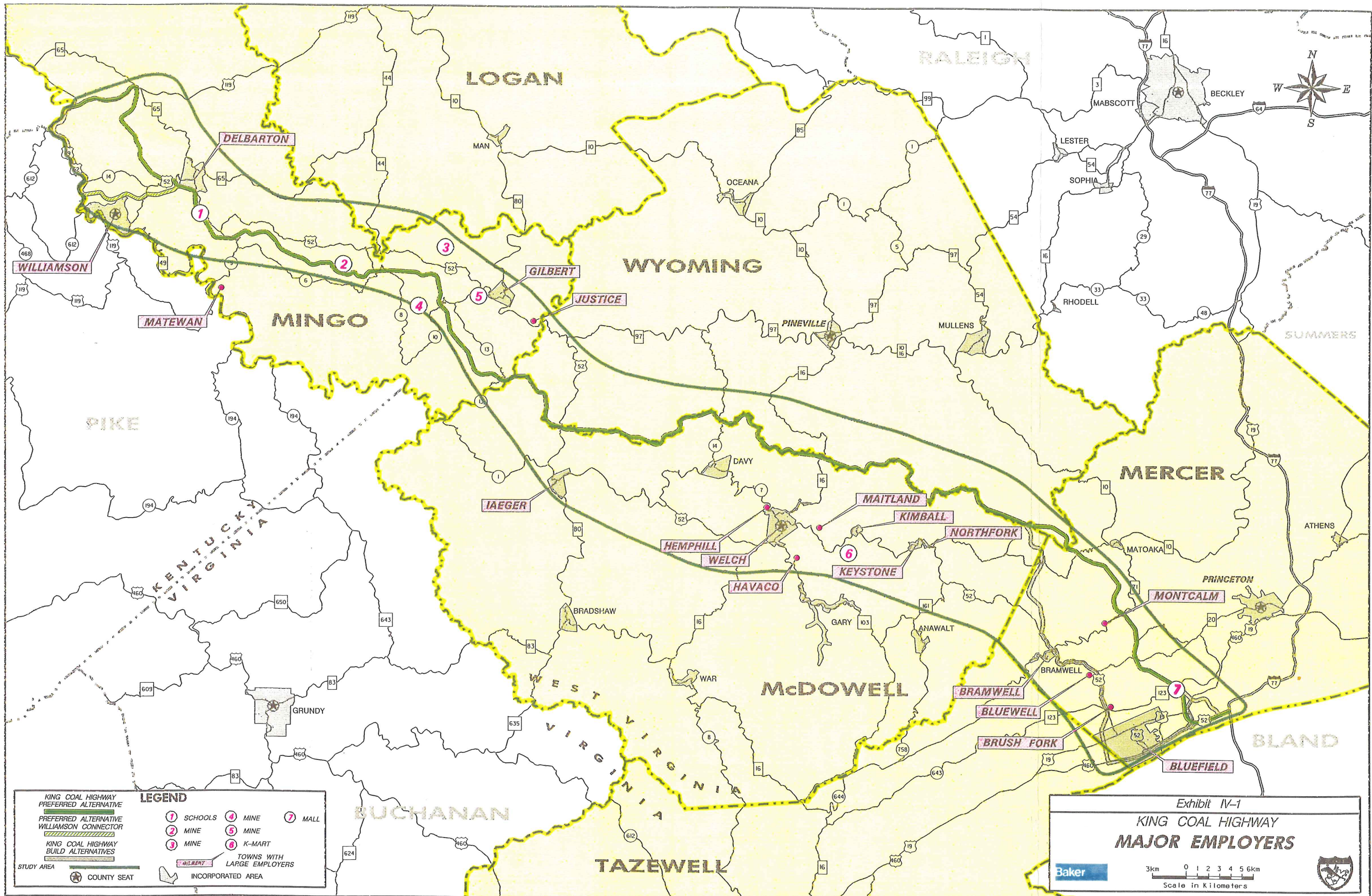


**ENVIRONMENTAL CONSEQUENCES**  
**EXHIBITS**



**LEGEND**

KING COAL HIGHWAY PREFERRED ALTERNATIVE	1 SCHOOLS	4 MINE	7 MALL
PREFERRED ALTERNATIVE WILLIAMSON CONNECTOR	2 MINE	5 MINE	
KING COAL HIGHWAY BUILD ALTERNATIVES	3 MINE	6 K-MART	
COUNTY SEAT	TOWNS WITH LARGE EMPLOYERS		
STUDY AREA	INCORPORATED AREA		

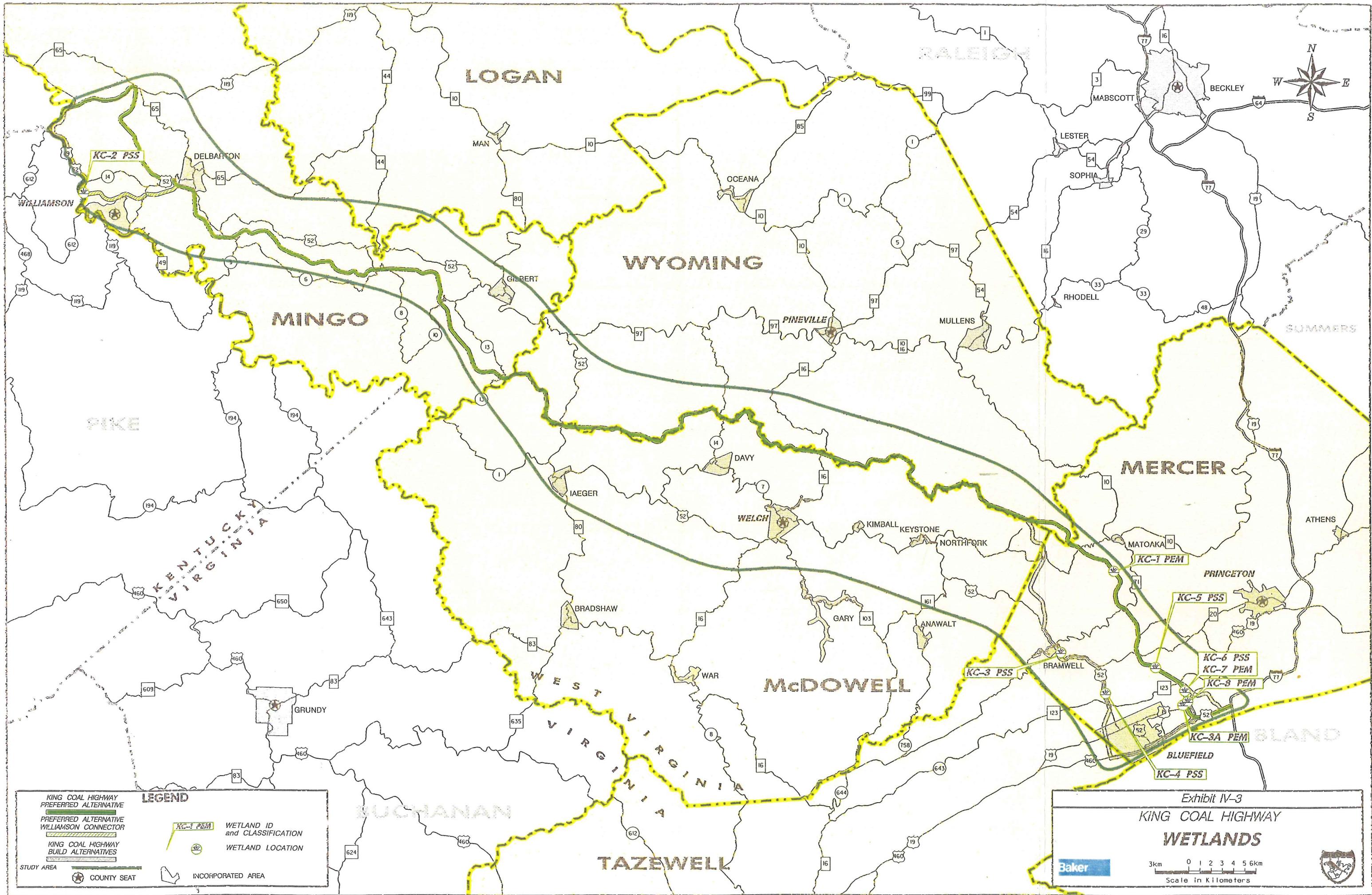
Exhibit IV-1  
**KING COAL HIGHWAY  
 MAJOR EMPLOYERS**

Baker

Scale in Kilometers  
 0 1 2 3 4 5 6 km







**LEGEND**

KING COAL HIGHWAY  
PREFERRED ALTERNATIVE

PREFERRED ALTERNATIVE  
WILLIAMSON CONNECTOR

KING COAL HIGHWAY  
BUILD ALTERNATIVES

STUDY AREA

COUNTY SEAT

INCORPORATED AREA

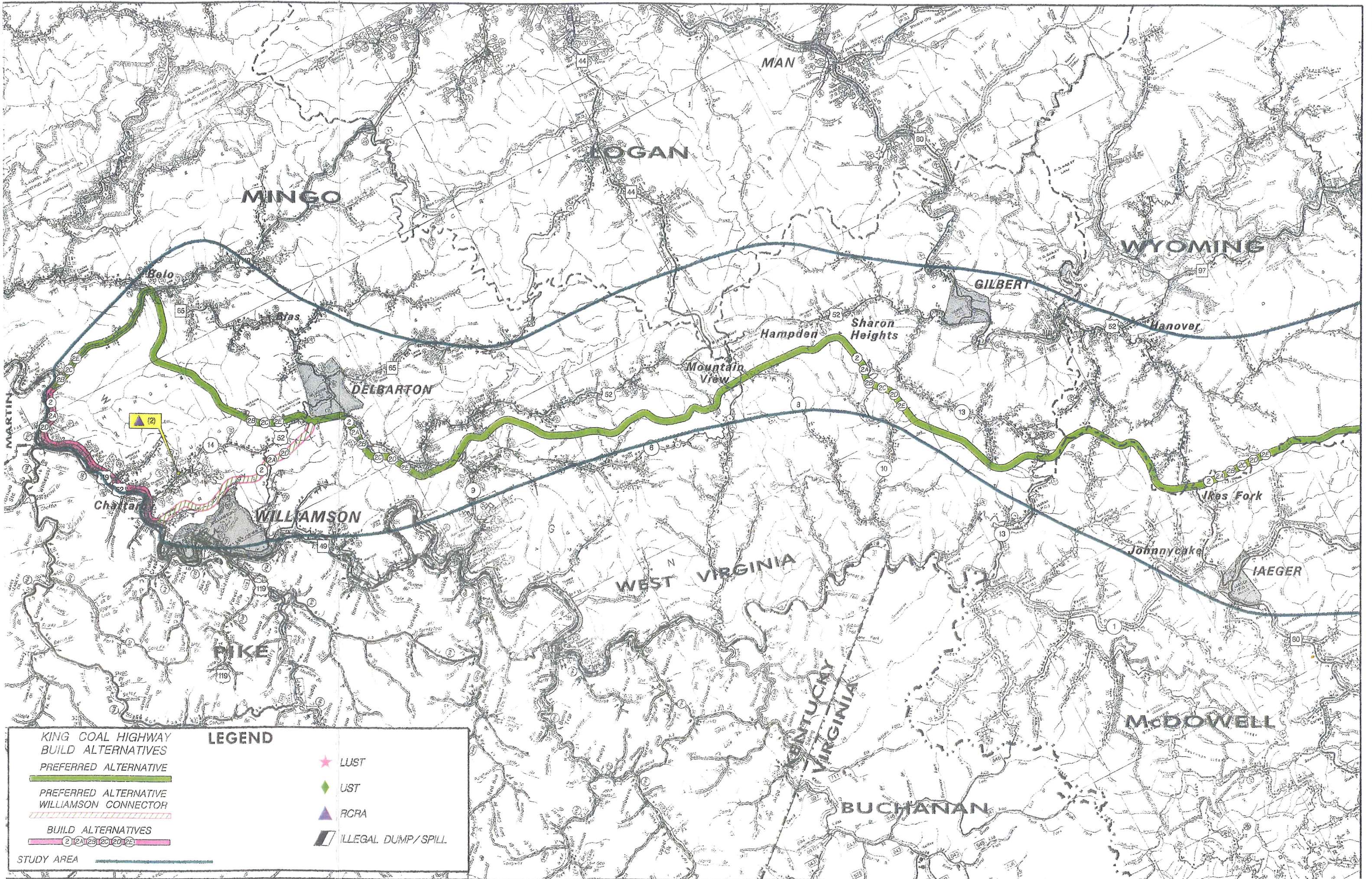
KC-1 PEM WETLAND ID  
and CLASSIFICATION

WETLAND LOCATION

Exhibit IV-3  
KING COAL HIGHWAY  
**WETLANDS**

3km 0 1 2 3 4 5 6km  
Scale in Kilometers

Baker



**KING COAL HIGHWAY BUILD ALTERNATIVES**

**PREFERRED ALTERNATIVE** (Green line)

**PREFERRED ALTERNATIVE WILLIAMSON CONNECTOR** (Red line)

**BUILD ALTERNATIVES** (Pink line with 2A, 2B, 2C, 2D, 2E labels)

**STUDY AREA** (Blue line)

**LEGEND**

- ★ LUST
- ◆ UST
- ▲ RCRA
- ▨ ILLEGAL DUMP/SPILL

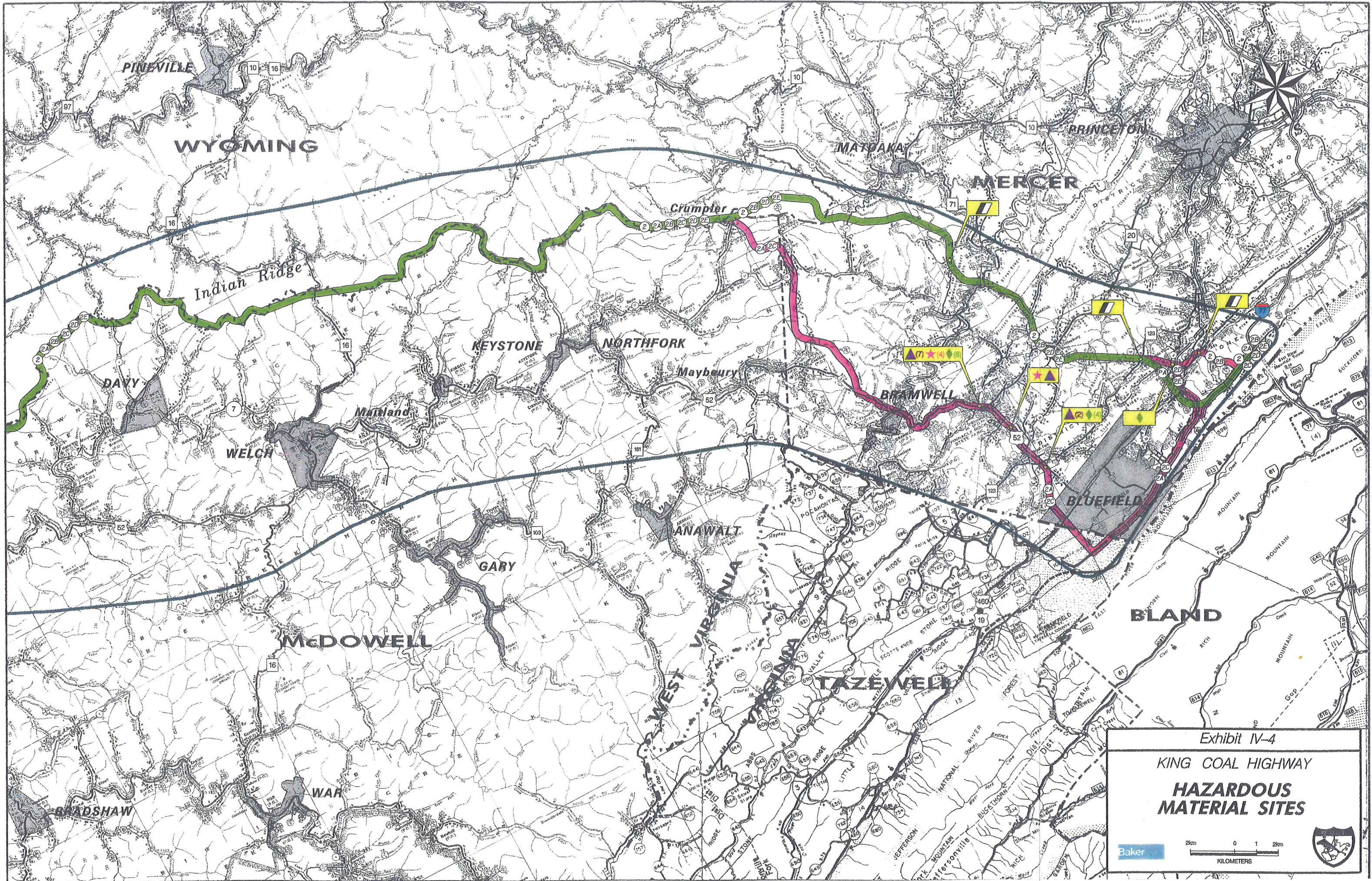
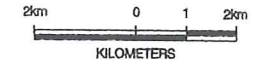


Exhibit IV-4

KING COAL HIGHWAY  
**HAZARDOUS  
MATERIAL SITES**

Baker



## SECTION V: LIST OF PREPARERS

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This document was prepared by the U.S. Department of Transportation, Federal Highway Administration, and the West Virginia Department of Transportation, with assistance from Michael Baker Jr., Inc., consulting engineers and planners, and Highlands Archaeology, Inc., cultural resource specialists.

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### MICHAEL BAKER JR., INC.

Mr. Philip A. Shucet                      B.A. degree with 24 years transportation President                      experience.

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Mr. Robert J. Thrift Senior Designer Improved Roadway Alternative	National Institute for the Certification of Engineering Technicians registration with 35 years experience in all aspects of highway design, development, and construction.
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Mr. Mark S. Fetch Drafting Technician Graphics, CADD, and GIS	Nineteen years experience as a graphics operator for transportation projects.

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historic preservation.

Mr. Stephen J. Roberts  
Vice President  
Cultural Resources

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experience in prehistoric and historic  
archaeology and historic preservation.

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Cultural Resources

B.A. degree in Historic Preservation  
with 14 years experience in historic  
preservation and architectural surveys.

## **SECTION VI: DISTRIBUTION LIST**

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Copies of the Draft Environmental Impact Statement have been distributed to the following agencies and organizations:

### **FEDERAL AGENCIES**

1. Advisory Council on Historic Preservation - Washington, DC
2. Federal Highway Administration - Baltimore, MD and Charleston, WV
3. United States Army Corps of Engineers - Huntington, WV and Norfolk, VA
4. United States Coast Guard - St. Louis, MO
5. United States Department of Agriculture, Natural Resources Conservation Service - Lebanon, VA and Beckley, WV
6. United States Department of Housing and Urban Development - Charleston, WV
7. United States Department of the Interior, Fish and Wildlife Service - Elkins, WV
8. United States Department of the Interior, Office of Environmental Policy and Compliance - Washington, DC
9. United States Department of the Interior, National Park Service - Philadelphia, PA
10. United States Department of Transportation, Secretary of Transportation - Washington, DC
11. United States Environmental Protection Agency, Region III - Philadelphia, PA
12. United States Environmental Protection Agency, Office of Federal Activities
13. (A-104) - Washington, DC

### **STATE OF WEST VIRGINIA**

1. Secretary of State - Charleston, WV
2. West Virginia Department of Transportation District 2 - Huntington, WV; and District 10 - Princeton, WV
3. West Virginia Department of Transportation - Charleston, WV
4. West Virginia Development Office - Charleston, WV
5. West Virginia Division of Culture and History - Charleston, WV
6. West Virginia Division of Environmental Protection - Nitro, WV and Charleston, WV
7. West Virginia Division of Natural Resources - Elkins, WV and Charleston, WV
8. West Virginia Division of Tourism and Parks - Charleston, WV
9. McDowell County Library - Welch, WV
10. Pineville Library - Pineville, WV
11. Princeton Library - Princeton, WV
12. Williamson Public Library - Williamson, WV

**STATE OF WEST VIRGINIA (cont.)**

13. Logan County Commission - Logan, WV
14. McDowell County Commission - Welch, WV
15. Mercer County Commission - Princeton, WV
16. Mingo County Commission - Williamson, WV
17. Wyoming County Commission - Pineville, WV
18. Region I Planning and Development Council - Princeton, WV
19. Region II Planning and Development Council - Huntington, WV
20. Mingo County Redevelopment Authority - Williamson, WV
21. Mingo County Housing Authority - Williamson, WV

**COMMONWEALTH OF VIRGINIA**

1. Virginia Department of Agriculture and Consumer Services - Richmond, VA
2. Virginia Department of Conservation and Recreation - Richmond, VA
3. Virginia Department of Environmental Quality - Richmond, VA
4. Virginia Department of Game and Inland Fisheries - Marion, VA
5. Virginia Department of Historic Resources - Richmond, VA
6. Virginia Department of Transportation - Richmond, VA
7. Cumberland Plateau Planning District Commission - Lebanon, VA
8. Tazewell County Board of Supervisors, Tazewell, VA
9. Tazewell County Library - Tazewell, VA

## SECTION VII: COMMENTS AND COORDINATION

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A public involvement program has been initiated for the King Coal Highway to address the concerns of the federal, state, and local agencies, as well as those concerns expressed by the general public. The public involvement program included two rounds of public informational meetings and a formal Scoping Meeting. Subsequent meetings with resource agencies were held throughout the development of the project in accordance with the Integrated NEPA/404 process.

In March 1996, a Pre-Draft Environmental Impact Statement (PDEIS) was completed. In May 1996, this document was circulated among federal, state, and local agencies and organizations for review and comment. Comments were received by WVDOT throughout the summer and fall of 1996.

Based upon the findings of the King Coal Highway PDEIS and resource agency comments, the number of Build Alternatives to be carried forward in the Draft Environmental Impact Statement (DEIS) was reduced to six. The six retained Build Alternatives maintained a range of options that included only reasonable, feasible, and practicable alternatives, but allowed for a true comparison of impacts among Build Alternatives. The DEIS presented the results of the studies conducted for the six Build Alternatives and the selection of the Preferred Alternative (PA). Additionally, revisions requested by the reviewing agencies in their comment letters submitted to the WVDOT were included in the DEIS and this Final Environmental Impact Statement (FEIS).

The DEIS was signed in December, 1999 and circulated to resource agencies and the public. Three (3) public workshops and three (3) public hearings were held in February and March, 2000 respectively. This FEIS reflects the comments received on the DEIS and results of coordination with resource agencies.

### 7.1 PUBLIC MEETINGS

The public involvement program was initiated in 1992 by a series of four public information meetings conducted by the WVDOT. The purpose of those meetings was to explain the project to local officials and residents and to obtain input regarding local conditions, planned developments, issues of concern, and potential locations for the Build Alternatives. An additional series of public information meetings were held in May of 1998 (Table VII-1). The purpose of these meetings was to obtain public comment on the six Build Alternatives and the selection of a Preferred Alternative (PA). An additional component of these meetings was to elicit low income and minority participation in the alternative selection process and to provide project information as efficiently as possible. Public input and comments were used in the decision making process for selecting the PA. Table VII-1 identifies the dates and locations of the public information meetings.

**Table VII-1  
PUBLIC INFORMATION MEETINGS**

DATE	LOCATION
November 9, 1992	Pineville, West Virginia
November 10, 1992	Welch, West Virginia
November 17, 1992	Princeton, West Virginia
November 24, 1992	Williamson, West Virginia
May 18, 1998	Williamson, West Virginia
May 20, 1998	Welch, West Virginia
May 27, 1998	Bluefield, West Virginia
February 28, 2000	Williamson, West Virginia
February 29, 2000	Welch, West Virginia
March 2, 2000	Bluefield, West Virginia
March 13, 2000	Williamson, West Virginia
March 14, 2000	Welch, West Virginia
March 16, 2000	Bluefield, West Virginia

Public comments received from the May 1998 public information meetings were overwhelmingly favorable for building of the highway. A majority of comments received expressed a strong need for the project. Similarly, public comments stemming from the public workshops and public hearings in February and March, 2000, were also overwhelmingly favorable for building the facility.

## 7.2 SCOPING PROCESS

A formal Scoping Meeting was held on September 16, 1993, in Charleston, West Virginia. Representatives from federal and state agencies, and consultants Michael Baker Jr., Inc., and Howard Needles Tammen and Bergendoff, Inc., were in attendance.

The purpose of the Scoping Meeting included the following:

- ◆ To initiate preparation of the DEIS.
- ◆ To invite early participation of the resource agencies.
- ◆ To identify significant issues within the framework of the DEIS analyses.

- ◆ To develop consensus on appropriate level of analysis for the DEIS.
- ◆ To identify required permits.

This meeting served as a forum for explaining project history and established a standard for future communication with the resource agencies. Minutes from the meeting are included in this section.

## 7.3 RESOURCE AGENCY MEETINGS

An Alternatives Study Meeting was held on May 25, 1995. The purpose of the meeting was to review the alternatives which would be included in the DEIS. In addition, project constraints and issues of concern were discussed. The resource agencies were provided opportunity to express their concerns regarding the project and potential impacts. Minutes from the meeting are included in this section.

A meeting with the US Fish and Wildlife Service (USFWS) and the West Virginia Department of Natural Resources was held on October 13, 1995 to discuss the vegetation and wildlife studies conducted for the DEIS. The USFWS's Habitat Evaluation Procedure (HEP) was used to assess wildlife habitat in the study area. The purpose of the meeting was to:

- ◆ Form a HEP team.
- ◆ Discuss the direction and purpose of the HEP.
- ◆ Determine what the agencies would like to see in the habitat evaluation.
- ◆ Decide on species models to be used in the program.
- ◆ Establish methodologies for the application of the HEP.

Minutes from the meeting are included in this section.

On January 29, 1997, during a meeting with the resource agencies, the WVDOT presented their



decision to reduce the number of Build Alternatives to be carried forward in the DEIS. Eight Build Alternatives were recommended for elimination due to potential extensive impacts to natural, cultural, and socio-economic resources of the study area. Comment letters specific to the reduction of Build Alternatives are included in this section.

#### **7.4 AGENCY CORRESPONDENCE**

Comments received from federal, state, and local agencies were considered during the development of the DEIS. Table VII-2 presents a summary of the comments received prior to the circulation of the

Preliminary PDEIS from those agencies regarding the King Coal Highway. Comments specific to the PDEIS and supporting technical reports are presented in Table VII-3. Table VII-3 provides a summary of the agency comments, WVDOT's response, and identifies the location of the applicable revisions within the DEIS. Comment letters specific to the PDEIS and technical reports are included in this section. Table VII-4 presents a summary of the agency comments on the signed DEIS and technical appendices. Responses to these comments are included in Table VII-4. Copies of the agency letters are provided at the end of this section.

**TABLE VII-2  
AGENCY COMMENTS**

Agency	Date	Comments
US Environmental Protection Agency - Region III	5/31/95	<ul style="list-style-type: none"> <li>◆ Review of the Alternatives Study document completed. The alternatives presented represent feasible options.</li> <li>◆ Encourage the WVDOT to explore other alternatives which will serve to reduce environmental impacts and economic expenditures besides the Build Alternatives.</li> </ul>
	1/20/95	<ul style="list-style-type: none"> <li>◆ Review of revised Purpose and Need Study completed.</li> <li>◆ Does not believe that the information substantiates the stated purpose or need for both the King Coal Highway and the Coalfields Expressway.</li> <li>◆ Project should proceed to the Alternatives Analysis Phase based on need to improve the geometry and safety of the current road system, as well as improving regional and modal linkages, not based on promotion of economic development via tourism.</li> </ul>
	6/22/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Multi-modal options should be examined.</li> <li>◆ Economic development is difficult to support as a purpose and need.</li> <li>◆ Economic decline or lack of growth is complex and has many root causes.</li> <li>◆ Either King Coal Highway or Coalfields Expressway can be justified for transportation concerns. Instead of both highways, WVDOT could evaluate short linkages to US 460 or minor roadway improvements.</li> </ul>
US Army Corps of Engineers Huntington District - Planning Division - Resource Evaluation Branch	5/20/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed, no significant comments at this time.</li> <li>◆ The Department requests continued coordination in order to avoid conflicts with the ongoing flood protection program.</li> </ul>
Operations and Readiness Division, Regulatory Functions Branch	5/9/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Concur with the purpose and need presented in the document.</li> </ul>

**TABLE VII-2 (CONT.)  
AGENCY COMMENTS**

Agency	Date	Comments
US Fish and Wildlife Service- West Virginia Field Office	6/26/95  1/24/95	<ul style="list-style-type: none"> <li>◆ Review of the Alternatives Study document completed.</li> <li>◆ Reserves comment on the alternatives presented by the WVDOT until further information on environmental factors associated with the various alternatives are presented.</li> <li>◆ Information on location of abandoned coal mines should be included in subsequent documentation.</li> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Consideration of impacts should be evaluated as a whole for both the King Coal and Coalfields projects.</li> <li>◆ Subsequent documentation should show primary and secondary impacts associated with new economic development and the expansion of the coal industry from improved highway access.</li> </ul>
US Bureau of Mines	9/23/93	<ul style="list-style-type: none"> <li>◆ Concerned that possible impacts on mineral resources and mineral production facilities are adequately addressed in the DEIS.</li> </ul>
US National Park Service	5/9/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Project is outside the geographical area of the resources that the Service administers.</li> <li>◆ Unless the scope of the project changes, it is not necessary for the Service to be involved in the review process for the project.</li> </ul>
West Virginia Division of Environmental Protection - Office of Water Resources	1/26/95	<ul style="list-style-type: none"> <li>◆ No objections to the revised Purpose and Need Study.</li> <li>◆ Concern about NEPA/404 Process resolved by letter of Division of Highways dated June 5, 1994.</li> </ul>
	5/16/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed. There are no objections to the purpose and need for the project.</li> <li>◆ Division of Highways adopted NEPA/404 Process without consultation of State Resource and Regulatory agencies.</li> </ul>

**TABLE VII-2 (CONT.)  
AGENCY COMMENTS**

Agency	Date	Comments
West Virginia Division of Natural Resources	6/8/95	<ul style="list-style-type: none"> <li>◆ Review of the Alternatives Study document completed.</li> <li>◆ Wildlife impacts resulting from the project cannot be determined until specific alignments are proposed. Following alignment selection, comments will be provided relative to minimizing and mitigating any impacts. Alternatives that do not follow existing roadways within the study area will result in significant losses of terrestrial habitat, will require numerous stream crossings, and will likely result in increased mitigation to compensate for the increased impacts resulting.</li> <li>◆ Agree that there are transportation needs in this region of the state, but do not concur on the need for two large-scale highway projects in the same general area.</li> <li>◆ Recommend that the Coalfields Expressway and the King Coal Highway be considered as a single design unit since they both address the same needs in the same general area.</li> </ul>
West Virginia Division of Natural Resources	5/13/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Requests several text revisions.</li> <li>◆ Concurs with the conclusions of the Purpose and Need Study.</li> <li>◆ Tourism development potential section should include the attraction to the area of sportsmen, due to the growing wildlife populations</li> </ul>
West Virginia Division of Tourism and Parks	5/16/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Improved highways would be of great benefit to the state parks, forests, and wildlife management facilities in the study area.</li> <li>◆ Recreational opportunities available at these facilities would receive much greater exposure as a result of the access an improved transportation system would provide.</li> </ul>

**TABLE VII-2 (CONT.)  
AGENCY COMMENTS**

Agency	Date	Comments
West Virginia Division of Culture and History	9/6/95	<ul style="list-style-type: none"> <li>◆ Review of the Alternatives Study document completed.</li> <li>◆ Cannot determine which alternative will best protect the historic properties until the results of a Phase I Archaeological Survey and an inventory of structures for each of the alternatives are submitted for review.</li> </ul>
	9/5/95	<ul style="list-style-type: none"> <li>◆ The Purpose and Need Study has been received.</li> <li>◆ A determination of the project's effects to cultural resources will be made after the results of a Phase I archaeological survey and/or inventory of structures in the project area are submitted for review.</li> </ul>
Virginia Department of Transportation	6/27/95	<ul style="list-style-type: none"> <li>◆ Review of the Alternatives Study document completed.</li> <li>◆ No comments other than those previously stated in correspondence dated 12/30/94.</li> </ul>
	12/30/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ Is the King Coal Highway part of the proposed I-73?</li> </ul>
Shawnee Parkway Association	4/27/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ No comments on the King Coal Highway project.</li> </ul>
	5/13/94	<ul style="list-style-type: none"> <li>◆ Review of Purpose and Need Study completed.</li> <li>◆ No comments on the King Coal Highway project.</li> </ul>

**TABLE VII-3  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Army Corps of Engineers, Huntington District - Operations and Readiness Division Regulatory Functions Branch (Letter dated 07/10/96)	COE-1	The wetlands to be affected by the proposed highway will need to be field verified by the COE.	A field review of the wetlands impacted by the Preferred Alternative will be coordinated with the COE.
	COE-2	It is recommended that prior to construction, you flag the wetlands and buffer areas that are proposed not to be filled to avoid activities in these areas.	All practicable impact minimization measures will be implemented during construction.
	COE-3	The alternatives analysis should demonstrate how alternatives were considered and how unnecessary environmental impacts were eliminated.	This has been addressed in the <i>Reduction of Build Alternatives Report</i> (January, 1997). A discussion of alternatives considered for the project and alternatives eliminated is included in the DEIS.
	COE-4	The acreage of streams to be affected by the proposed project, both temporary and permanent impacts, must be identified and included in the application for a Section 404 permit.	The application for a Section 404 permit will include all required information.
	COE-5	A Memorandum of Understanding with the SHPO and ACHP should be completed prior to the 404 permit application to avoid delaying the permit evaluation.	A Memorandum of Understanding with SHPO and ACHP will be completed, if required, in accordance with Section 106 of the NHPA prior to the 404 permit application.
	COE-6	All consultation with the USFWS on threatened and endangered species listed in the project boundaries should be concluded prior to the 404 permit application.	Consultation with USFWS is ongoing.
	COE-7	It should be noted that the COE does not have regulatory authority for administering the 100-year floodplain regulation pursuant to the National Flood Insurance Program. This authority lies with the local government using FEMA approved floodplain ordinances.	Comment noted.
	COE-8	The PDEIS for the project is believed to be a thorough analysis with the project and its potential environmental impacts.	Comment noted.

TABLE VII-3 (CONT.)  
 AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Fish and Wildlife Service, WV Field Office (Letter dated 8/27/96) PDEIS Comments	USFWS-1	Potential mitigation for impacts to fish and wildlife should be discussed.	The DEIS includes potential mitigation to fish and wildlife resources.
	USFWS-2	Evaluation of secondary environmental impacts from potential economic development and expansion of the coal industry should be addressed.	Comment noted.
	USFWS-3	Deposition of excess spoil from highway construction should be addressed. Volumes of excess spoil and areas that are unacceptable for deposition of the spoil should be identified in the DEIS.	The DEIS includes a discussion of excess spoil disposal. Volumes of excess spoil and specific areas that are unsuitable for disposition will be identified during the final design stage.
	USFWS-4	The number of stream crossings for each alternative was not provided. The inconsistent information on one wetland within the study area prevents a determination of which alternative has the least impacts to wetlands.	The documents have been revised.
	USFWS-5	Please add the cerulean warbler ( <i>Dendroica cerulea</i> ) and butternut ( <i>Juglans cinerea</i> ) to the list of species of concern that may occur in the project area.	The documents have been revised.
	USFWS-6	We recommend that surveys be conducted to determine the possible presence of Virginia spiraea ( <i>Spiraea virginiana</i> ), federally listed as threatened. We recommend that surveys be accomplished in all suitable habitat that could be affected by the highway alternatives.	Surveys for threatened and endangered species and species of concern will be conducted for the Preferred Alternative and coordinated with the USFWS and WVDNR.
	USFWS-7	The veery ( <i>Catharus fuscescens</i> ) is not a good guild indicator species in this study area since it is uncommon along the western foothills of the Allegheny Mountains.	The veery was chosen as a guild species for the reasons presented in the <i>Natural Environmental Technical Report (NETR)</i> . The HSI model (Sousa, 1982) presents discussion of veery habitat based on studies performed in New York, Tennessee, and North Carolina. The assumption can be drawn, based on studies, that the study area falls within the range of the veery. Additionally, Peterson (1980) and Scott ed. (1987) graphically demonstrate the range of the veery. The demonstrated ranges include the study area.
Natural Environment Report Comments			

TABLE VII-3 (CONT.)  
 AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Fish and Wildlife (cont.)	USFWS-8	Bottomland hardwoods habitat was not included in the land use and land cover types. Information on this habitat type should be given since it provides unique wildlife habitat values.	As stated in the NETR, land cover was identified to Level II of the Anderson classification system (Anderson et al., 1976). The classification "Bottomland Hardwoods" does not appear in that level. Further, the Anderson classifications were converted to USFWS classifications for the purposes of data entry into the HSI. "Bottomland Hardwoods" is not a cover type in the USFWS classification system. Bottomland hardwoods would have been perceived from aerial photointerpretation as Anderson 41 (deciduous forest). Subsequently, this classification was converted to UFOD (upland deciduous forest) in the USFWS classification system.
	USFWS-9	Habitat suitability indices (HSI's) in Table II-6 for wild turkey ( <i>Meleagris gallopavo</i> ) appear low. Using the HSI model for wild turkey without adjustments for regional differences may allow for misinterpretation of impacts among the proposed Build Alternatives and not adequately represent the habitat of the study area.	After a review of the published Habitat Suitability Model: eastern wild turkey (Schroeder, 1985), it was determined that an adjustment to the HSI model to accommodate regional differences in habitat requirements was not necessary. Of the many studies that were used to develop the model, four were conducted in West Virginia. These studies are: Bailey and Finnell (1968); Glover (1948); Healy (1977); and Pybus (1977). Studies conducted in Virginia (Raybourne, 1968) and Kentucky (Wright and Speake, 1975) were used in developing the model. The published model states, "This model was developed for application within the entire range of the eastern wild turkey." Peterson (1980) and Scott (1987) graphically demonstrate the range of the eastern wild turkey. The demonstrated range includes the study area. The low HSI for the eastern wild turkey is directly attributable to a low percentage of canopy closure of the herbaceous strata (variable VCVHE01) recorded in the UFOD. As stated in the NETR, collection of data was accomplished through random sampling. Because of the sampling methodology, it would be inappropriate to choose the most preferred habitat and perform sampling. Within the sample plots for UFOD, the average canopy enclosure of the herbaceous strata was 17.1%. The eastern wild turkey model is very specific about the limitations of herbaceous canopy enclosure. The model states, "It is assumed that areas with less than 20% herbaceous canopy cover will be too sparse to provide adequate food or cover for poultts."



TABLE VII-3 (CONT.)  
 AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Fish and Wildlife (cont.)	USFWS-9 (cont.)		should also be noted that in the UFOD sample plots, the percent canopy enclosure of trees (variable VCVTR01) was 71% and the percent canopy enclosure of shrubs (variable VCVSH01) was 42%. Combination of these enclosures would likely suggest a lower canopy enclosure in the herbaceous strata.
	USFWS-10	The HSIs for brown thrasher and eastern cottontail are inconsistent since these species occupy similar habitat.	While the brown thrasher ( <i>Toxostoma rufum</i> ) and the eastern cottontail ( <i>Sylvilagus floridanus</i> ) occupy similar habitats, many of their life requisites differ. In the case of the eastern cottontail, life requisites have been met by the available habitat, therefore a high SI was assigned. In the case of the brown thrasher, as stated in the NETR, the limiting variable at sample plot locations was the density of woody stems greater than 1 meter (3.05 feet) tall (variable VCVSH02). This is an important variable due to the fact that most brown thrasher nests are located in shrubs and trees greater than 1 meter (3.05 feet) above the ground (Cade, 1986).
	USFWS-11	Alternatives in Table II-7 should not be evaluated or ranked by totaling habitat units for all guild indicator species. The total habitat units for each alternative in the tables of this section should be removed.	The objective of totaling HUs for each Build Alternative was to accommodate comparison. Each Build Alternative was evaluated in like fashion with the same methodology; therefore, a comparison of the results would be appropriate. The NETR, states, "These numbers are used merely as a tool for comparing relative values of habitat between Build Alternatives. To use these HU totals for any other purpose is to use them out of context and render them meaningless."
	USFWS-12	Whether or not a wetland is within a "special state or federal protection area" should not be a criteria defining its values	Comment noted.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Fish and Wildlife (cont.)	USFWS-13	The acreage estimate for wetland KC-7 differs in three places. Wetland acreage figures for alternatives that include this wetland may also be incorrect.	The acreage for this wetland (now KC-4) has been corrected.
	USFWS-14	The number of stream crossings for each proposed alternative was not given so potential impacts to fish and wildlife and their habitat cannot adequately be determined. Also, comparison of impacts to water resources among the proposed alternatives is difficult without this information. Number of stream crossings and level of impacts to aquatic resources should be determined before selection of a preferred alternative.	The potential project effects section for water resources summarizes and details surface water resource occurrences within each Build Alternative. The number of occurrences should be interpreted as surface water impacts. During preliminary design of the Preferred Alternative, impacts to surface water resources will be mitigated through avoidance and minimization measures.
	USFWS-15	The relationship between the proposed highway and any ACOE flood protection project currently under construction or proposed for construction in the Tug Fork Basin should be defined.	The relationship between the King Coal Highway and COE flood protection projects are discussed in the DEIS and <i>Natural Environment Technical Report</i> .
	USFWS-16	Potential project effects to threatened and endangered species should be addressed.	The document has been revised.
	USFWS-17	Constructing the roadway subbase using crushed limestone may not adequately treat acid seeps from road cuts. Use of crushed limestone fines and active treatment techniques such as successive alkalinity producing system should be examined and site specific plans developed.	Mitigation measures for acid drainage will be developed and coordinated with USFWS and WVDEP.
	USFWS-18	Location of disposal of acid producing material should be coordinated with the WVDEP.	The disposal of acid producing material will be coordinated with the WVDEP.
	WV Division of Environmental Protection	The PDEIS and technical report has been reviewed. It has been determined that no formal comments from this agency are needed.	Comment noted.
	(Letter dated 06/07/96)	The PDEIS contains a minor misstatement regarding nonattainment areas.	The document has been revised.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (Letter dated 07/01/97)	WVDCH-1	The <i>Cultural Resources Technical Reports</i> for the King Coal Highway and Coalfields Expressway projects were reviewed simultaneously since the reports are almost identical. Given that the area traversed by the two projects intersects and that very little survey work has been conducted in the southern part of the state, this duplication is acceptable.	Comment noted.
Cultural Resources Technical Report Comments	WVDCH-2	Given the overwhelming differences between the number of potentially eligible resources in Alternatives 1 through 1G and those in Alternatives 2 through 2C, as well as the existing survey of the area, the elimination of the first group from further consideration is entirely justified in order to avoid unnecessary impact to architectural resources. The distinct differences in the number of high, moderate, and low probability acreage between the two groups, as calculated in the predictive model, also strongly supports the elimination of the first group of Build Alternatives.	Comment noted.
	WVDCH-3	The context sections of the report represent an effort to assemble "regional prehistoric and historic contexts which would serve as the basis for assessing both prehistoric and historic archaeological sites identified during later stages of the project." The report should also provide information about the types of cultural resources within the project area that allows DOH to make decisions crucial to the development of their project.	Comment noted.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (cont.)	WVDCH-4	While we agree that the information gathered in this initial report supports the selection of a preferred alternative for the King Coal Highway project, it is our opinion that there are some areas of this report that could be improved. For the purposes of project review, we will not request that the report be revised.	Comment noted.
	WVDCH-5	A basis for information regarding the eligibility of individual resources, this report may be used as a source of general information. There are a number of factual errors which cumulatively detract from its validity as a source of specific prehistoric and historic information for future use.	Comment noted.
	WVDCH-6	Very little of the regional prehistory discussion is specifically useful for future site evaluation efforts due to the absence of illustrations showing the various artifacts described. Unless the reader has a thorough familiarity with the artifact types described, the discussion is difficult to follow.	Comment noted
	WVDCH-7	There is a great deal of research information presented within the prehistoric context about regional artifact types and sub-types. However no efforts have been made to provide a more comprehensive geographical analysis of these typologies that would be useful in identifying the cultural affiliations of sites identified in the current project area. There is a lack of information regarding the period of initial contact between Native Americans and European settlers. No serious attempt is made to delineate with which Native American ethnic populations any prehistoric or protohistoric archaeological sites discovered might be affiliated	Comment noted.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (continued)	WVDCH-8	There are a number of aspects of the regional prehistory context which reflect the general lack of information available about archaeological sites within the project area. The references to Wilkins, Dennison, and other sites should make clear the limited scientific examinations of regional prehistoric sites.	Comment noted.
	WVDCH-9	Section II-C-2 does not reflect the increase in archaeological research efforts being conducted in the study area nor the large number of sites being identified.	Comment noted.
	WVDCH-10	The site integrity evaluation that was conducted for the predictive model is difficult to understand, given that no field evaluations of integrity were performed as part of the study. The integrity of the excluded sites should not have been an issue, rather their existence constitutes data sufficient to contribute to the study.	Comment noted.
	WVDCH-11	The methodology of the predictive model should be reexamined in consultation with our office so as to ensure that the most appropriate sections of the project areas are subjected to archaeological testing.	Comment noted.
	WVDCH-12	Some of the context sections in the regional history are too broad for use in the evaluation of architectural resources. A lack of detailed information about coal mining resources is a distinct weakness in the report. In order to evaluate resources identified during future project surveys, the preparation of small highly developed, historic context reports may ultimately be necessary. We will not request the preparation of any additional historic contexts at this time.	Comment noted.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (continued)	WVDCH-13	Staff reviewers identified some misinterpretations of historic sources in the report. The lack of specific project information was also troubling. The survey data gathered for the Phase I survey for the Preferred Alternative should address some of the data gaps.	Comment noted.
	WVDCH-14	There are instances in the text where conclusions are made on the basis of very limited documentation.	The technical report has been revised.
	WVDCH-15	There are a number of inaccuracies or omissions in the regional historic context, although they are not serious enough to merit a complete revision of the current report.	The technical report has been revised.
	WVDCH-16	The prefix "46" should not be used as part of the identifying number for a structure in the Coal Heritage Survey. This prefix should only be used as part of the identification system for archaeological sites.	The technical report has been revised.
	WVDCH-17	The section of the report which discussed residential structures could have been expanded.	Comment noted.
	WVDCH-18	Disagree with the way the term "vernacular" is used in the text.	Comment noted.
	WVDCH-19	An evaluation of the significance of company towns would be most successful in the form of an evaluation of the various building forms and their arrangement as planned communities. Their significance might also be based on their historic importance relative to the industries involved, as well as their reflection of the greater economic development of the region.	Comment noted.

**TABLE VII-3 (CONT.)**  
**AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (continued)	WVDCH-20	For residential structures, we anticipate that the majority of the buildings that will be identified as part of the project survey will date from the period in which the industrialization of the area occurred. Any buildings that predate the industrial period would probably be considered to be significant.	Comment noted.
	WVDCH-21	Only a very generalized discussion of the types of industrial resources that might be found in the study area is listed in the report. No attempt is made to describe the specific attributes of any industrial resource. If any industrial resources are identified during the project survey, a historic context report will probably need to be prepared in order to evaluate their significance.	Comment noted.
	WVDCH-22	We request that copies of the marked up quad maps showing the location of historic buildings used for the project survey be submitted to our office.	Comment noted.
	WVDCH-23	We have evaluated the <i>Reduction of Build Alternatives Report</i> and concur with the methodology used to evaluate the project impacts to architectural resources. With the completion of the <i>Cultural Resources Technical Report</i> and the initial field survey of the project area that has occurred, we are satisfied that WVDCH has met the obligations of 36 CFR 800.4(a)(2) for architectural resources.	Comment noted.

**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (continued)	WWDCH-24	The next step in meeting the requirements of the review process will be a phase I level architectural survey of the Build Alternatives carried forward to the DEIS stage. It is not necessary to rewrite the historic context that was prepared. We suggest that the survey be designed to produce brief Historic Property Inventory forms for the surveyed resources to identify additional research necessary to conduct eligibility evaluations.	Comment noted.
	WWDCH-25	The preparation of small, in-depth historic context reports will facilitate the evaluation of resources in this part of the state. The preparation of any additional historic context reports may be deferred until the initial Phase I architectural survey of the Build Alternatives has been prepared and reviewed. We would like to develop this survey in close consultation with your office in order to facilitate the review process for this project.	Comment noted.
	WWDCH-26	For the identification of potential prehistoric archaeological resources, there are some aspects of the predictive model's methodology that we believe should be reexamined before it is field-tested. It is our opinion that the modeling had already produced results sufficient to allow the selection of a Preferred Alternative using a reasonable level of consideration for archaeological potential. A Phase I archaeological survey should be conducted for the Preferred Alternative. The identification of the potential historic archaeological resources can use the regional history as a source of information, but should be supplemented by the field survey and the building locations found on early 20th century USGS maps.	Comment noted.



**TABLE VII-3 (CONT.)  
AGENCY COMMENTS ON THE PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
WV Division of Culture and History (continued)	WVDCH-27	The survey methodology used for the Preferred Alternative archaeological and architectural surveys should meet the existing 1991 guidelines and should address changes recommended in the new draft guidelines.	Comment noted.

**TABLE VII-4  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Army Corps of Engineers, Huntington District - Operations	COE-1	The DEIS has been reviewed and appears to be adequate at this time. You are reminded the placement of fill material into waters of the United States will require a Department of the Army permit under Section 404 of the Clean Water Act.	Comment noted.
US Department of the Interior, Office of Environmental Policy and Compliance	DOI-1	Pinnacle Rock State Park has received grant assistance from the Land and Water Conservation Fund program in order to acquire and develop portions for outdoor recreation purposes. The Park is therefore protected under Section 6(f) of the Land and Water Conservation Fund Act. As such, no part of the Park can be converted to anything other than for outdoor recreational use without the approval of the Secretary of the Interior. Although "Build Alternatives" 2A and 2C include Pinnacle Rock State Park, they do not require actual use of parkland so it is not anticipated that these alternatives will trigger a conversion of the Park area. Should the alignment for either alternatives change so that they impact the Park in any way, you are advised to contact the West Virginia Land and Water Conservation Fund State Liaison Officer, Mr. Fred Cutlip at the following address: West Virginia Development Office, Community Development Division, 1500 Kanawha Boulevard East, Charleston, West Virginia 25305-0311.	Comment noted. The Preferred Alternative avoids Pinnacle Rock State Park.

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Department of the Interior, Office of Environmental Policy and Compliance (continued)	DOI-2	<p>The alternatives do not appear to efficiently improve system linkage among communities in the study area. The project was to address the low level of service for U.S. 52, which links 35 towns in the study area. The Preferred Alternative is removed from many of these communities and their educational institutions, particularly in the eastern half of the project. It appears that much local transportation will still occur on secondary roads with a low level of service.</p>	<p>The proposed King Coal Highway is located within mountainous terrain. The majority of communities and towns within the study area are located in the lower portions of stream valleys. The Preferred Alternative purposely avoids impacting the towns and communities it will serve by traversing ridges and staying above valleys where communities are located. Prior to publication of the DEIS, alternatives were studied during the P-DEIS stage of this project and eliminated from further study, as documented in the <i>King Coal Reduction of Build Alternatives Report</i> (January 1997).. These additional alternatives were eliminated from further study due to the significant impacts they would have on towns and communities. These impacts included the displacement of substantial portions of communities (residential, commercial, and industrial) that the facility was to serve, disruption in community cohesion, and substantial cultural resource and floodplain impacts.</p> <p>The King Coal Highway's purpose and need is discussed in detail in Section 1.3 of the FEIS. In addition to providing a facility that will improve system linkage among communities in the study area the facility will:</p> <ol style="list-style-type: none"> <li>1. Provide a transportation system with minimal geometric constraints to that which currently exist for the study area routes (i.e. sharp curves, steep grades, 2-lane "No Passing Zones", narrow lanes/shoulders, bridge restrictions, residential/commercial involvement);</li> <li>2. Minimize conflict between interstate/intercounty traffic and local traffic;</li> <li>3. Minimize conflict between truck traffic (i.e. coal trucks) and local traffic, residential areas, and towns;</li> <li>4. Decrease travel times within the study area and between project termini for interstate travelers.</li> </ol>

TABLE VII-4 (CONT.)  
 AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Department of the Interior, Office of Environmental Policy and Compliance (continued)	DOI-2 (cont.)		<p>between project termini for interstate travelers;</p> <ol style="list-style-type: none"> <li>5. Develop a transportation system that at least operates at Level of Service (LOS) C for both present and projected traffic volumes;</li> <li>6. Minimize/reduce accident rates within the study area, specifically those types of accidents that frequently lead to injury or fatality;</li> <li>7. Reduce emergency response times within the study area for ambulance, police, and fire protection services;</li> <li>8. Develop a transportation system that more safely and efficiently interrelates with the existing railroad system, specifically as it relates to the shipping of coal resources;</li> <li>9. Develop a transportation system that provides safe and efficient access for the many towns and communities within the study area to the regional roadway network such as Interstate 77 (I-77), US 460 (Corridor Q), and US 119 (Corridor G).</li> <li>10. Develop a transportation system that supports and is a part of a broader and more comprehensive economic development plan for the study area by improving access to the local and regional communities and economies.</li> </ol>
	DOI-3	The Preferred Alternative had more watershed encroachments than five other alternatives. Only one alternative has more encroachment. The Preferred Alternative (25.47 miles) and Alternative 2B have the greatest surface water involvement. The Preferred Alternative has the greatest acreage of wetland	Comment noted. During the design phase of the project coordination with state and federal resource agencies will be ongoing.

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
<p>US Department of the Interior, Office of Environmental Policy and Compliance (continued)</p>	<p>DOI-3 (cont.)</p>	<p>involvement (17.44), including two of the highest quality wetlands in the study area. The Fish and Wildlife Service (FWS) recommends that every effort be made to avoid impacts to the aquatic system during the alignment process. Mitigation for stream loss should be based on natural stream restoration design principles (Rosgen, 1996) and occur, if possible, within the same watershed where impacts occurred. Coordination of design for stream relocations and construction of mitigation wetlands should involve the FWS.</p>	
	<p>DOI-4</p>	<p>The FWS requested a discussion in the DEIS relating to disposition of excess spoil from highway construction in our comments on the pre-draft EIS on August 27, 1996. The DEIS does not appear to contain any mention of excess spoil disposal although the response to our comments (Pages VII-9) stated that there would be one. We understand that details will be explored during the design stage but a discussion of general types of areas planned for disposal purposes and areas to avoid should be included in the DEIS. Considering the abundance of surface mines in the study area, the FWS recommends that abandoned or unreclaimed surface mines be considered for disposal of excess spoil.</p>	<p>Comment noted. This discussion is included in Section 4.22.6, which states "during construction, the contractor will make every effort to utilize suitable excess material (rock and soil) for forming the base of embankments, connecting roads, ramps, and approaches. If there is excess material that is unsuitable, or if there is a surplus, the contractor will prepare a waste disposal plan (WV DOT, 1994). The plan will identify the location, size, and details of the site(s) as well as discuss acceptable waste and instructions for stabilization and closure. The contractor will not utilize "sensitive areas" identified on the construction plans for waste disposal. This plan will be reviewed and approved by WV DOT prior to implementation.</p> <p>Existing conditions that could pose problems to the constructability of the King Coal Highway (e.g. large cuts and fills, rock fall areas, deep-mined and strip-mined areas, stream crossings and relocations) will be handled individually during the final design phase. The final alignment will be placed in the most practical location to avoid construction within problem areas and sensitive natural resource areas. In-depth geotechnical research, reconnaissance, and core borings will be used to make sound engineering judgments to solve construction problems as they arise."</p>

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Department of the Interior, Office of Environmental Policy and Compliance (continued)	DOI-5	In the FWS's January 24, 1995, comments on the Purpose and Need document, we requested a discussion in the primary and secondary impacts section on the coal industry as a result of this project. Even though it was stated in the DEIS in Table III-7, page III-10 and in the Environmental Appendix on pages 81 and 83, that the coal industry was the major employer of three watersheds or was one of the largest employers for each county in the study area, no discussion of impacts from the expansion of the coal industry relating to the highway was included in the DEIS. The FWS believes this discussion is warranted under the secondary impacts section of the DEIS.	Comment noted. A discussion of the potential relationship between the King Coal Highway and secondary impacts on the coal industry is included in Section 4.1.2.2 of the FEIS.
	DOI-6	Table III-20, Rare, Threatened and Endangered Species, Page III-36. The C2 designation is no longer applicable. The species in the table designated as C2 are now considered species of concern. Species of concern are those for which the FWS has information indicating that protection under the Endangered Species Act may be warranted, but for which it lacks sufficient information, on status and threats to proceed with preparation of a proposed listing. On December 5, 1996, the FWS announced their final decision to discontinue efforts to maintain a national list of these species. While species of concern lack formal recognition as candidates (C2) for possible future listing under the Endangered Species Act, the FWS and the West Virginia Division of Natural resources encourage continued consideration of these species in environmental planning.	Comment noted. Table III-20 has been revised to reflect this change.
	DOI-7	Section 4.15.2 Impact Assessment, Page IV-50 paragraph two. Line one should be changed to read" . . . the King Coal Highway will not have an adverse effect on	The text has been revised.

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
US Department of the Interior, Office of Environmental Policy and Compliance (continued)	DOI-7 (cont.)	critical habitat." Line two should state: "Since there is potential Indiana Bat summer habitat throughout the project area and to avoid the possibility of incidental take.	
West Virginia Development Office	WVDO	Our office has reviewed the project for environmental impacts associated with Section 6F (c) of the Land and Water Conservation Fund Act of 1965 and has not found any areas of concern.	Comment noted
WV Division of Environmental Protection - Office of Air Quality and Planning	WVDEP-1	Table III-24 of the DEIS and Table 80 (Environmental Appendix) are outdated.	Table III-24 in the FIES and Table 80 (Volume I) have been revised.
Advisory Council On Historic Preservation	ACHP-1	On December 28, 1999, we received notification and supporting documentation regarding the adverse effect of the referenced project on properties eligible for inclusion in the National Register of Historic Places. Based upon the information provided and the criteria included in Appendix A of our regulations, we do not believe that our participation in the consultation to resolve adverse effects is needed. Pursuant to 36 CFR 800, 6(b)(iv), you will need to file the final MOA, developed in consultation with the WVSPPO, and related documentation at the conclusion of the consultation process. The filing of the MOA is required in order for FHWA to complete its compliance responsibilities under Section 106 of the National Historic Preservation Act.	Comment noted.
USDA - Natural Resource Conservation Service	NRCS-1	Table 7 (Volume 1) and Table III-13 in the DEIS need to be revised as detailed in our letter.	Comment noted. Table III-13 and Table 7 have been revised.
	NRCS-2	Please reword Volume 1 (p. 111) and Section 14.1.2 Soils section of the DEIS as per that detailed in our letter.	Comment noted.

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
USDA - Natural Resource Conservation Service (cont.)	NRCS-3	Please insert the word "Southern" in Volume 1 Section 14.2.3 Soils and Section 3.2.4.3 of the DEIS, where identified in the letter	Comment noted. The text has been revised.
	NRCS-4	DEIS Section 3.2.3.3 and Section 12.3.3 (Volume 1) makes no mention of the NRCS Public Law-566 watershed protection and flood prevention project in the Brush Creek Watershed. A description of the Brush Creek Watershed should be included in the DEIS sections noted above.	The DEIS has been revised (Section 3.2.3.3) to include a description of the NRCS Public Law-566 watershed protection and flood prevention project in the Brush Creek Watershed.
	NRCS-5	DEIS Section 4.12.2.2 and Section 12.4.2 (Volume 1) makes no mention of potential impacts of the proposed highway on the Brush Creek Watershed Project. The DEIS should analyze the effect of the proposed highway with regard to the generation of increased runoff and sediment to the Brush Creek Watershed, its floodwater retarding dams, and channel work. Measures to forestall potential short and long term impacts to the Brush Creek Watershed should be described. Specifically, we recommend that no fill material be placed within the flood pools of watershed dams, that appropriate sediment and erosion control practices be applied, and that blasting near dam sites 9 and 9A be limited to protect their structural integrity.	Comment noted. The following text has been added to Section 4.12.2.2 and Section 12.4.2 of Volume 1: The Preferred Alternative will traverse the upper reaches of the Brush Creek watershed, which includes a NRCS watershed protection and flood prevention project. Potential impacts from increased sediment runoff as a result of construction and operation of the Preferred Alternative will be addressed during detailed design which will also include appropriate geotechnical investigations. During the design and construction phase of the project, no fill material will be placed within the flood pools of watershed dams, and appropriate sediment and erosion control practices will be employed. Structures (e.g., dams) that may be sensitive to blasting will be identified and measures will be taken to protect their structural integrity. Also, measures to minimize impacts to streams and sensitive flood control resources will be evaluated and employed where necessary. Examples of such measures include: the utilization of best management practices for erosion and sedimentation control during construction and operation of the facility; open box culverts; and bridging.
U.S. EPA Region III	EPA-1	EPA recognizes that the level of detail provided on the potential environmental impacts of the project was limited by the length and width of the proposed transportation corridor. We also recognize that as the right-of-way	The West Virginia Division of Highways is committed to minimizing potential environmental impacts due to construction of the proposed facility and will coordinate with the appropriate Federal and State environmental agencies during the preliminary



**TABLE VII-4 (CONT.)**  
**AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
U.S. EPA Region III (cont.)	EPA-1 (cont.)	<p>(ROW) is identified within the proposed corridor, it will be more feasible to provide a specific evaluation of the potential environmental effects of the project, and provide an opportunity for the avoidance of many of the impacts identified in the Draft EIS. However, we are concerned that the identification of the ROW and a more detailed evaluation of the potential environmental impacts of the proposed highway will not occur until after the NEPA process has been completed and the opportunity for the public to comment on the impacts of the proposed project is closed. We suggest that close coordination take place among the West Virginia Department of Highways, the Federal and State environmental agencies, and the public during the preliminary and final design of the project. In addition, we suggest that additional NEPA documentation be prepared if significant issues arise during the design process.</p>	<p>and final design phases of this project. In the event that "significant issues" arise during later phases of this project, WVDOH will take the necessary measures to insure its compliance with the NEPA process, including additional NEPA documentation if necessary.</p>
	EPA-2	<p>As proposed the Preferred Alternative will potentially impact 25 miles of stream corridor. We recognize that the stream mileage impacted will be reduced by the narrowing of the study corridor from 1000' to an approximate 350' right-of-way. However, given the length of this project, we suggest that all efforts to avoid the relocation, enclosure, or filling of streams be undertaken. In cases where impacts are unavoidable, we suggest that geomorphic techniques (such as Rosgen) for stream relocation and enhancement be employed. All compensatory measures should be clearly outlined in the Final EIS and a natural resources compensation plan, as well as the Record of Decision (ROD). These mitigation measures should be tracked throughout the design and construction of the project.</p>	<p>Comment Noted. Avoidance and minimization of impacts to streams, wetlands, and floodplains has been an on-going process in the selection of the Preferred Alternative. As part of the NEPA process, a Section 404 permit will be prepared for the Preferred Alternative. The permit will identify all stream crossings requiring bridges and culverts in addition to wetland encroachments. The 404 permit shall also identify High Quality streams and water bodies. General mitigation measures, as described in Section 4.10.3 of the FEIS will be carried forward in the ROD as commitments in the mitigation of surface water impacts.</p>

**TABLE VII-4 (CONT.)**  
**AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
U.S. EPA Region III (cont.)	EPA-2 (cont.)	<p>In addition to avoidance of impacts to stream systems, we suggest that efforts to avoid and minimize impacts to wetlands be incorporated into the design of the proposed project. A discussion of the efforts to avoid and minimize wetland impacts should be provided for the Section 404 permit evaluation. Compensatory mitigation should be outlined in the Final EIS and ROD, and tracked throughout the design and implementation of the project.</p>	
	EPA-3	<p>The Draft EIS provides little information on the potential impacts to community resources and community cohesion. Specifically, there was very little discussion of the potential impacts to the four cemeteries found in the Preferred Alternative Corridor. In fact, cemeteries were included under historic resources, but not under community facilities. We suggest that a discussion of how the DOH will avoid, minimize or mitigate impacts to the cemeteries be included in the Final EIS.</p> <p>Other community resources were identified as potentially impacted. However, due to the large corridor sizes, details of the impacts were not given. We suggest that additional information be provided in the Final EIS, including mitigation measures to be undertaken if any community resource is impacted. Likewise, we suggest that measures to mitigate any community cohesion impacts be discussed in the Final EIS.</p>	<p>A signed Programmatic Agreement among WVDOH, FHWA, and SHPO for cultural resources is included in the Appendix of this FEIS. The Programmatic Agreement addresses Section 106 issues and conditions.</p> <p>With respect to the concern that the Preferred Alternative may potentially impact community cohesion, the proposed King Coal Highway is located within mountainous terrain. The majority of communities and towns within the study area are located in the lower portions of stream valleys. The Preferred Alternative was developed to purposely avoid impacting the towns and communities it will serve by traversing ridges and staying above valleys where communities are located. Prior to publication of the DEIS, six (6) additional Build Alternatives were studied during the Pre-DEIS stage of this project and eliminated from further study, as documented in the King Coal Reduction of Build Alternatives Report (January 1997). These six (6) alternatives, in addition to the six carried forward in the DEIS, were evaluated and eliminated from further study due to the impacts they would have on towns and communities. These impacts included the displacement of substantial portions of communities (residential, commercial, and industrial) that the facility was to serve, disruption in community cohesion, and substantial cultural resource and floodplain impacts. In summary, the Preferred Alternative was selected, in part, due to its avoidance of community disruption.</p>

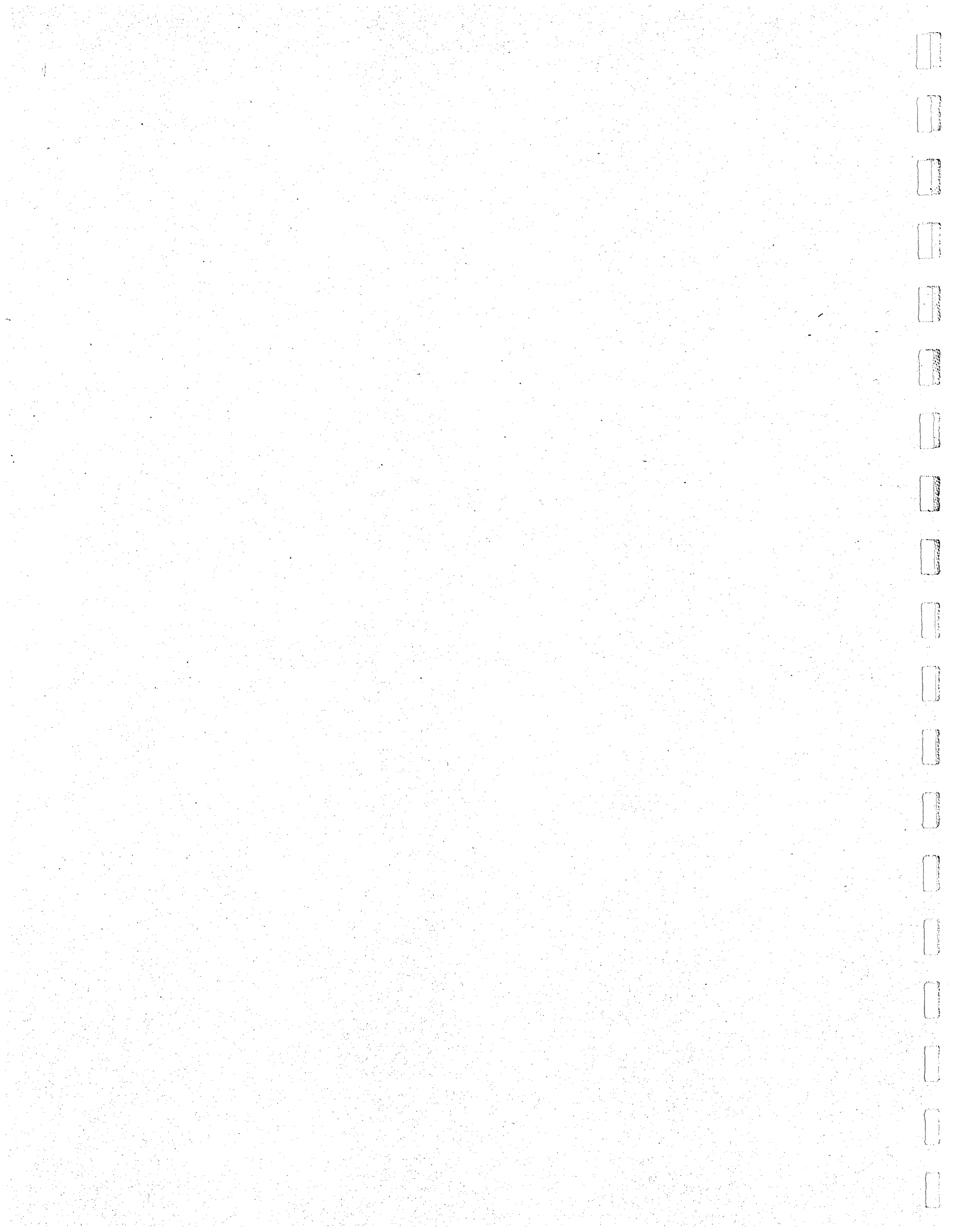
**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
U.S. EPA Region III (cont.)	EPA-4	<p>EPA recognizes the concerns for economic development in the study area. We also recognize the potential for improved access to encourage additional development in the communities along the proposed facility. EPA would be happy to work with you to investigate ways to ensure that the future development in the region will occur in a manner that avoids the negative economic, social, and environmental impact of unmanaged growth.</p>	<p>Comment noted.</p>
	EPA-5	<p>The proposed alternative has the potential to impact over 9000 acres of forest habitat. We strongly suggest that you prepare a compensation plan for the replacement, enhancement and preservation of forest habitat in the region. From information provided in the Draft EIS, many previously strip mined areas could be targeted for re-vegetation activities. In addition, high quality forested habitat threatened by development or mining could be acquired as compensation for the impacts of the proposed facility. This compensation, which can be funded with federal transportation funds, should be outlined in the Final EIS and ROD, and in a natural resources compensation plan.</p> <p>We suggest that a plan for the compensation of all impacted natural resources be prepared for the entire 96 mile corridor. This plan should include specific activities that will be taken to compensate or mitigate for the impacts of the highway. Efforts should consider integrating stream, wetland, and terrestrial mitigation in a manner which enhances the wildlife value of all the resources. This compensation plan will allow for the tracking of mitigation commitments.</p> <p>In addition to compensatory mitigation, any commitments made to avoid or minimize impacts to natural resources</p>	<p>During the design phase of the project, coordination will be initiated with appropriate Federal and State agencies. Documentation will be developed for the implementation of any necessary mitigation items and will include upland habitat if warranted. A terrestrial, or natural resource compensation plan, will be explored and discussed among the concerned agencies at that time.</p>

**TABLE VII-4 (CONT.)  
AGENCY COMMENTS ON THE SIGNED DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Reviewing Organization	Comment Number	Reviewing Organization Comment	Response
U.S. EPA Region III (cont.)	EPA 5 (cont.)	such as streams or wetlands would be identified and tracked through the final design and construction processes. We suggest the use of a mitigation tracking system similar to the one utilized on the Mon Fayette Transportation Project in Pennsylvania.	

**AGENCY COMMENT LETTERS**  
**ON THE**  
**DRAFT ENVIRONMENTAL IMPACT STATEMENT**  
**AND**  
**TECHNICAL REPORTS**  
**1999**



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DOT/FHWA/WV DIVISION Fax:3043475103

TEL:1 304 558 1334 P.002  
FEB 18 2000 14:44

# Advisory Council On Historic Preservation

The Old Post Office Building  
1100 Pennsylvania Avenue, NW, #808  
Washington, DC 20004

JAN 10 2000

Mr. Henry E. Compton, P.E.  
Right-of-Way & Environment Specialist  
West Virginia Division, Federal Highway Administration  
U.S. Department of Transportation  
700 Washington Street East, Suite 200  
Charleston WV 25301

REF: Mingo, Logan, McDowell, Wyoming and Mercer County Historic Properties  
Construction of King Coal Highway  
Federal Project DPS-0012(013); State Project X169-SHA/WN-1 03

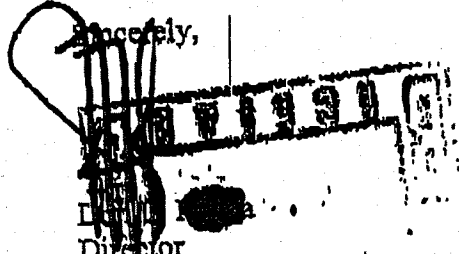
Dear Mr. Compton:

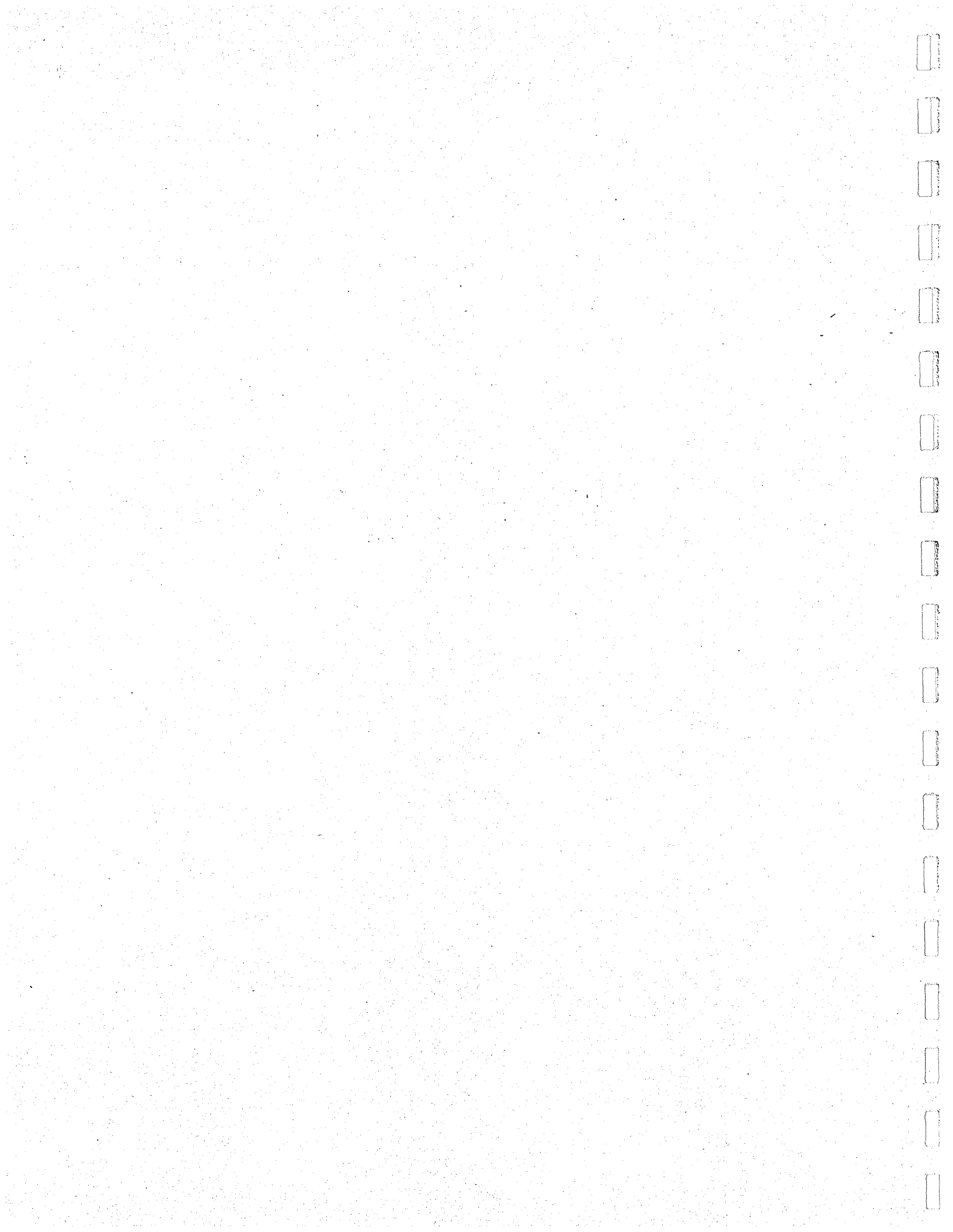
On December 28, 1999, we received your notification and supporting documentation regarding the adverse effect of the referenced project on properties eligible for inclusion in the National Register of Historic Places. Based upon the information you provided and the criteria included in Appendix A of our regulations, "Protection of Historic Properties" (36 CFR Part 800), we do not believe that our participation in the consultation to resolve adverse effects is needed. However, should circumstances change and you determine that our participation is required, please notify us.

Pursuant to 36 CFR 800.6(b)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the West Virginia State Historic Preservation Officer (SHPO), and related documentation at the conclusion of the consultation process. The filing of this MOA with the Council is required in order for the Federal Highway Administration to complete its compliance responsibilities under Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions, please contact Ralston Cox at (202) 606-8528 or via eMail at rcox@achp.gov.

Sincerely,

  
Ralston Cox  
Director  
Office of Planning and Review





Natural  
Resources  
Conservation  
Service

75 High Street  
Room 301  
Morgantown, WV  
26505

Phone:  
(304)284-7540

Fax:  
(304)284-4839

February 14, 2000

Mr. James E. Sothen, P.E.  
Director, Engineering Division  
WV Dept. of Trans., DOH  
1900 Kanawha Boulevard East  
Building Five, Room 110  
Charleston, WV 25305-0430

**RECEIVED**

FEB 16 2000

RE: Draft Environmental Impact Statement  
King Coal Highway  
State Project X169-SHA/WN-1.03  
Federal Project DPS-0012(013)  
Mingo, McDowell, Wyoming and Mercer Counties

ENGINEERING DIVISION  
WV DOH

Dear Mr. Sothen:

This is in response to your letter of January 14, 2000 to Mr. Rob Pate, NRCS Soil Scientist, Beckley, West Virginia, requesting a review of the above referenced Draft EIS. Our comments are as follows:

1. Volume 1, Table 7, page 14 has been updated and should read:

<u>County</u>	<u>Prime Farmland Soils</u>	<u>SW Important Soils</u>
Logan & Mingo, WV*	Allegheny loam Chavies fsl Chagrín loam Sensabaugh	Craigsville vgrsl Yeager fsl Lobdell
McDowell, WV	Chavies (Cv)	Lily loam (LlC) Yeager (Ye)
Wyoming, WV	Chagrín RF (Cg) Chagrín (Ch)	Monongahela (MgB) Gilpin-Lily (GpC) Pineville-Buchanan (PbC) Lobdell (Ho)
Mercer, WV	Kanawha fsl (Ka) Gilpin sil (GaB) Lily loam (LlB) Shouns sil (ShB) Chagrín loam (Cm) Lobdell loam (Lo)	Calvin (CaC, CaD), Calvin-Berks (CbC, CbC3, CbD), Clymer-Gilpin (CnD), Coolville-Latham (CtC, CtD), DeKalb (DeC, DeD), Ernest (ErB, ErC, ErD), Frederick (FkC, FrC, FrD), Gilpin (GaC, GaD), Gilpin-Berks (GbC, GbC3, GbD), Lily (LlC, LlD), Monongahela (MgB, MgC), Murrill (MuC, MuD), Shouns (ShC, ShD), Tilsit (TtB, TtC), Westmoreland (WeC, WeD).

Tazewell, VA Allegheny (1A,1B), N/A  
Coursey (17B),  
Frederick (20B,21B,22B),  
Groselock (26B), Guernsey  
(27B), Melvin (32A), Murrill  
(34B), Newark-Lindsay (35A),  
Philo (41A), Pisgah (42B,43B),  
Pope (45A), Purdy (47A),  
Timberville, (48B), Wolfgap (54)

\*Soil Survey is in progress, farmland soils in Logan and Mingo Co., WV, are preliminary and may be subject to change.

Tazewell, VA Important Farmland information obtained from Jeannette Freyman, USDA-NRCS Resource Soil Scientist, 75 Hampton Boulevard, Christiansburg, VA 24073. Please add this name to your mailing list. Also note that the address for Rob Pate has changed to 465 Ragland Road.

2. Volume 1, page 111, section 14.1.2 Soils should read:

Soil surveys of Mercer and Wyoming counties, West Virginia were obtained from the NRCS. The soil survey for Logan and Mingo counties, West Virginia, is in progress. Soil Surveys for McDowell County, West Virginia, and Tazewell County, Virginia are just recently completed. Because these soil surveys were not available at the time of this study, general soil maps of West Virginia and Virginia were obtained from NRCS offices. The general soil maps illustrate the major soil associations found within counties where no specific soil survey had been completed. County soil surveys, general soil maps of each state, NRCS established soil descriptions, and interviews with NRCS conservationists, were used to identify soil types with the potential erosion and landscape stability hazards within the study area.

3. Volume 1, page 115, section 14.2.3 Soils:

(Appalachian Ridges and Valleys resource region) should read (Southern Appalachian Ridges and Valleys resource region).

4. DEIS, Table III-13, page III-16: This table should be the same as 1 above.

5. DEIS, page III-30, section 3.2.4.3 Soils: This should be the same as 3 above.

6. DEIS, Section 3.2.3.3 Flood Control Projects, page III-28 and Volume I, Section 12.3.3 Flood Control Projects, page 101.

There is no mention of the NRCS administered Public Law-566 watershed protection and flood prevention project in the Brush Creek Watershed, Mercer County, WV. The 22,300 acre watershed is drained by Brush Creek and its two major tributaries, North Fork and South Fork. The project was planned by local Sponsors and the NRCS in the late 1950's, authorized for installation in 1960, and all project measures, as supplemented, were completed by 1986. The project consists of 12,060 acres of conservation land treatment, six single purpose flood retarding dams, three multiple purpose flood retarding-municipal water supply dams, one multiple purpose flood retarding-recreation dam, and 5.86 miles of channel work (see project map attached). Additionally, the NRCS is currently conducting a study to develop flood control alternatives along the South and Middle Forks, in the upper end of the watershed.

A description of the Brush Creek Watershed Project should be included in the DEIS sections noted above.

7. DEIS, Section 4.12.2.2 Flood Control Projects, page IV-35 and Volume I, Section 12.4.2 Flood Control Projects, page 106.

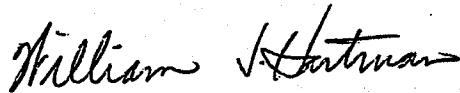
No mention is made of potential impacts of the proposed highway on the Brush Creek Watershed Project. Because of the scale and quality of the highway alignment maps contained in the DEIS, it is difficult to determine the exact routing through the Brush Creek Watershed. However, our review indicates that the preferred highway alternative will enter the upper (west) end of the watershed near Littleburg and exit the south border near Stony Gap. This alignment would cross the upper reaches of the North Fork, Middle Fork, and South Fork of Brush Creek. The highway's apparent location, with respect to watershed structures, is upstream of dam sites 14 and 15 on the North Fork, and dam site 19A on the Middle Fork, and downstream of dam site 9 on the South Fork. Additionally, this alignment is above existing channel work on the South Fork and in the current flood prevention study area on the South Fork.

The DEIS should analyze the effect of the proposed highway with regard to the generation of increased runoff and sediment to the Brush Creek Watershed, its floodwater retarding dams, and channel work. Sediment deposition in the dam sites and channel work areas during highway construction could result in increased operation and maintenance costs for local sponsors. Sediment accumulation coupled with the long-term potential for increased storm runoff from impervious highway surfaces could diminish the amount of flood protection afforded downstream properties. Measures to forestall potential short and long term impacts to the Brush Creek Watershed should be described. Specifically, we recommend that no fill material be placed within the flood pools of watershed dams, that appropriate sediment and erosion control practices be applied, and that blasting near dam sites 9 and 9A be limited to protect their structural integrity.

Thank you for the opportunity to comment. Should you have any questions, concerning soil surveys or prime farmland, please contact Mr. Pate at 304-255-9225. Other questions may be directed to:

Mr. Sam DePue, District Conservationist  
Agricultural Service Center, 114 Gott Road  
Princeton, WV 24740  
Telephone: 304-487-1405

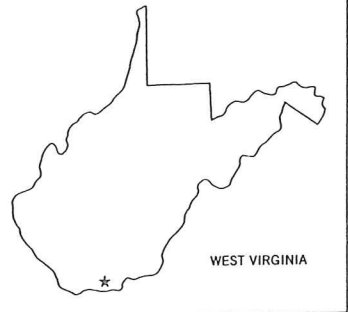
Sincerely,



WILLIAM J. HARTMAN  
State Conservationist.

cc:

Paul Dunn, ASTC-Technology, NRCS, Morgantown, WV  
Kelley Sponaugle, ASTC-FO, NRCS, Beckley, WV  
Rob Pate, Soil Scientist, NRCS, Beckley, WV  
Sam DePue, District Conservationist, NRCS, Princeton, WV  
Lynn Shutts, Environmental Specialist, NRCS, Morgantown, WV

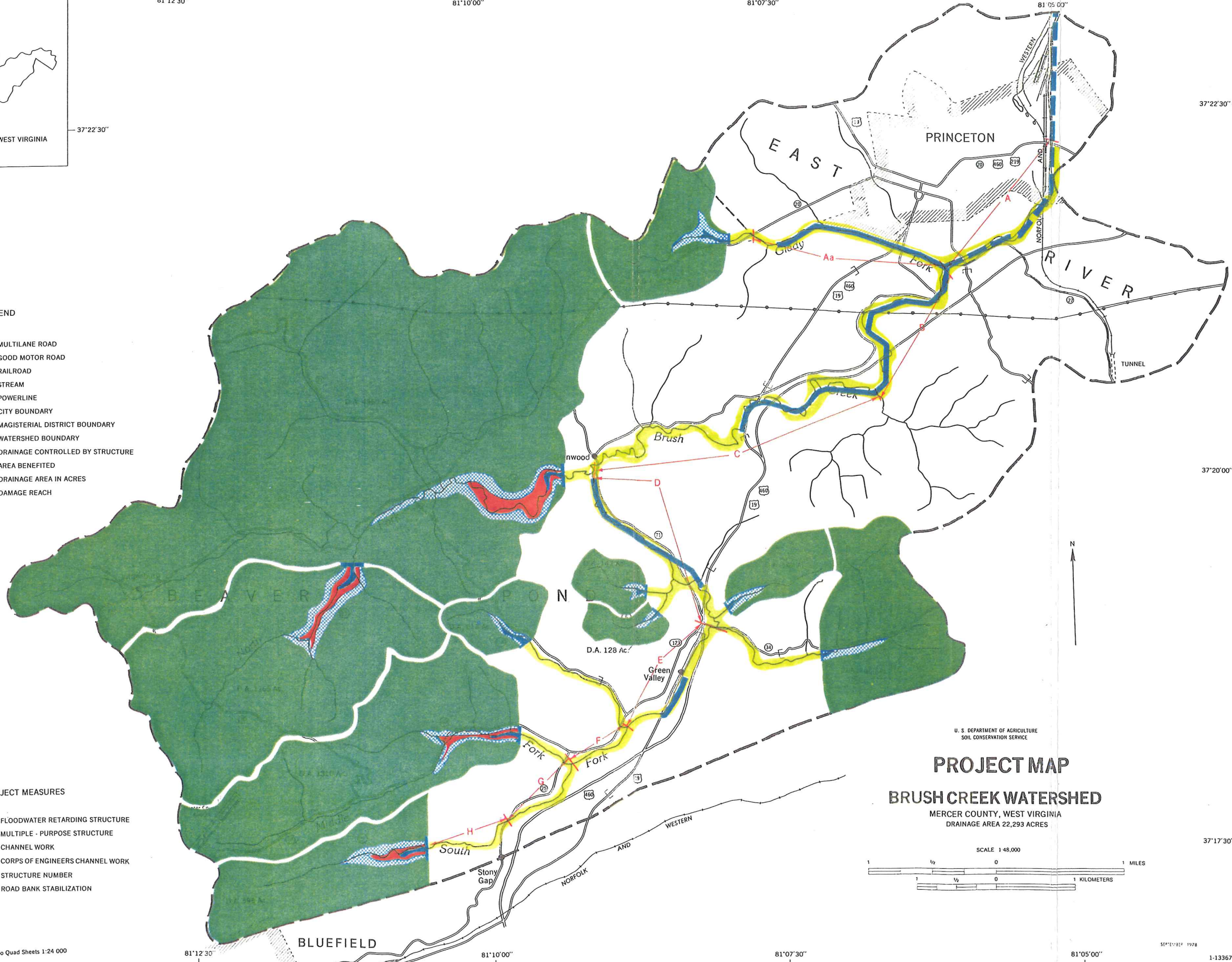


LEGEND

- MULTILANE ROAD
- GOOD MOTOR ROAD
- RAILROAD
- STREAM
- POWERLINE
- CITY BOUNDARY
- MAGISTERIAL DISTRICT BOUNDARY
- WATERSHED BOUNDARY
- DRAINAGE CONTROLLED BY STRUCTURE
- AREA BENEFITED
- D.A. 1920 Ac.
- DAMAGE REACH

PROJECT MEASURES

- FLOODWATER RETARDING STRUCTURE
- MULTIPLE - PURPOSE STRUCTURE
- CHANNEL WORK
- CORPS OF ENGINEERS CHANNEL WORK
- STRUCTURE NUMBER
- ROAD BANK STABILIZATION



U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

## PROJECT MAP

### BRUSH CREEK WATERSHED

MERCER COUNTY, WEST VIRGINIA  
DRAINAGE AREA 22,293 ACRES

SCALE 1:48,000

1 MILES

1 KILOMETERS

BASE SOURCE U.S.G.S. Topo Quad Sheets 1:24 000

SEPTEMBER 1978  
1-13367

**Office of Air Quality - Planning & Programs**

1558 Washington Street, East  
Charleston, WV 25311  
Telephone Number: (304) 558-1213  
Fax Number: (304) 558-1222



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**West Virginia Division of Environmental Protection**

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Cecil H. Underwood  
Governor

Michael C. Castle  
Director

February 24, 2000

Mr. James Sothen, Director  
Engineering Division  
WV Department of Transportation  
Building 5 Room A-110  
*via Inter-Dept. Mail*

RECEIVED

FEB 28 2000

ENGINEERING DIVISION  
WV DOT

Re: King Coal Highway  
Draft Environmental Impact Statement (DEIS)  
State Project X169-SHA/WN-1.03  
Federal Project: DPS-0012(013)  
Mingo, McDowell, Wyoming and Mercer Counties

Dear Mr. Sothen:

In response to your letter to Chief Kropp (01/14/00) requesting comments on the above referenced document, we offer the following. We appreciate this opportunity to comment on the King Coal Highway DEIS. Mingo, McDowell, Wyoming and Mercer Counties are currently designated attainment/unclassifiable for all criteria air pollutants. Therefore, the project is exempt from the requirements of the Federal Transportation Conformity Rule(s) [40 CFR 93], the related State Rule and our interagency Memorandum Of Understanding. It is suggested that the federal exemption be explicitly stated in the text.

The National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter (PM) have been revised. Therefore, Table III-24 (page III-40) and Table 80 (page 129 of Environment Appendix) are outdated. Also, the lead (Pb) standard is shown in units of ppm rather than the correct unit,  $\mu\text{g}/\text{m}^3$ . The correct, new standards are attached. However, a recent Federal Court decision:

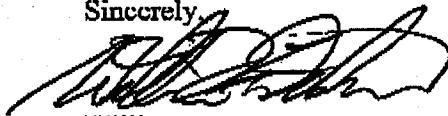
- left the revised 8-hour ozone standard in place, but stated that it "cannot be enforced."
- vacated the revised coarse particle ( $\text{PM}_{10}$ ) standards, but the old  $\text{PM}_{10}$  standards still apply.

- ruled that the  $PM_{2.5}$  standard should remain in place. However, the Court will allow parties to apply for the standard to be vacated if "the presence of this standard threatens a more imminent harm".

If the table is retained, it should be updated with the new standards accompanied by a brief summary of the Court decision. Staff or contractors may wish to review associated U.S. EPA documents on the internet at <http://www.epa.gov/>

If you or your staff have any questions, please do not hesitate to contact me at 558-1217.

Sincerely,



William Fred Durham  
Transportation Conformity Contact

attach

## National Ambient Air Quality Standards (NAAQS)

The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. *Primary standards* set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. *Secondary standards* set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. They are listed below. Units of measure for the standards are parts per million (ppm), milligrams per cubic meter of air ( $\text{mg}/\text{m}^3$ ), and micrograms per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ).

POLLUTANT	STANDARD VALUE		STANDARD TYPE
<b>Carbon Monoxide (CO)</b>			
8-hour Average	9 ppm	(10 $\text{mg}/\text{m}^3$ )**	Primary
1-hour Average	35 ppm	(40 $\text{mg}/\text{m}^3$ )**	Primary
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
Annual Arithmetic Mean	0.053 ppm	(100 $\text{g}/\text{m}^3$ )**	Primary & Secondary
<b>Ozone (O<sub>3</sub>)</b>			
1-hour Average*	0.12 ppm	(235 $\text{g}/\text{m}^3$ )**	Primary & Secondary
8-hour Average	0.08 ppm	(157 $\text{g}/\text{m}^3$ )**	Primary & Secondary
<b>Lead (Pb)</b>			
Quarterly Average		1.5 $\text{g}/\text{m}^3$	Primary & Secondary
<b>Particulate &lt; 10 micrometers (PM-10)</b>			
Annual Arithmetic Mean		50 $\text{g}/\text{m}^3$	Primary & Secondary
24-hour Average		150 $\text{g}/\text{m}^3$	Primary & Secondary
<b>Particulate &lt; 2.5 micrometers (PM-2.5)</b>			
Annual Arithmetic Mean		15 $\text{g}/\text{m}^3$	Primary & Secondary
24-hour Average		65 $\text{g}/\text{m}^3$	Primary & Secondary
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
Annual Arithmetic Mean	0.03 ppm	(80 $\text{g}/\text{m}^3$ )**	Primary
24-hour Average	0.14 ppm	(365 $\text{g}/\text{m}^3$ )**	Primary
3-hour Average	0.50 ppm	(1300 $\text{g}/\text{m}^3$ )**	Secondary

\* The ozone 1-hour standard applies only to areas that were designated nonattainment when the ozone 8-hour standard was adopted in July 1997. This provision allows a smooth, legal, and practical transition to the 8-hour standard. Visit US EPA's [AIRLinks](#) web page for more information about the July 1997 revisions to the ozone and particulate matter standards.

\*\* Parenthetical value is an approximately equivalent concentration.







DEPARTMENT OF THE ARMY  
HUNTINGTON DISTRICT, CORPS OF ENGINEERS  
502 EIGHTH STREET  
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO  
ATTENTION OF

March 3, 2000

Operations and Readiness Division  
Regulatory Branch  
King Coal Highway-199600377

James E. Sothen, P.E., Director, Engineering Division  
WVDOT-Division of Highways  
1900 Kanawha Boulevard East,  
Building Five, Room 110  
Charleston, West Virginia 25305-0430

RECEIVED  
MAR 07 2000

ENGINEERING DIVISION  
WVDON

Dear Mr. Sothen:

I refer to the Draft Environmental Impact Statement (DEIS) you have submitted on the proposed 96 mile King Coal Highway project from the vicinity of Williamson, Mingo County, West Virginia to the vicinity of Bluefield, Mercer County, West Virginia.

The DEIS has been reviewed and appears to be adequate at this time. You are reminded the placement of fill material into waters of the United States will require a Department of the Army permit under Section 404 of the Clean Water Act. This includes fills (whether temporary or permanent) planned for wetlands, bridges, road crossings, streambank stabilization, or channel relocations. Please allow at least 60 days, prior to construction, for the submission, processing, and authorization of the required Department of the Army permits.

You are reminded that unavoidable fills to be placed into wetlands will require you to minimize the impacts as much as possible. After minimization of fills, mitigation will be required to offset wetland losses. As you know, there are proposed changes to the nationwide permit program which include the loss of nationwide #26 scheduled to expire April 14, 2000. It will be beneficial for you to keep current of these changes as you proceed with this project.

If you have any questions about these comments, or the permitting procedures, please contact Ms. Ginger Mullins at 304-529-5710.

Sincerely,

*Rich Buckley*

Richard P. Buckley, Chief  
South Permit Section



Cecil H. Underwood, Governor



WEST VIRGINIA DEVELOPMENT OFFICE

1900 KANAWHA BOULEVARD, EAST  
CHARLESTON, WV 25305-0311

April 18, 2000

RECEIVED

APR 20 2000

ENGINEERING DIVISION  
WV DOH

Mr. James E. Sothen, P.E.  
Director, Engineering Division  
Division of Highways  
West Virginia Department of Transportation  
1900 Kanawha Boulevard East, Building 5  
Charleston, West Virginia 25305-0430

Dear Mr. Sothen:

**RE: Draft EIS Review: King Coal Highway (Preferred Alternative)**

Our office has reviewed the above project for environmental impacts associated with Section 6F(c) of the Land and Water Conservation Fund (LWCF) Act of 1965 and has not found any areas of concern.

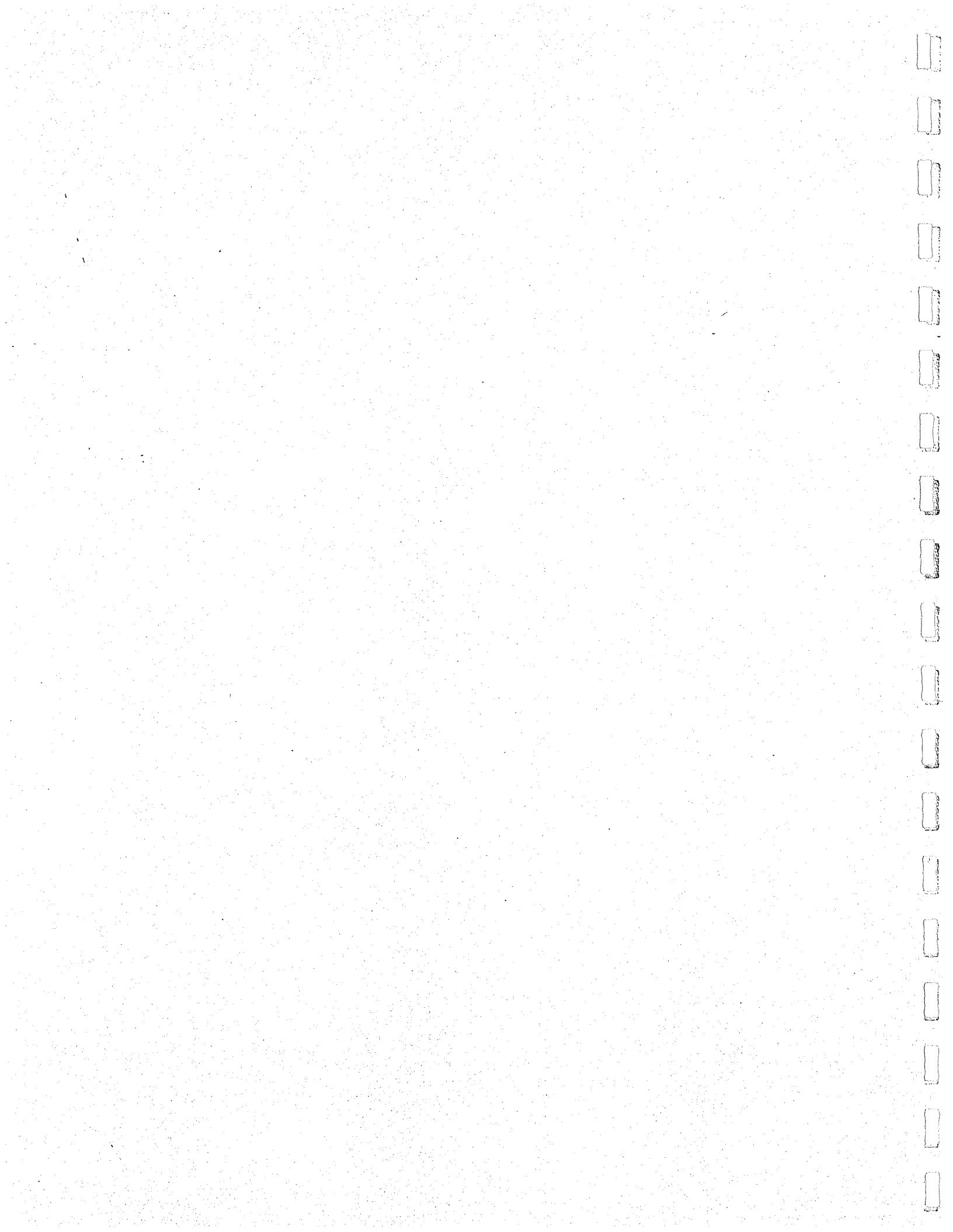
If you need any additional information, please contact me at 558-4010.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "John McGarrity".

John McGarrity  
Community Development Specialist

JM:bo





Mr. Thomas J. Smith

-2-

The Preferred Alternative had more watershed encroachment than five other alternatives. Only one alternative has more encroachment. The Preferred Alternative (25.47 miles) and Alternative 2B have the greatest surface water involvement. The Preferred Alternative has the greatest acreage of wetland involvement (17.44), including two of the highest quality wetlands in the study area. The Fish and Wildlife Service (FWS) recommends that every effort be made to avoid impacts to the aquatic system during the alignment process. Mitigation for stream loss should be based on natural stream restoration design principles (Rosen, 1996) and occur, if possible, within the same watershed where impacts occurred. Coordination of design for stream relocations and construction of mitigation wetlands should involve the FWS.

The FWS requested a discussion in the DEIS relating to disposition of excess spoil from highway construction in our comments on the pre-draft EIS on August 27, 1996. The DEIS does not appear to contain any mention of excess spoil disposal although the response to our comments (Page VII-9) stated that there would be one. We understand that details will be explored during the design stage but a discussion of general types of areas planned for disposal purposes and areas to avoid should be included in the DEIS. Considering the abundance of surface mines in the study area, the FWS recommends that abandoned or unreclaimed surface mines be considered for disposal of excess spoil.

In the FWS's January 24, 1995, comments on the Purpose and Need document, we requested a discussion in the primary and secondary impacts section on the coal industry as a result of this project. Even though it was stated in the DEIS in Table III-7, page III-10 and in the Environmental Appendix on pages 81 and 83, that the coal industry was the major employer of the three watersheds or was one of the largest employers for each county in the study area, no discussion of impacts from the expansion of the coal industry relating to the highway was included in the DEIS. The FWS believes this discussion is warranted under the secondary impacts section of the DEIS.

#### Specific

Table III-20, Rare, Threatened and Endangered Species, Page III-36. The C2 designation is no longer applicable. The species in the table designated as C2 are now considered species of concern. Species of concern are those for which the FWS has information indicating that protection under the Endangered Species Act may be warranted, but for which it lacks sufficient information on status and threats to proceed with preparation of a proposed listing. On December 5, 1996, the FWS announced their final decision to discontinue efforts to maintain a national list of these species. While species of concern lack formal recognition as candidates (C2) for possible future listing under the Endangered Species Act, the FWS and the West Virginia Division of Natural Resources encourage continued consideration of these species in environmental planning.

Mr. Thomas J. Smith

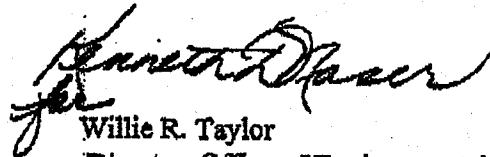
-3-

Section 4.15.2 Impact Assessment, Page IV-50, paragraph two. Line one should be changed to read "... the King Coal Highway will not have an adverse effect on critical habitat." Line two should state: "Since there is potential Indiana Bat summer habitat throughout the project area and to avoid the possibility of incidental take ...."

For questions concerning Land and Water Conservation Fund resources, please contact Cynthia Haywood Wilkerson, Environmental Planning Specialist, National Park Service, Philadelphia Support Office, Customs House Building, 200 Chestnut Street, Philadelphia, PA 19106; telephone (215) 597-1570. For questions concerning fish and wildlife resources, please contact Linda Smith, U.S. Fish and Wildlife Service, West Virginia Field Office, Post Office Box 1278, Elkins, WV 2624; telephone (304) 636-6586.

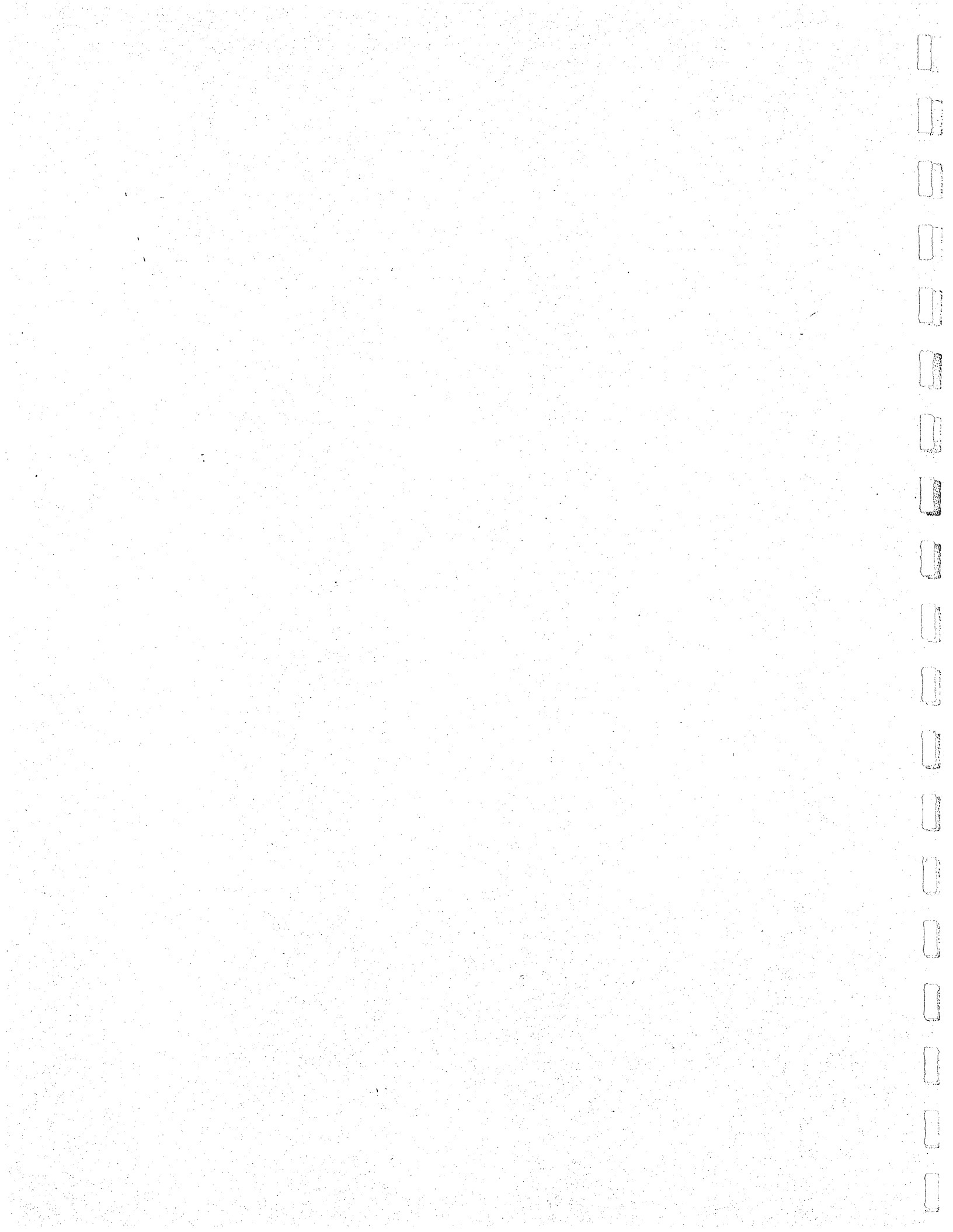
The Department of the Interior appreciates the opportunity to provide these comments.

Sincerely,



Willie R. Taylor  
Director, Office of Environmental  
Policy and Compliance





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WV DOH BUSINESS MGR

TEL: 304 558 4076

P. 002

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EPA III EAPD

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P.02/04



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2028

JUN 19 2000

Mr. James E. Sothen  
Director, Engineering Division  
WVDOT - Division of Highways  
State Capitol Complex Building Five  
Charleston, WV 25305

Re: Draft Environmental Impact Statement  
King Coal Highway

Dear Mr. Sothen:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Clean Water Act Section 404, EPA has reviewed the Draft Environmental Impact Statement (EIS) for the above referenced project. Based on our review, we have assigned a rating of EC-2 (environmental concerns, additional information required) due the potential impacts to streams, wetlands, and community resources, and the broad level of environmental impact information provided for the 96 mile, 1000 foot wide transportation corridor. A copy of EPA's EIS Rating System is enclosed for your information. Our concerns and suggestions for the Final EIS are outlined in the following paragraphs.

#### Level of Environmental Analysis

EPA recognizes that the level of detail provided on the potential environmental impacts of the project was limited by the length and width of the proposed transportation corridor. We also recognize that as the right-of-way (ROW) is identified within the proposed corridor, it will be more feasible to provide a specific evaluation of the potential environmental effects of the project, and provide an opportunity for the avoidance of many of the impacts identified in the Draft EIS. However, we are concerned that the identification of the ROW and a more detailed evaluation of the potential environmental impacts of the proposed highway will not occur until after the NEPA process has been completed and the opportunity for the public to comment on the impacts of the proposed project is closed. We suggest that close coordination take place among the West Virginia Department of Highways, the Federal and State environmental agencies, and the public during the preliminary and final design of the project. In addition, we suggest that additional NEPA documentation be prepared if significant issues arise during the design process.

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EPA III EAPD

TEL: 304 558 4070

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### **Aquatic Resources**

As proposed the Preferred Alternative will potentially impact 25 miles of stream corridor. We recognize that the stream mileage impacted will be reduced by the narrowing of the study corridor from 1000' to an approximate 350' right-of-way. However, given the length of this project, we suggest that all efforts to avoid the relocation, enclosure, or filling of streams be undertaken. In cases where impacts are unavoidable, we suggest that geomorphic techniques (such as Rosgen) for stream relocation and enhancement be employed. All compensatory measures should be clearly outlined in the Final EIS and a natural resources compensation plan, as well as the Record of Decision (ROD). These mitigation measures should be tracked throughout the design and construction of the project.

In addition to avoidance of impacts to stream systems, we suggest that efforts to avoid and minimize impacts to wetlands be incorporated into the design of the proposed project. A discussion of the efforts to avoid and minimize wetland impacts should be provided for the Section 404 permit evaluation. Compensatory mitigation should be outlined in the Final EIS and ROD, and tracked throughout the design and implementation of the project.

### **Community Resources**

The Draft EIS provides little information on the potential impacts to community resources and community cohesion. Specifically, there was very little discussion of the potential impacts to the four cemeteries found in the Preferred Alternative Corridor. In fact, cemeteries were included under historic resources, but not under community facilities. We suggest that a discussion of how the DOH will avoid, minimize or mitigate impacts to the cemeteries be included in the Final EIS.

Other community resources were identified as potentially impacted. However, due to the large corridor sizes, details of the impacts were not given. We suggest that additional information be provided in the Final EIS, including mitigation measures to be undertaken if any community resource is impacted. Likewise, we suggest that measures to mitigate any community cohesion impacts be discussed in the Final EIS.

### **Secondary and Cumulative Effects**

EPA recognizes the concerns for economic development in the study area. We also recognize the potential for improved access to encourage additional development in the communities along the proposed facility. EPA would be happy to work with you to investigate ways to ensure that the future development in the region will occur in a manner that avoids the negative economic, social, and environmental impacts of unmanaged growth.

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WV DOH BUSINESS MGR

TEL: 304 558 4070

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EPA III EAPD

215 8142783

P.03/04

### Terrestrial Resources

The proposed alternative has the potential to impact over 9000 acres of forest habitat. We strongly suggest that you prepare a compensation plan for the replacement, enhancement and preservation of forest habitat in the region. From information provided in the Draft EIS, many previously strip mined areas could be targeted for re-vegetation activities. In addition, high quality forested habitat threatened by development or mining could be acquired as compensation for the impacts of the proposed facility. This compensation, which can be funded with federal transportation funds, should be outlined in the Final EIS and ROD, and in a natural resources compensation plan.

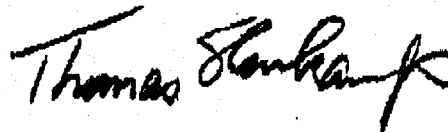
### Natural Resources Compensation Plan and Tracking of Mitigation Commitments

We suggest that a plan for the compensation of all impacted natural resources be prepared for the entire 96 mile corridor. This plan should include specific activities that will be taken to compensate or mitigate for the impacts of the highway. Efforts should consider integrating stream, wetland, and terrestrial mitigation in a manner which enhances the wildlife value of all the resources. This compensation plan will allow for the tracking of mitigation commitments.

In addition to compensatory mitigation, any commitments made to avoid or minimize impacts to natural resources such as streams or wetlands should be identified and tracked through the final design and construction processes. We suggest the use of a mitigation tracking system similar to the one utilized on the Mon Fayette Transportation Project in Pennsylvania.

Thank you for providing EPA with the opportunity to comment on this project. We look forward to working with you in the future to address our concerns. If you have any questions regarding our concerns, please contact Ms. Denise M. Rigney at (215) 814-2726.

Sincerely,

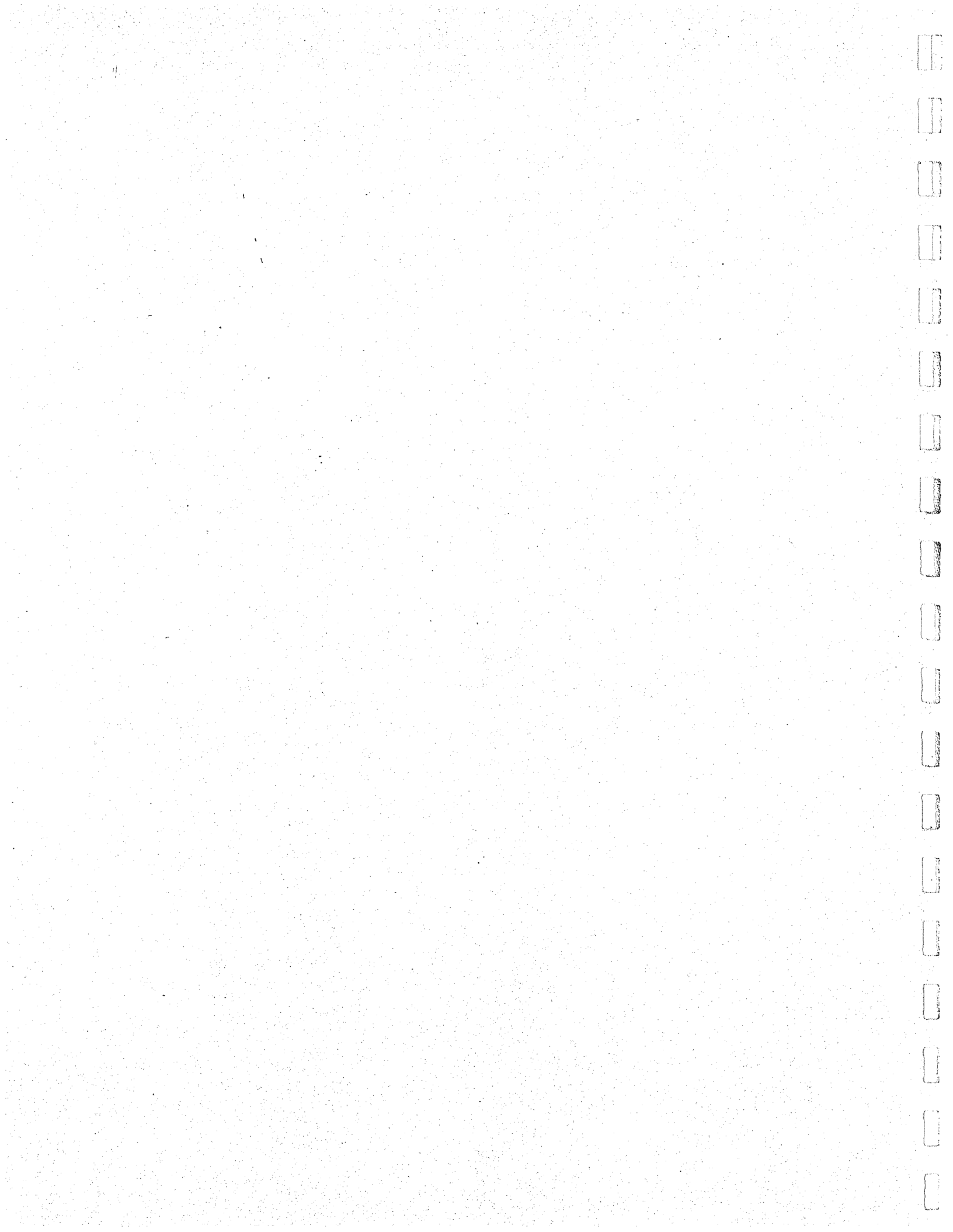


Thomas Slenkamp, Deputy Director  
Office of Environmental Programs

Enclosure



**AGENCY COMMENT LETTERS**  
**ON THE**  
**PRE-DRAFT ENVIRONMENTAL IMPACT STATEMENT**  
**AND**  
**TECHNICAL REPORTS**  
**1996-1997**





DEPARTMENT OF THE ARMY

HUNTINGTON DISTRICT, CORPS OF ENGINEERS

502 EIGHTH STREET

HUNTINGTON, WEST VIRGINIA 25701-2070

JUL 11 1996

WEST VIRGINIA DEPT. OF HIGHWAYS  
ATTENTION OF: CHIEF ENGINEER DEVELOPMENT

July 1996

RECEIVED  
JUL 11 1996

Operations and Readiness Division  
Regulatory Branch  
King Coal Highway

ROADWAY DESIGN DIVISION  
WV DIVISION OF HIGHWAYS

Mr. Norman H. Roush  
West Virginia Department of Transportation  
Division of Highways  
1900 Kanawha Boulevard, Building 5, Room 109  
Charleston, West Virginia 25305-0430

Dear Mr. Roush:

In accordance with your request, the Huntington District Corps of Engineers has completed a review of the Pre-Draft Environmental Impact Statement for the King Coal Highway, dated March 1996. The project area involves Pike County, Kentucky; the West Virginia counties of Mingo, Logan, McDowell, Wyoming, and Mercer; and Tazewell County, Virginia. Our review and comments pertain to the issues relating to any impacts to waters of the United States in the West Virginia counties, and to Pike County, Kentucky, exclusively. The Norfolk District Corps of Engineers is responsible for the one-mile section of proposed highway that is to be located in Tazewell County, Virginia. The point of contact in the Norfolk District is Alice Allen-Grimes and can be reached at 804-441-7219.

Based upon our review of the issues relating to any impacts to waters of the United States in the Huntington District presented in the Pre-Draft Environmental Impact Statement, we offer the following comments:

- COE-1** a. The wetlands to be affected by the proposed highway will need to be field verified by the Regulatory Branch, Corps of Engineers. The wetland delineation should be completed using the 1987 Corps of Engineers Wetland Delineation Manual. Large scale mapping of the wetland delineations are required along with copies of the wetland data forms used to delineate the wetlands.
- COE-2** b. It is recommended that prior to construction, you flag the wetlands and buffer areas that are proposed not to be filled to avoid activities in these areas.
- COE-3** c. The alternatives analysis should demonstrate how alternatives were considered, and how unnecessary environmental impacts were eliminated. This could be done



by including the number of acres of waters of the United States, (wetlands and streams), avoided for each alternative.

**COE-4** d. The acreage of streams, intermittent and perennial, to be affected by the proposed project, both temporary and permanent impacts, must be identified and included in the application for a Section 404 Department of the Army permit. This could be done by including the number of acres of stream to be affected by the project for each alternative.

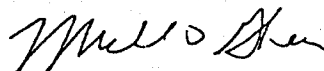
**COE-5** e. A Memorandum of Understanding with the State Historic Preservation Office and Advisory Council of Historic Properties should be completed prior to the 404 permit application to avoid delaying the permit evaluation.

**COE-6** f. All consultation with the U. S. Fish and Wildlife Service on threatened and endangered species listed in the project boundaries should be concluded prior to the 404 permit application.

**COE-7** g. It should also be noted that the Corps of Engineers does not have regulatory authority for administering the 100-year floodplain regulation pursuant to the National Flood Insurance Program. This authority lies with the local government using floodplain ordinances approved by the Federal Emergency Management Agency.

**COE-8** The Pre-Draft Environmental Impact Statement for the King Coal Highway is believed to be a thorough analysis of the project and its potential environmental impacts. If you have any questions, please feel free to contact Julie Bush or Rick Buckley at 304-529-5710.

Sincerely,



Michael D. Gheen  
Chief, Regulatory Branch



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

West Virginia Field Office  
Post Office Box 1278  
Elkins, West Virginia 26241

August 27, 1996

Mr. Fred VanKirk, Secretary  
Commissioner of Highways  
West Virginia Department of Transportation  
1900 Kanawha Boulevard, East  
Building Five, Room 109  
Charleston, West Virginia 25305-0430

Dear Mr. VanKirk:

The U.S. Fish and Wildlife Service has completed its review of the Pre-Draft Environmental Impact Statement and the Natural Environment Technical Report for the King Coal Highway in Logan, Wyoming, Mercer, Mingo, McDowell Counties, West Virginia, Tazewell County, Virginia, and Pike County, Kentucky. We appreciate the opportunity to review the document and offer the following technical assistance comments. These comments do not constitute the review of the Secretary of the Interior as provided for by: Section 2(b) of the Fish and Wildlife Coordination Act (P.L. 83-624); the National Environmental Policy Act of 1969 (42 U.S.C. 4231 et seq.); the Clean Water Act of 1977, as amended (P.L. 95-217); the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.); or other pertinent legislation.

PRE-DRAFT EIS

### General Comments

**USFWS-1** Potential mitigation for impacts to fish and wildlife should be discussed.

### Specific Comments

**USFWS-2** Page IV-12. Impact Assessment. Evaluation of secondary environmental impacts from potential economic development and expansion of the coal industry should be addressed.

**USFWS-3** Page IV-122. Construction Impacts. Deposition of excess spoil (soil and rock) should be addressed. Volumes of excess spoil and areas that are unacceptable for deposition of the spoil should be identified in the draft EIS.

## NATURAL ENVIRONMENT TECHNICAL REPORT

### General Comments

As proposed, alternative 2C would have the least floodplain encroachments on the area's three watersheds. Alternative 2, 2A, 2B, and 2C have very similar number and length of surface water involvements and much fewer (nearly one-fourth) of these involvements than all other alternatives. These four alternatives also have similar (and fewer) high quality surface water involvements than all other alternatives. The number of stream crossings for each proposed alternative was not provided. The inconsistent information provided on one wetland within the study area prevents a determination of which alternative has the lowest number of impacts to wetlands (see specific comments under Page III-14 and Table III-3 below).

USFWS-4

The document has incorporated the endangered species information provided in our July 14, 1995 letter. Please add the cerulean warbler (Dendroica cerulea) and butternut (Juglans cinerea) to the list of species of concern that may occur in the project area.

USFWS-5

We recommend that surveys be conducted to determine the possible presence of the Federally listed as threatened Virginia spiraea, Spiraea virginiana in the alternative alignments. S. Virginiana is a riparian shrub from two to ten feet tall. It occurs along scoured banks of high gradient streams. Scour must be sufficient to prevent canopy closure, but not extreme enough to completely remove small woody vegetation. The species is known to occur along the Bluestone River in Mercer County. We recommend that surveys be accomplished in all suitable habitat that could be affected by the highway alternatives.

USFWS-6

### Specific Comments

Section II. Vegetation and Wildlife.

Page II-10. The veery (Catharus fuscescens) is not a good guild indicator species in this study area since it breeds primarily in the Allegheny Mountains Region in mixed spruce-northern hardwoods, in hemlock-hardwoods and in northern hardwoods forest types and is uncommon along the western foothills of the Allegheny Mountains.

USFWS-7

Page II-18. Bottomland hardwoods habitat was not included in the landuse and land cover types. Information on this habitat type should be given since it provides unique wildlife habitat values.

USFWS-8

Page II-31. Table II-6. Habitat suitability indices (HSI) for wild turkey (Meleagris gallopavo) appear low. We understood the HEP would be adjusted for regional differences in habitat requirements for this species (meeting on October 13, 1995). The suitability of using the HSI model for wild turkey without

USFWS-9

adjustments for regional differences may allow for misinterpretation of impacts among the proposed build alternatives and not adequately represent the habitat of the study area.

*USFWS-10* The HSI's for brown thrasher and eastern cottontail are inconsistent since these species occupy similar habitat.

*USFWS-11* Page II-33. Table II-7. Alternatives should not be evaluated or ranked by totaling habitat units for all guild indicator species. The total habitat units for each alternative in the tables of this section should be removed.

### Section III. Wetlands.

*USFWS-12* Page III-11. Wetland Societal Values. It was stated that one criteria used to determine if a wetland provided exceptional values was whether it was within a "special state or federal protection area".... "where wetlands receive protective status". Wetlands and waters of the U.S. are regulated by Section 404 of the Clean Water Act (33 U.S.C. 1344) through the Corps of Engineers permitting process. The Clean Water Act was meant to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Section 404 of the Act deals with the destructive effects of depositing fill material into the waters of the U.S. Executive Order 11990 (EO11990) establishes a national policy to avoid impacts to wetlands regardless of location. Whether or not a wetland is within a "special state or federal protection area" should not be a criteria defining its values.

*USFWS-13* Page III-14. Table III-3, Wetland Inventory and Table III-4, Wetland Functional Inventory. The acreage for wetland KC-7 is given as 3.3 on Table III-3 and as greater than 5 acres on Table III-4. On page III-19, the acreage is given for this wetland as greater than 10 acres. Wetland acreage figures for those alternatives that have this wetland may also be incorrect. Correct determination of acreage should be made.

### Section IV. Water Resources.

*USFWS-14* Page IV-13. Potential Project Effect. The number of stream crossings for each proposed alternative was not given so potential impacts to fish and wildlife and their habitat cannot adequately be determined. Also, comparison of impacts to water resources among the proposed alternatives is difficult without this information. Number of stream crossings and level of impacts to aquatic resources should be determined before selection of a preferred alternative.

### Section V. Floodplains.

*USFWS-15* Page V-9. Flood Control Projects. The relationship between the proposed highway and any U.S. Army Corps of Engineers flood

protection project currently under construction, or proposed, for the Tug Fork Basin should be defined.

Section VI. Rare, Threatened, and Endangered Species.

**USFWS-16** This section should address potential project effects to threatened and endangered species.

Section VII - Soil, Geology, and Hydrogeology.

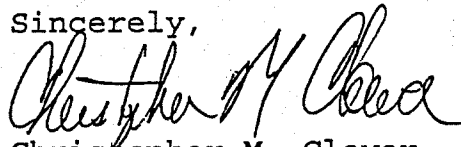
**USFWS-17** Page VII-39. Constructing the roadway subbase using crushed limestone may not adequately treat acid seeps from road cuts. Acid seeps could occur throughout the construction corridor, entering culverts or flowing overland, and the roadway would not act as a buffer. Use of crushed limestone fines and active treatment techniques such as successive alkalinity producing system (SAPS) should be examined and site-specific plans developed. Depending on size of material used, limestone could eventually become coated with iron oxide and become ineffective in neutralizing acid drainage from coal seams. Long-term monitoring and maintenance should be part of any treatment plan.

**USFWS-18** Page VII-38. Acid drainage. Location of disposal of acid producing material should be coordinated with WV Division of Environmental Protection.

Summary Comments

We appreciate the opportunity to comment at this stage in the planning process and look forward to further coordination as planning progresses.

Sincerely,



Christopher M. Clower  
Supervisor



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE



West Virginia Field Office  
Post Office Box 1278  
Elkins, West Virginia 26241

December 3, 1999

RECEIVED

DEC 07 1999

ENGINEERING DIVISION  
WV DOH

Mr. Ben L. Hark  
West Virginia Department of Transportation  
1900 Kanawha Boulevard East, Building Five, Room 110  
Charleston, West Virginia 25305-0430

Dear Mr. Hark:

This responds to your letter of November 16, 1999 regarding field surveys relating to the endangered Indiana bat, Myotis sodalis and the endangered Virginia spiraea, Spiraea virginiana on the study area for the proposed King Coal Highway in Mingo, Logan, McDowell, Wyoming and Mercer Counties, West Virginia. West Virginia Division of Highways (WVDOH) requests concurrence that this project, as proposed, is not likely to adversely affect the Indiana bat and the Virginia spiraea. These review comments are submitted in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.).

A field survey for potential Indiana bat habitat was performed within the study area by biologists from Michael Baker, Jr. Corporation. To conduct this analysis, sample points were selected at random intervals throughout the study area. At each sample point, field data were collected to determine average tree density per acre, percent canopy cover, average diameter breast height (DBH) of trees, and Potential Roost Tree (PRT) density per acre. PRT's are live or dead trees with exfoliating bark with space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites.

A Biological Assessment (BA) was prepared to analyze the potential effects of the King Coal Highway on the Indiana bat. The direct effects evaluation included two types of impacts to this species: 1) removal of PRT's and foraging habitat by construction of the preferred alternative; and 2) potential for incidental take of individual bats during project construction.

The BA determined that the number of PRT's removed by the proposed project is 1.8% of the available PRT's within two miles of the centerline of the preferred alternative and the remaining 184,064 acres of potential foraging habitat is sufficient to support the existing known population of 12,000 Indiana bats in West Virginia.

Since potential summer/maternity habitat for the Indiana bat occurs in the proposed project area and to avoid possible incidental take, the WVDOH will remove all PRT's during times of Indiana bat hibernation, between November 15 and March 31. This also includes those areas associated with borrow and fill construction activities.

Field surveys for Virginia spiraea were conducted in the three West Virginia counties from July 3 to 9, 1999 by Douglas Ogle, a biologist who specializes in the identification and habitat requirements of this plant. Results of the field survey for Virginia spiraea were negative.

Based on survey results for the Virginia spiraea and the proposal by WVDOH to cut all PRT's during the time Indiana bats spend in hibernation, the Service concurs that the project is not likely to adversely affect the Indiana bat and the Virginia spiraea. Therefore no further section 7 consultation pursuant to the Endangered Species Act(87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) for these species is required with the Fish and Wildlife Service.

If you have further questions regarding this response, please contact Ms. Linda Smith of my staff at (304) 636-6586.

Sincerely,

*William A. Tolson*  
for Jeffrey K. Towner  
Field Supervisor

# FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN WEST VIRGINIA

COMMON NAME	SCIENTIFIC NAME	STATUS	DISTRIBUTION
<b>FISHES</b>			
None			
<b>BIRDS</b>			
Eagle, bald	<u>Haliaeetus leucocephalus</u>	T	Entire state Nest sites: (1) Mineral, (2) Hampshire, (1) Hancock, (1) Pendleton, (1) Grant and (3) Hardy Counties
<b>MAMMALS</b>			
Bat, Indiana	<u>Myotis sodalis</u>	E	Known hibernacula in Tucker, Pocahontas, Greenbrier, Randolph, Preston, Pendleton, Monroe and Mercer Counties. Critical habitat: Hellhole Cave, Pendleton County - Additional Counties where bats may occupy summer habitat include: Grant, Hardy, Monongalia, Marion, Taylor, Barbour, Upshur, Webster, Nicholas, Fayette, Raleigh, Wyoming, McDowell, Wayne, Cabell, Clay, Braxton, Kanawha, Roane and Calhoun
Bat, Virginia big-eared	<u>Corvorhinus (=Plecotus) townsendii virginianus</u>	E	Primarily northeastern counties, especially Pendleton, Tucker and Grant Counties. Critical habitat: Hellhole Cave, Cave Mountain Cave, Hoffman School Cave, and Sinnit Cave in Pendleton Co.; Cave Hollow Cave in Tucker Co.
Bat, gray	<u>Myotis arisescens</u>	E	Hellhole Cave, Pendleton Co.
Cougar, eastern	<u>Felis concolor cougar</u>	E	Entire state, may be extinct
Squirrel, Virginia northern flying	<u>Glaucomys sabrinus fuscus</u>	E	Pocahontas, Tucker, Pendleton, Greenbrier, Webster, and Randolph Counties, within proclamation boundary of Monongahela National Forest
<b>MOLLUSKS</b>			
Snail, flat-spined three-toothed land	<u>Triodopsis platysavoides</u>	T	Monongalia and Preston Counties, mainly in Cooper's Rock State Forest area, both sides of Cheat River Gorge
Mussel, tubercled-blossom pearly	<u>Epioblasma (=Dysnomia) torulosa torulosa</u>	E	Kanawha River, Fayette Co., may be extinct
Mussel, pink mucket pearly	<u>Lampsilis abrupta (=orbiculata)</u>	E	Kanawha River, Fayette Co., Ohio River, Cabell, Mason and Wood Counties; Elk River, Kanawha Co.
Mussel, James spiny	<u>Pleurobema (=Canthyrina) collina</u>	E	Monroe Co., South Fork of Potts Creek
Mussel, fanshell	<u>Cyprogenia stegaria (=irrorata)</u>	E	Kanawha River, Fayette Co.; Ohio River, Wood Co.
Mussel, clubshell	<u>Pleurobema clava</u>	E	Elk River, Braxton, Kanawha, and Clay Counties; Hackers Creek, Lewis Co.; Meathouse Fork, Doddridge, Co.
Mussel, northern riffleshell	<u>Epioblasma torulosa andiana</u>	E	Elk River, Kanawha Co.



DISTRIBUTION

STATUS

SCIENTIFIC NAME

COMMON NAME

PLANTS

Harperella	<i>Ptilimnium nodosum</i>	E	Morgan and Berkeley Counties
Shale barren rock cress	<i>Arabis serotina</i>	E	Greenbrier, Hardy, and Pendleton Counties
Running buffalo clover	<i>Trifolium stoloniferum</i>	E	Fayette, Webster, Tucker, Pocahontas, Barbour and Randolph Counties
Virginia spiraea	<i>Spiraea virginiana</i>	T	Nicholas, Fayette, Mercer, Raleigh, Summers, and Greenbrier Counties
Northeastern burrush	<i>Scirpus ancistrochaetus</i>	E	Berkeley and Hardy Counties
Small whorled pogonia	<i>Isotria Medeoloides</i>	T	Greenbrier County
Cheat Mountain salamander	<i>Plethodon nettingi</i>	T	Pendleton, Pocahontas, Randolph, and Tucker Counties

\* Threatened

\*\* Endangered

AMPHIBIANS

RECEIVED  
JUN 11 1996



ROADWAY DESIGN DIVISION  
WV DIVISION OF HIGHWAYS  
GASTON CAPERTON  
GOVERNOR

DIVISION OF ENVIRONMENTAL PROTECTION  
1558 Washington Street East  
Charleston, WV 25311-2599

LAIDLEY ELI MCCOY, PH.D.  
DIRECTOR

June 7, 1996

Mr. Ben Hark  
WVDOT- Bldg. 5  
Capitol Complex

Re: PDEIS King Coal Highway & PDEIS Coalfields Expressway  
WV projects: X169-SHA/WN-1(03) & U124-83-0.00 (02)

Dear Mr. Hark:

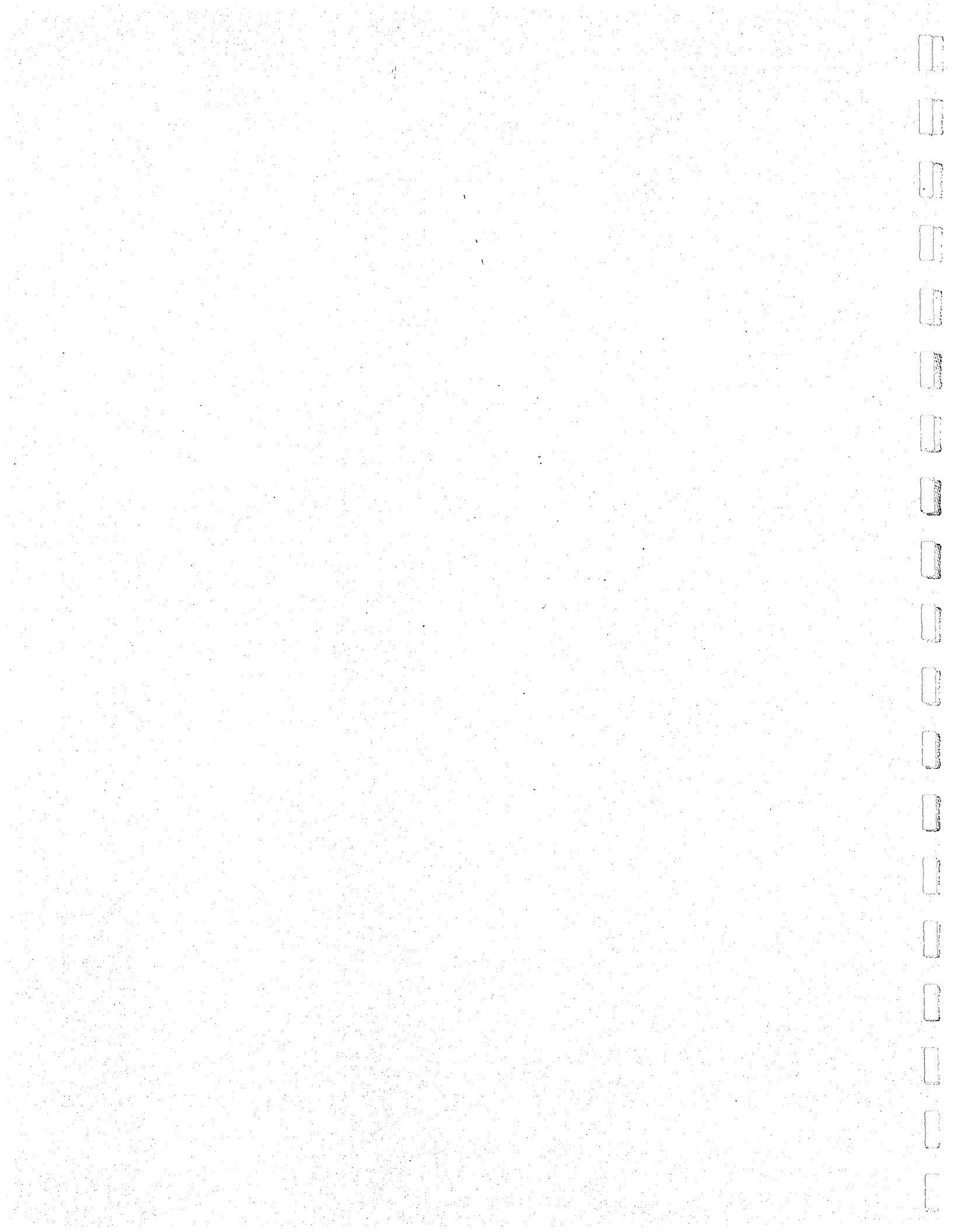
The above referenced Pre-Draft Environmental Impact Statements (PDEIS) were provided to this office along with associated technical reports. I have reviewed them and *WVDEP-1* determined that no formal comments from our agency are needed. However, I did want to make you aware that a minor misstatement occurs in both PDEIS documents. The statement "When a project is designated as non-attainment..." occurs in the King Coal PDEIS on page III-70. The *WVDEP-2* same language is used in the Coalfields PDEIS on page III-65. Projects are not designated nonattainment, but areas (usually counties or Metropolitan Statistical Areas) may be. I suspect what the contractor meant to say was, "When a project occurs in an area that is designated nonattainment..."

We appreciate the opportunity to review and comment on these documents and look forward to continuing cooperation on future projects.

Sincerely,

A handwritten signature in black ink, appearing to read "William Frederick Durham".

William Frederick Durham  
Transportation Conformity Contact





July 1, 1997

WEST VIRGINIA DIVISION OF  
CULTURE AND HISTORY

Mr. Norman Roush  
Division of Highways  
1900 Kanawha Blvd., East  
Building 5, Room 109  
Charleston, WV 25305-0430

RE: King Coal Highway  
State Project X169-SHA/WN-1(03)  
FR: 95-204-MULTI-2 and 95-204-MULTI-3

Dear Mr. Roush:

We have received the March, 1996 Cultural Resources Technical Report and Cultural Resources Technical Report Appendices (Volumes D and D-1 of the Draft Environmental Impact Statement Appendices) for the King Coal Highway Project. (We did not receive the basic Pre-DEIS report.) We have also received the Reduction of Build Alternatives report dated January, 1997. We offer our comments as required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic and Cultural Properties." Although our comments for the King Coal and Coalfields projects are similar, there are different suggestions for future survey work at the end of this letter which should be carefully noted.

General Comments on Technical Report:

*WVDCH-1* The technical reports for the King Coal Highway and Coalfields Expressway projects were reviewed simultaneously since, with some exceptions, the reports are almost identical. Given that the area traversed by the two projects intersects and that very little survey work has been conducted in the southern part of the state, this duplication is acceptable. The prehistoric and historic context sections, as well as the predictive model's methodology, used the same general study area for both projects. This study area is a region encompassing McDowell, Wyoming, and Mercer Counties, large portions of Mingo, Logan, Summers and Raleigh Counties, as well as portions of Pike County, KY and Buchanan and Tazewell Counties, VA.

For the King Coal Highway, the number of cultural resources identified in the twelve original build alternatives varied widely, from just under 300 to over 3,000 along some of the routes. Portions of the project area have already been surveyed for architectural resources as part of the reconnaissance-level Coal Heritage Survey in 1990.

**WVDCH-2** Given the overwhelming differences between the number of potentially eligible resources in Alternatives 1 through 1G and those in Alternatives 2 through 2C, as well as the existing survey of the area, the elimination of the first group from further consideration is entirely justified in order to avoid unnecessary impact to architectural resources. The distinct differences in the number of high, moderate and low probability acreage between the two groups, as calculated in the predictive model, also strongly supports the elimination of the first group of build alternatives.

General Comments on Contexts:

**WVDCH-3** The context sections of the report represent an effort to assemble "regional prehistoric and historic contexts which would serve as the basis for assessing both prehistoric and historic archaeological sites identified during later stages of the project" (I-1). The report should also, ideally, provide information about the types of cultural resources within the project area that allows DOH to make decisions crucial to the development of their project.

**WVDCH-4** While we agree that the information gathered in this initial report supports the selection of a preferred alternative for the King Coal Highway project, it is our opinion that there are some areas of this report that could be improved. For the purposes of project review, we will not request that the report be revised. We will, however, provide comments regarding some aspects of the report which could have been made more useful. We will also offer comments regarding the further development of the predictive model and future survey efforts.

**WVDCH-5** It is our opinion that as a basis for information regarding the eligibility of individual resources, this report may be used as a source of general information. However, there are a number of factual errors which cumulatively detract from its validity as a source of specific prehistoric and historic information for future use. Some of these errors will be addressed in the following sections of this letter.

Regional Prehistory:

The discussion of regional prehistory in both the King Coal Highway and Coalfields Expressway reports is virtually identical. The discussion is very technical, relying heavily on projectile point, knife and ceramic typologies, along with data from radiocarbon dating of various artifacts. There are many references to both famous and obscure archaeological sites located across the eastern United States, similar to the kind of contextual information presented in the original report for Corridor H.

**WVDCH-6** Unfortunately, very little of this discussion is specifically useful for future site evaluation efforts in its current form, suffering most notably from a complete absence of illustrations showing the various types of artifacts described in the context. Unless the reader has a thorough familiarity with the artifact types described throughout the context, the discussion is difficult to follow.

**WVDCH-7** There is a great deal of research information presented within the prehistoric context about regional artifactual types and subtypes. However, no efforts have been made to provide a more comprehensive geographical analysis of these typologies that would be useful in identifying the cultural affiliations of sites identified within the current project area. A particular shortcoming of this report is a lack of information regarding the period of initial contact between Native Americans and European settlers. With the exception of some historic accounts (the Battle of Point Pleasant, for example) no serious attempt is made to delineate with which Native American ethnic populations any prehistoric or protohistoric archaeological sites discovered might be affiliated.

**WVDCH-8** There are a number of aspects of this context which reflect the general lack of information available about archaeological sites within the project area. At several points in this report, there is a reference to Wilkins's 1978 discussion of projectile points from 38 "ridge-top" or "mountain-top" sites in the Boone County area. There is no apparent recognition of the fact that Wilkins was simply analyzing materials that had been removed from the sites by avocational archaeologists and collectors; no scientific excavations of these sites were ever conducted.

Similarly, the Dennison site (46Lg16) was excavated by avocational archaeologists and collectors over a period of years, but has never been scientifically reported other than in Moxley's 1982 paper describing projectile points. The type of artifact collecting that has occurred in this area has provided some insights into the prehistoric cultures of the area, but the use of projectile point and knife typologies in this region is distinctly limited by the lack of disciplined, scientific examinations of regional prehistoric sites.

**WVDCH-9** Section II-C-2 describes previous archaeological research which has been conducted within the King Coal Highway study area. This short section lists the previous, minor archaeological research efforts in chronological order, but the lack of extensive scientific research in the region apparently limited the ability of the authors to reach any conclusions from this part of their research effort. The implicit conclusion of this section seems

to be that previous research in the study area shows the existence of relatively few sites, despite our office's recent experience that as research efforts in the area have increased, larger numbers of sites are being identified.

Predictive Model:

According to the report, our archaeological site files contained only one recorded site located within the build alternatives for the King Coal Highway: an historic cemetery. The consultant chose to construct a probabilistic model which included the entire King Coal/ Coalfields study area as a basis for predicting the most likely areas in which to find prehistoric sites. The model uses the location of 274 recorded archaeological sites and 325 randomly selected data points to analyze a set of nine "ecological" and four "categorical" variables for any statistically significant correlations in site location.

The methodology of the modelling study's data sampling presents some problems. For instance, any sites located within the study area for which site forms were found to be "incomplete, inaccurate, or questionable" were excluded from this study, accounting for about 10% of sample site forms, according to the report.

In addition to this qualifying factor, any sites that had some question as to their integrity were also excluded from the study, accounting for about another 5% of the sample sites. Unfortunately, the locations of sites excluded from the study is not presented within the report, either as to specific site designations or even in which state (VA or WV) these sites are found.

**WVDCH-10** The site integrity evaluation that was conducted is difficult to understand, given that no field evaluations of integrity were performed as part of the study. In any event, the intent of the model is to predict likely locations for prehistoric sites. The integrity of the excluded sites should not have been an issue, rather their existence constitutes data sufficient to contribute to the study. For example, four recorded rock shelter sites from the Eccles quad were apparently excluded from the study on the basis of their integrity, despite the fact that they are well known and properly mapped.

The quads chosen as a sample base for the study include two distinct "topographic/drainage" areas. Most of the study area is located within the area drained by the Tug Fork, Levisa Fork, Guyandotte and Big Coal Rivers (TFLFGBC Area). A smaller portion of the study area is located within the New and Clinch River (NEWRCLR Area) drainage. The actual project areas of the two

highways have only very small portions of their total area located within the NEWRCLR Area quads.

The frequency of distribution is definitely skewed towards sites located within the NEWRCLR Area quads. Over 42% of the 174 sample sites are located in the five easternmost quads of the study area, accounting for only 9% of the total study area. Many of these sample sites are lowland sites identified as part of the surveys conducted for the Bluestone Dam. The two most densely surveyed quads for the TFLFGBC Area contain upland sites that have been most commonly identified as part of surface mining projects in the region. Additionally, the model provides little information which might assist in the identification of other type of sites which might be found in the area, such as rock shelters.

These factors may not have overly influenced the statistics involved in the construction of the probability model for these two projects. However, the relative paucity of survey data for large portions of the study area does require additional consideration of these types of mitigating factors. It is our **WDCH-II** opinion that the methodology of the predictive model should be reexamined in consultation with our office so as to ensure that the most appropriate sections of the project areas are subjected to archaeological testing.

Regional History- Historic context periods:

The Regional History section of the report (II-124 to II-221) touches briefly on significant influences on the development of this region. This information includes discussions about many distinct historic periods. These periods are:

- Explorations of the area in the early eighteenth century;
- Acquisition of the first large land grants in the mid-eighteenth century;
- Frontier settlement period in the late eighteenth century;
- First permanent settlement during the early nineteenth century;
- Development of semi-subsistent agricultural holdings through the mid-nineteenth century;
- Influx of residents and development as a result of the timber, rail and coal industries from the late nineteenth century until the end of World War I;
- Loss of the region's industrial stability during the Great Depression;
- WPA-era federally backed projects during the 1930s and early 1940s;
- World War II-era coal boom;



- Introduction of modern production methods to the regional coal industry and the continued erosion of the region's economic base.

The preceding list is one which we have generated from the information contained within the Technical Reports for the King Coal/ Coalfields projects. However, this list does not correspond exactly to the historic periods found within the text, which included: "Frontier Unrest"; "Railroads Come to the Study Region 1881-1892"; "Early Transportation"; "Early Economies"; "The Formation of West Virginia and the Civil War"; "Timber: The First Non-Agricultural Alternative" and "King Coal".

Many of these sections include good evaluations of development trends which can be used in the future as historic contexts to help evaluate the eligibility of surveyed resources. However, some of the context sections in the report are too broad for immediate use in the evaluation of architectural resources. For instance, the "King Coal" section is by far the largest discussion of the historic context periods included in the report. It attempts to describe a very significant period of time which extends from the first commercial mining activity in the 1880s to a time simply described as "After 1950" forty pages later.

**WVDCH-12** The types of architectural resources that would have been constructed during this important period were the most numerous to have been built in the region. They are, therefore, the most likely types of resources to have survived long enough to be identified during the project survey. A lack of detailed information about these types of resources is a distinct weakness in the report. In order to evaluate resources identified during future project surveys, the preparation of small highly-developed, individual historic context reports may ultimately be necessary. However, we will not request the preparation of any addition historic contexts at this time. Rather, it is our opinion that any additional context information which might become necessary should be based in part on the survey data collected as part of the field survey for this project.

Some Problems with the Regional History:

On the whole, the Regional History provides a great deal of important information about this region. For instance, the report includes a fairly comprehensive description of local CCC-built camps, as well as WPA and NYA construction projects in the region (II-211 to 219). Overall, however, the report's presentation of historic data suffers from a lack of critical analysis of the information. Portions of the text read as if the authors simply assembled every piece of historic information on

each subject in chronological order, with little recognition of inconsistencies between sources and showing an occasional lack of understanding of the subject matter.

**VDCH-13** Our staff reviewers were able to identify some misinterpretations of historic sources in the report (although many facts are presented without detailed citations of the sources used). The lack of information specific to the project area was also troubling. Some assumptions made about the project area are based on sources written about the industries and towns of Kentucky or Virginia. We hope that the survey data that will be gathered as part of the Phase I survey effort for the preferred alternative will address some of these data gaps for the project area and allow more detailed historic contexts for this area to be written in the future.

**VDCH-14** Given the lack of specific historic texts describing this region, it is very important not to overgeneralize using the limited facts that are available. There are instances in the text where conclusions are made on the basis of very limited documentation. One example is the account of the murder of Joseph Gilbert, which supposedly led to the naming of Gilbert's Creek. The description is immediately followed by the statement that "Many of the creeks and branches of the area apparently derived their names in this way" (II-135).

It is not clear whether this conclusion is found in the original source, or is the author's own interpretation. In any event, given the frequency of place names which are corruptions of Native American names like Aracoma or Logan, or more practically derived names like Horse Pen Creek (found in the same paragraph), this conclusion is unsupported. Many areas were named simply because a particular family settled there, or for more distinctive attributes of the location. Seng Camp Hollow (II-213), for instance, was probably named because it was a good place to dig ginseng, a practice which remains fairly common for some of the area's semi-subsistent residents. If the authors are going to come to any reasonable conclusions about this region's history on the basis of the limited sources available, then they have to be more conservative in their interpretations in order to create more useful, well-written reports.

**VDCH-15** There are a number of obvious inaccuracies or omissions in the regional historic context, although they are not serious enough to merit a complete revision of the current report. However, we do strongly recommend that any references taken from this regional history be double-checked against their original source before the information is used in any future reports. We will list some examples:

- "The Guyandotte River...underwent a series of improvements between 1840 and 1860, through the efforts of the Coal River Navigation Company. The improvements were designed to facilitate transportation of coal from early mines in Peytons, Boone County, to outside markets..." (II-144) Peytona is not located on the Guyandotte; the river described in the original source was the Coal River. The text goes on to imply (without a citation) that the Virginian Railway served the Guyandotte River valley (it didn't).
- On page II-150, the text gives statistics about the number of bondsmen in the region in 1830, then cites statistics about the increase in the number of slaves by 1850, with no apparent differentiation between the two groups.
- On page II-154, the text describes the second known mill in Logan County complete to the measurements of the waterwheel, but states that the location of Mr. Peck's mill is "undetermined". Peck's Mill, WV (according to the state highway map) is located seven miles south of Chapmanville on the Guyandotte River, giving a good indication that the historic mill was located nearby.
- "Arriving at a small town called Pocahontas, the newly constructed tipples loaded the first Pocahontas/Flat-Top coal..." (II-181) Did the tipples really travel to Pocahontas? The machinery may have been transported by train, but the more common usage of the term "tipple" refers to the entire building that houses the coal cleaning plant.
- More than "miner housing, a company store for families, and a tipple to process and load coal.." (II-185, quoting Eller 1982) was needed to develop even early mines. As early as the 1890s, coal and coke companies opening mines on lands owned by the Pocahontas Land Company were required to construct a certain number of coke ovens and would also have needed barns for mules and horses, tramway tracks, power plants, water supply facilities, etc. These are types of resources that may still exist within the study area.
- "The line [Deepwater Railway] left the C&O at Deepwater, followed the Guyandotte Valley, and crossed Fayette, Raleigh, and Wyoming counties to the Virginia line" (II-187). This railroad, which became the Virginian Railway, really followed Loup Creek from the Kanawha River to the Oak Hill area, then proceeded generally south through the Winding Gulf region before reaching the Virginia border (as shown in the report in Exhibit II-11).
- The section describing the poor "Conditions in the Coal Fields" (II-196) is very generalized, with two sources cited for the entire discussion. Widen, WV is also mentioned in this section; it is listed as an example of a model company

town in the region. Widen is located in eastern Clay County, well outside the current study area.

- The geographical information supplied for the short description of the "Battle of Blair Mountain" is not exactly correct (II-205). Given this event's well-documented significance, as well as the actual National Historic Landmark nomination recently prepared for part of the Blair Mountain site, the inaccuracies are particularly disturbing.
- In the section of the context describing "The Depression", the text reads simply that "As a result of regional poverty, the population, mostly children, died from malnutrition and disease" (II-206). The region (which was Eastern Kentucky, according to the original source) was not depopulated, although this poorly constructed sentence clearly implies otherwise.

Current Research- Architecture:

Some common building types found within the project area are described in the "Current Research" section (III-1 to III-14). The portions that deal with the timber boom have been excerpted from Clarkson's authoritative history of the industry and provide some good information about the types of structures that were used. Descriptions of some National Register-eligible historic districts and individual buildings surveyed as part of the Coal Heritage Survey appears from pages III-45 to III-55. The basic eligibility decisions made by office for buildings surveyed as part of the Coal Heritage Survey are restated in this section.

One serious error in this part of the report is the incorrect use of the Coal Heritage Survey's identification system. The prefix "46" is not used as part of the identifying number for a structure in this survey, or any other architectural survey information in our office. Instead, this prefix should only be used as part of the identification system for archaeological sites. These references must be corrected in all future project reports and correspondence to avoid misidentifications of resources.

For the evaluation of residential structures in the project area, information is provided which gives a very basic description of settlement-era log houses. This section of the report could certainly have been expanded to include information about other types of residences. Company towns are also discussed at some length, although other good sources that should probably have been used for this section include studies of the coalfields in northern West Virginia (various reports by the Institute for the History of Technology & Industrial Archaeology) or southwestern Pennsylvania (HABS/HAER- NPS publications).

WVDCH-16

WVDCH-17

**WVDCH-18** One misconception which we would like to address relates to the use of the term "vernacular" in the consideration of coal or timber industry housing. While the term "vernacular style" (III-7) is often used to describe buildings whose features lack the most distinctive architectural details associated with well-known styles like Greek Revival or Second Empire, caution should be used in evaluating company towns as "vernacular" buildings. The term "vernacular" was developed as a way for architectural historians to describe buildings constructed by individual persons that did not correspond to the more well-known styles. The term is often used to describe buildings with simple, although sometimes very unique, design elements.

**WVDCH-19** The carefully designed housing forms of the company town have much more in common with early planned housing developments than with the "vernacular style" traditions of independent home builders. An evaluation of the significance of company towns would be most successful in the form of an evaluation of the various building forms and their arrangement as planned communities. Their significance might also be based on their historic importance relative to the industries involved, as well as their reflection of the greater economic development of the region. The evaluation of the potential eligibility of company town buildings identified within the project area may eventually require more detailed historic context information.

**WVDCH-20** For residential structures, we anticipate that the majority of the buildings that will be identified as part of the survey of the King Coal Highway project will date from the period in which the industrialization of the area occurred. Any buildings that predate the industrial period would probably be considered to be significant, since architectural resources from earlier periods would have had to survive the intensive activities of the coal and timber industries.

**WVDCH-21** The description of surveyed properties in the area concludes that "... it was the unprecedented demand for coal on a nation-wide scale that produced the economic viability for massive capital investment in this area..." (III-13). The most obvious physical manifestations of direct industrial investment in the region were the structures associated with the coal, rail and timber industries. Only a very generalized discussion of the types of industrial resources that might be found in the study area is listed in the report. The list includes sawmills, logging camps, rail spurs, bridges, tunnels, mine complexes and massive alterations to the natural landscape. No attempt is made to describe the specific attributes of any industrial resource; the information provided about mine complexes, for instance, is overly simplified. This is a distinct shortcoming of the report.

Page 11  
July 1, 1997  
Norman Roush

If any industrial resources are identified during the project survey, a historic context report will probably need to be prepared in order to evaluate their significance.

Future Survey Efforts- Architectural Resources

**WVDCH-22** A field survey was conducted to identify historic buildings near the original twelve build alternatives. We request that copies of the marked-up quad maps showing the location of historic buildings used for the survey be submitted to our office. This will document the initial field survey for the purposes of project review, as well as allow our office to update survey records of the area.

**WVDCH-23** We have evaluated the Reduction of Build Alternatives report prepared by DOH and we concur with the methods used to evaluate the project's potential impact to architectural resources along the twelve original build alternatives. With the completion of the Cultural Resources Technical Report and the initial field survey of the project area that has already occurred, we are satisfied that DOH has met the obligations of 36 CFR 800.4(a)(2) for architectural resources. Sufficient information has already been compiled to support the elimination of eight of the original twelve build alternatives.

**WVDCH-24** The next step in meeting the requirements of the review process will be a Phase I level architectural survey of the build alternatives carried forward to the DEIS stage. We have some suggestions regarding the scope of work for that survey effort. In our opinion, it is not necessary to rewrite the historic context that was prepared for the Pre-DEIS report at this time. Instead, we suggest that the survey be designed to produce brief Historic Property Inventory forms for the surveyed resources, to be followed by the evaluation of the results of the initial effort to identify additional research necessary to conduct eligibility evaluations.

**WVDCH-25** We anticipate that the preparation of small, in-depth historic context reports will facilitate the evaluation of resources in this part of the state. Likely topics for these smaller contexts might include historic background statements to support historic district evaluations or an evaluation of industrial resources in the project area. There are a number of promising areas for additional research, but until the results of the initial survey have been examined and research gaps have been identified, no further historic contexts are necessary. The preparation of any additional historic context reports may be deferred until the

Page 12  
July 1, 1997  
Norman Roush

initial Phase I architectural survey (basic WV Historic Property Inventory forms with maps showing resource locations) of the four build alternatives has been prepared by DOH and reviewed by our office. We would like to develop this survey in close consultation with your office in order to facilitate the review process for this project.

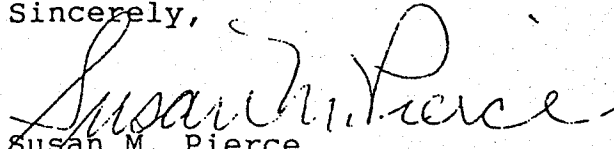
Future Survey Efforts- Archaeological Resources

**WVDCH-26** For the identification of potential prehistoric archaeological resources, there are some aspects of the predictive model's methodology that we believe should be reexamined before it is field-tested. However, it is our opinion that the modelling has already produced results sufficient to allow the selection of a preferred alternative using a reasonable level of consideration for archaeological potential. A Phase I archaeological survey should be conducted for the preferred alternative. The identification of potential historic archaeological resources can use the Regional History as a source of information, but should be supplemented by the field survey and take advantage of the details about building locations found on early twentieth century USGS topographical maps for the area or any other helpful sources.

**WVDCH-27** DOH has already been provided with copies of our office's first draft archaeological and architectural survey guidelines as part of our peer review process. The survey methodology used for the survey of the preferred alternative should meet the existing 1991 guidelines, but should also address the changes recommended in the new draft guidelines. Any questions regarding the interpretation of these updated draft guidelines may be directed to our Senior Archaeologist, Patrick Trader, or Historian, Lisa Adkins. We will be happy to work with your consultants in the development of survey methodology for this project.

We appreciate your patience regarding our review of this project. If you have any questions regarding our comments, please contact Patrick Trader, Senior Archaeologist (ext. 719), or Lisa Adkins, Historian (ext. 146).

Sincerely,

  
Susan M. Pierce  
Deputy State Historic Preservation  
Officer for Resource Protection

SMP/LAA



**WEST VIRGINIA DIVISION OF  
CULTURE AND HISTORY**

March 22, 1999

Mr. James Sothen  
Division of Highways  
Bldg. 5, Room 110  
Capitol Complex  
Charleston, WV 25305

RE: King Coal Highway  
State Project X169-SHA/WN-1 (03)  
FR#: 95-204-MULTI-4

Dear Mr. Sothen:

We have received the project report "King Coal Highway: Determination of Eligibility Documentation and Preliminary Effects Assessment for the King Coal Highway Preferred Alternative" prepared by Michael Baker, Jr and Associates. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties" we submit our comments.

**Architectural Resources:**

Approximately ninety-six miles of the Built Alternatives for the King Coal Highway stretch through the West Virginia counties of Mingo, Logan, McDowell, Wyoming, and Mercer. During the survey of cultural resources for the project, 492 properties fifty years old or older were identified within the Area of Potential Effect for all alignment alternatives. In accordance with a March 5, 1998, agreement between representatives of the West Virginia State Historic Preservation Office, West Virginia Division of Highways, Federal Highways Administration, and Michael Baker, Jr. and Associates, a revised methodology was established which allowed abridged West Virginia Historic Property Inventory Forms to be used for each resource over fifty years of age. Upon the SHPO's request more detailed inventory forms would be completed for properties determined eligible for listing in the National Register of Historic Places.

Of the 492 properties initially identified and documented by Baker, ninety-five are located within the project's Preferred Alternative. Included in this number are three buildings determined by Baker as potentially eligible for the National Register, six cemeteries, eight architectural ruins, and four properties not accessible at the time of the survey. Baker did not identify any eligible historic districts within the Preferred Alternative.

Due to the enormous amount of properties surveyed by Baker only those located in the Area of Potential Effect for the Preferred Alternative will be addressed here. If, in the future, the Preferred Alternative's alignment is revised or altered impacting a property not already reviewed by this office, please inform us so that we may render a decision of National Register eligibility.

THE CULTURAL CENTER • 1900 KANAWHA BOULEVARD, EAST • CHARLESTON, WEST VIRGINIA 25305-0300  
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EEO/AA EMPLOYER



Page 2  
March 22, 1999  
Mr. James Sothen

In their assessment, Baker and Associates determined that three properties are eligible for listing in the National Register of Historic Places. These properties are KC003a-002, KC003a-003, and KC028-006. We concur that the Norfolk & Western Railroad (KC028-006) is National Register eligible. Before a determination for the other two properties is made, however, we request that Baker prepare detailed West Virginia Historic Property Inventory Forms for each. Full inventory forms must also be completed for the following resources: KC005-003, KC025-001, KC027-001, KC029-001, KC030-003, KC030-006, KC031-007, and KC039-010. When researching each property, ensure that enough information is gained in order to confirm or deny eligibility under Criteria A and B.

Several photographs that accompanied the abridged inventory forms were of poor quality or otherwise insufficient to gain a visual understanding of individual resources. Please supply us with better photographs of the following properties: KC005-001, KC006-001, KC025-002, KC028-019, KC029-002, KC029-016, and KC031-014.

Four properties were not accessible and were not surveyed. These resources are KC009-003, KC009-004, KC027-002, and KC027-003. Please attempt to examine these properties or, failing this, provide a reason why access is not possible.

Those architectural properties located in the Preferred Alternative not mentioned above are not eligible for listing in the National Register of Historic Places.

#### Archaeological Resources:

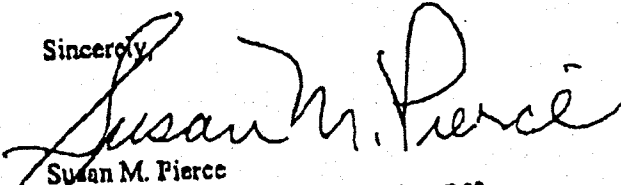
In order to expedite the review process, we will confine our comments and concerns to those resources located within the Preferred Alternative as well. We cannot make a final determination of effects to cultural resources until the results of a Phase I archaeological investigation of this alignment are submitted. As very little information exists concerning the prehistory and early history of this part of West Virginia, we look forward to reviewing the final report. We ask that a Memorandum of Agreement be prepared for this project so that we may review the consultant's methodology prior to survey. If the alignment of the Preferred Alternative should change during or after the Phase I survey, we ask that you contact this office so that the Memorandum and survey methodology may be amended accordingly.

✓ In reference to the inventory forms included in the Determination of Eligibility documentation, we concur with the consultant's recommendation that any structural ruins located within the Preferred Alternative be tested during Phase I investigation. Please submit completed site forms for all foundations and cemetery survey forms for all cemeteries within this alignment. These forms should include sketch maps, photographs, and any other form of documentation that will supply us with the necessary information required for a determination of eligibility.

Mr. James Sothen  
King Coal Highway  
March 23, 1999  
Page 2

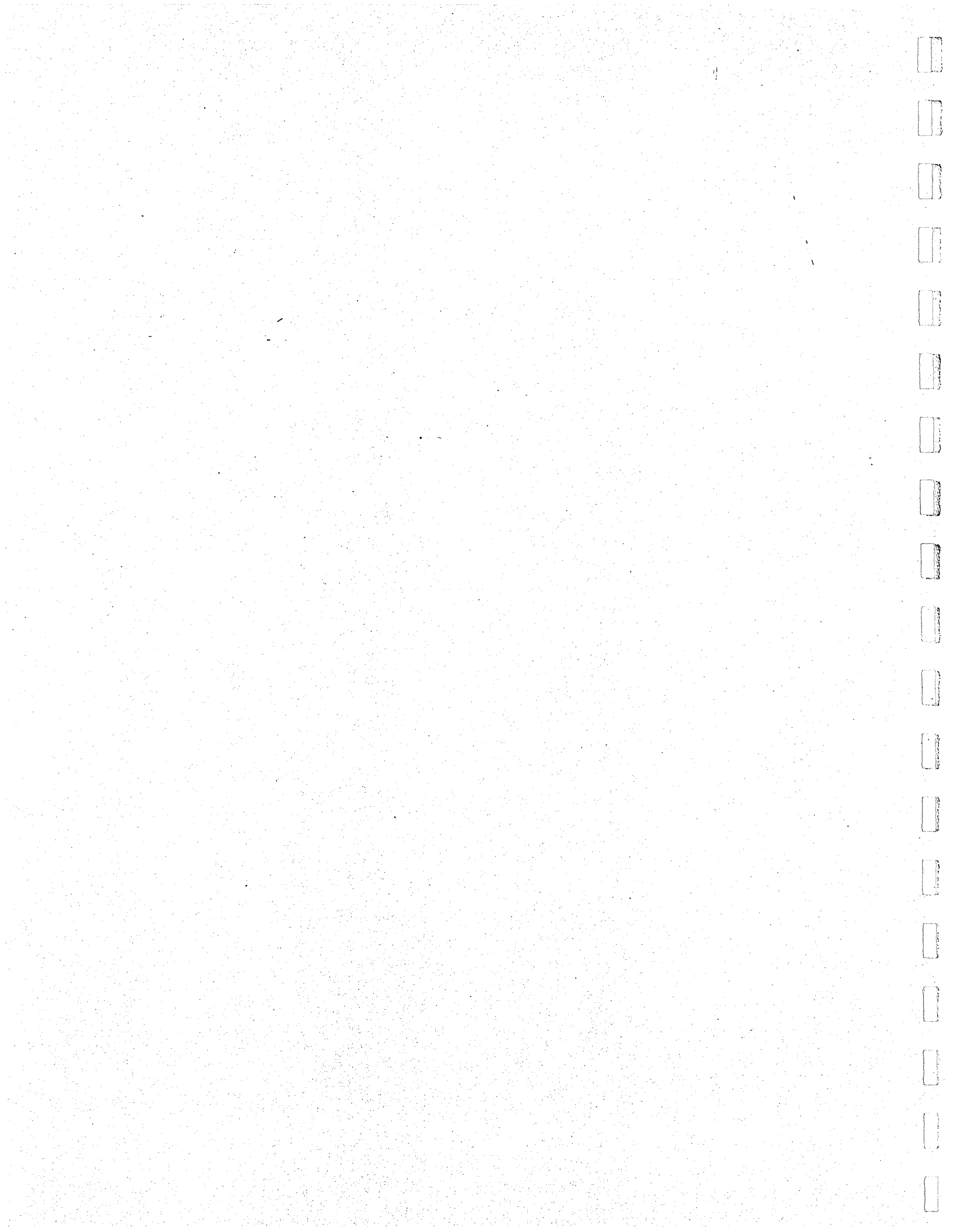
We appreciate the opportunity to be of service. If you have questions regarding our comments or about the Section 106 process, please call Marc Holms, Structural Historian, or Joanna Wilson, Staff Archaeologist, at (304) 558-0220.

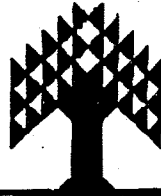
Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP: mh,jlw





WEST VIRGINIA DIVISION OF  
CULTURE AND HISTORY

RECEIVED

OCT 08 1999

October 6, 1999

Mr. James Sothen  
Building 5, Room 110  
Division of Highways  
Capitol Complex  
Charleston, WV 25305

ENGINEERING DIVISION  
WV DOH

RE: King Coal Highway  
State Project X169-SHA/WN-0(03)  
FR#: 95-204-MULTI-8

Dear Mr. Sothen:

We have received revised Historic Property Inventory Forms and map sheets for the above mentioned project. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Architectural Resources:

In a March 22, 1999 letter we requested complete Historic Property Inventory Forms for several resources within the project area of the Preferred Alignment for the King Coal Highway. This request was necessary because we did not have enough information on the properties in question to make accurate determinations of National Register eligibility. Since our March 22<sup>nd</sup> comment letter, however, alterations to the Preferred Alignment have necessitated the inclusion of previously undocumented dwellings, and the exclusion of some resources for which we required additional information.

As a result of the changes to the Preferred Alignment, resources KC030-003, KC030-006, and KC030-007 were dropped from consideration because they are no longer located within the project area. Additionally, resource KC025-001 was revealed to be a modern building constructed in the 1960s and is no longer a subject for review. Resource KC027-001, which was believed to be a church, is actually a cemetery and is addressed below under "Archaeological Resources." The realignment also resulted in the addition of several properties to the project area. The new resources that are now included in the study area are: KC040-023, KC040-024, KC040-025, KC040-026, KC040-027, KC040-028, and KC040-029. Along with these seven new properties, there are also five resources remaining from our initial inquiry that must be

Page 2  
October 6, 1999  
Mr. James Sothen

evaluated for National Register eligibility. These resources are: KC003a-002, KC003a-003, KC005-003, KC029-001, and KC039-010.

We determine that none of the resources submitted for our review (i.e. KC003a-002, KC003a-003, KC005-003, KC029-001, KC039-010, KC040-023, KC040-024, KC040-025, KC040-026, KC040-027, KC040-028, and KC040-029) are eligible for the National Register of Historic Places. These resources are not eligible for listing in the National Register because they lack architectural distinction and are not associated with significant individuals or historic events.

Archaeological Resources:

We have reviewed the HPI form and Cemetery Survey Form for KC027-001 (Bailey Cemetery). As mentioned in the cover letter, this resource was initially identified as a church. The HPI form included with this review, however, still lists the resource as a church. Please revise the form to reflect the fact that the resource is a cemetery. We concur with the recommendation that the Bailey Cemetery be considered not eligible for inclusion in the National Register of Historic Places.

We appreciate the opportunity to be of service. If you have questions concerning our comments or the Section 106 process, please call Marc Holma, Structural Historian, or Joanna Wilson, Senior Archaeologist, at (304) 558-0220.

Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP:mh,jlw

## SECTION VIII: INDEX

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Accident Rates .....	S-3, I-1, 2, 5, 6, II-2, 3, 6, 11, 18
Affected Environment .....	III-1, 11
Air Quality .....	III-37, 40, 41, IV-597, 60, 62, 65
Alternatives Analysis .....	II-2, 12, 13
Archaeological Sites .....	III-18, 22, 23, IV-17, 19, 21
Build Alternative .....	S-1, 2, 3, 4, II-1, 2, 12, 13, 17, 19, 20, 21, 22, IV-1-68
Capacity Analysis .....	I-2
Community Cohesion .....	III-3, 5, IV-6, 7
Community Services .....	III-1, 6, 7, 8, IV-7
Construction Impacts .....	IV-63, 64, 65
Cultural Resources .....	III-16, 18, IV-17, 18, 20, 21
Design Criteria .....	II-17
Displacements .....	II-6, 10, IV-9, 10, 11
Economic Activity .....	III-8, IV-8, 68
Endangered Species .....	III-35, 36, IV-51
Energy .....	IV-57, 61, 62
Environmental Consequences .....	S-4, II-13, IV-1
Environmental Justice .....	III-11, IV-10, 12, 13
Environmental Permits .....	IV-64
Farmlands .....	III-15, IV-14
Floodplains and Floodways .....	III-27, 28, IV-29, 31, 37
Geology .....	III-29, IV-37
Groundwater Resources .....	IV-43, 45
Hazardous Materials .....	III-36, 37, IV-53
Rail Alternative .....	II-10
Historic Resources .....	III-18, 19, 21, IV-17, 18, 19, 21
Improved Roadway Alternative .....	S-2, II-1, 4, 5
Income .....	III-1, 8, 11, 13, IV-8, 10, 12, 13, 68
Land Use .....	III-1, 27, 33, 34, 36, 37, 38, IV-1, 2, 4, 5, 6, 26, 28, 39, 46, 47, 55, 68
Mass Transit Alternative .....	II-7, 8

Mineral Resources .....	III-29, IV-37, 38
Modal Interrelationships.....	S-3, I-4, 7
Natural Environment .....	II-1, 12, 13, III-23
No Build Alternative .....	S-2, I-2, II-1, 12, 13
Noise.....	III-20, 37, 38, IV-52, 54, 55, 56, 57, 59, 64, 65
Physical Environment .....	III-1, 36
Population.....	III-1, 3, 4, 5, 8, 11, 12, 13, 14, 15, 20, 21, 32, IV-1, 4, 5, 8, 10, 12, 13, 16, 22, 52
Purpose and Need.....	S-1, 2, 3, I-1, 2, 5, 6, 7, II-1, 2, 3, 8, 10, 11, 12, 13
Recreational Resources.....	III-16, 17, 18, IV-9, 16
Roadway Deficiencies.....	S-3, I-2, 5, 7, II-11
Safety.....	S-1, 3, 4, I-2, 5, 7, II-3, 6, 7, 12, 18, III-7, IV-7, 8, 14, 68
Social Environment.....	S-3, II-1, III-1, IV-6
Soils .....	III-15, 16, 25, 29, 30, 31, 37, IV-14, 15, 25, 37, 40, 45
Study Route .....	S-1, 3, I-1, 2, 3, 4, 5, 6, II-3, 4, 5, 6, 8, 9, 10, 11, 12, 18, 19, III-7, 8, 14, 39, 41, IV-6, 14
Surface Water Resources.....	III-23, IV-22, 24, 25
System Linkage .....	S-3, I-2, 3, 7, II-2, 3, 6, 7, 11, 21
Threatened Species.....	III-35
Traffic And Transportation .....	I-3, II-18
USTS .....	III-37, IV-53
Vegetation.....	III-25, 26, 27, 33, 34, 35, IV-22, 25, 27, 28, 29, 44, 45, 46, 53
Visual Quality .....	III-36, IV-52, 53
Water Quality .....	S-5, III-24, 25, 31, 32, IV-22, 38, 42, 43, 64, 66
Wetlands.....	III-26, 27, IV-25, 26, 28, 29, 31
Wildlife .....	III-24, 25, 27, 33, 34, 35, IV-26, 27, 28, 29, 31, 45, 46, 51

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**PROGRAMMATIC  
AGREEMENT**

PROGRAMMATIC AGREEMENT  
AMONG  
THE FEDERAL HIGHWAY ADMINISTRATION,  
THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS,  
AND  
THE WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICE  
REGARDING IMPLEMENTATION OF THE KING COAL HIGHWAY PROJECT  
MINGO, MCDOWELL, WYOMING, AND MERCER  
COUNTIES, WEST VIRGINIA

WHEREAS, the Federal Highway Administration (FHWA), in conjunction with the West Virginia Department of Transportation, Division of Highways (WVDOH), proposes to construct the King Coal Highway as a four-lane, partially controlled access facility from the vicinity of Williamson, West Virginia to the vicinity of Bluefield, West Virginia; and

WHEREAS, the FHWA, in consultation with the WVSHPO, has identified areas of potential archaeological sensitivity and determined that the King Coal Highway project may have an effect upon archaeological properties eligible for inclusion in the NRHP;

WHEREAS, the FHWA has determined that the King Coal Highway project will have no adverse effects on architectural resources eligible for inclusion in the National Register of Historic Places (NRHP), and has consulted with the West Virginia State Historic Preservation Officer (WVSHPO) pursuant to Section 800.14(b) of the regulations (36CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C., 470f)

WHEREAS, WVDOH participated in the consultation and has been invited to concur in this Agreement; and

NOW, THEREFORE, FHWA and the WVSHPO agree that the project shall be administered in accordance with the following stipulations to satisfy the FHWA's Section 106 responsibility with regard to the project.

## STIPULATIONS

The FHWA will ensure that the following measures are carried out:

### 1. ARCHAEOLOGICAL RESOURCES

- A. The WVDOH will ensure that a Phase I archaeological survey of the Preferred Alternative of the King Coal Highway project is conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the WVSHPO's "Guidelines for Phase I Surveys, Phase II Testing, Phase III Mitigation and Cultural Resource Reports", as amended (October 1991 Guidelines). Prior technical consultation with WVSHPO concerning the King Coal Highway project will be used as a guide in conducting field investigations and subsequent site analysis. The Phase I survey shall be conducted in consultation with the WVSHPO, and a report of the survey will be forwarded to the WVSHPO for review and comment. The Phase I report will contain locational information, descriptions of fieldwork, methods employed, results of fieldwork, pertinent maps, photographs, completed West Virginia Archaeological site forms, and recommendations and scope(s) of work for Phase II investigations, if necessary.
- B. The WVDOH will evaluate properties identified through the archaeological survey in accordance with 36CFR800.4(c). If WVDOH and the WVSHPO agree that a property is not eligible for the NRHP, then no further cultural resource investigation of that property will be conducted. If WVDOH and the WVSHPO agree that the resources are only eligible for the NRHP for the information they contain, the FHWA will ensure that they are treated in accordance with stipulation 1C. If Phase II testing results in the identification of an archaeological resource eligible for inclusion in the NRHP, the FHWA shall comply with 36CFR 800.5.
- C. If it is determined by WVDOH and the WVSHPO that avoidance of an eligible archaeological site is impracticable, the WVDOH will develop a data recovery plan. WVDOH will ensure that a data recovery plan, if required, will be developed in consultation with the WVSHPO. The plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37).
- D. WVDOH will ensure that any human remains and grave-associated artifacts encountered during the archaeological investigations are brought to the immediate attention of the WVSHPO. No activities which might disturb or damage the remains will be conducted until the WVSHPO has determined whether excavation is necessary and/or desirable. All procedures will comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800.
- E. WVDOH will ensure that all final archaeological reports resulting from actions pursuant to this agreement will be provided to the WVSHPO for review and approval. The reports will meet professional standards set forth by the Department of the Interior's "Format Standards for Final Reports of Data Recovery Program" (42 FR 5377-79) and the WVSHPO's Guidelines.



- F. All records and materials resulting from the archaeological investigations will be curated in accordance with 36 CFR 79 and the West Virginia Division of Culture and History Curatorial Guidelines - Collections Management Facility (n.d.).
- G. WVDOH will ensure that research results from data recovery excavations at eligible archaeological sites will be disseminated to the public.

## 2. ARCHITECTURAL RESOURCES

- A. Architectural resources are defined as non-archaeological resources consisting of historic buildings, structures, objects, and districts.
- B. No architectural resources listed on or eligible for the NRHP in the Area of Potential Effect (APE) of the Preferred Alternative of the Undertaking will be adversely affected.

## 3. UNANTICIPATED DISCOVERY

- A. In the event of any unanticipated discoveries during construction, all activities will be suspended in the area of the discovery. WVDOH will contact the WVSHPO within 48 hours of the discovery. WVDOH and WVSHPO will meet at the location of the discovery within 48 hours of the initial WVSHPO notification. WVDOH and the WVSHPO will agree upon appropriate treatment of the discovery prior to resumption of construction activities in the area of the discovery.

## 4. ADMINISTRATIVE CONDITIONS


- A. All archaeological investigations carried out pursuant to this agreement will be by or under the direct supervision of a person or persons meeting at a minimum the Secretary of the Interior's Professional Qualifications Standard for archaeologists.
- B. The WVSHPO may monitor activities carried out pursuant to this Programmatic Agreement (PA). The FHWA will cooperate with the WVSHPO in carrying out their monitoring and review responsibilities.
- C. No construction activity will occur within the construction project limits of an archaeological site until all data recovery has been completed and a management summary has been approved by the WVSHPO.
- D. Any party to the PA may request that it be amended, whereupon the parties will consult to consider such amendment.
- E. In the event the FHWA does not carry out the terms of this PA, the FHWA will comply with 36 CFR 800.4 through 800.7 with regard to the undertaking covered by this PA.

5. DISPUTE RESOLUTION

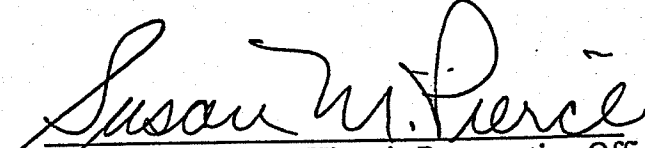
- A. Should the WVSHPO object within fifteen (15) days to any actions proposed pursuant to this agreement, the FHWA will consult with the WVSHPO to resolve the objection. The FHWA responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.
- B. Unless otherwise stated, the process for dispute resolution set forth in this stipulation shall generally follow the process used for consulting to resolve adverse effects as outlined in 36 CFR 800.7

Execution of this agreement by the FHWA and the WVSHPO, and the implementation of its terms, is evidence that the FHWA has taken into account the effects of the project on historic properties.

Signature Page

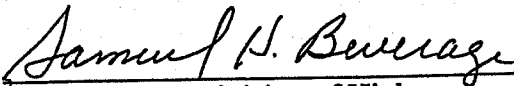
  
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Federal Highway Administration

4/10/2000  
Date

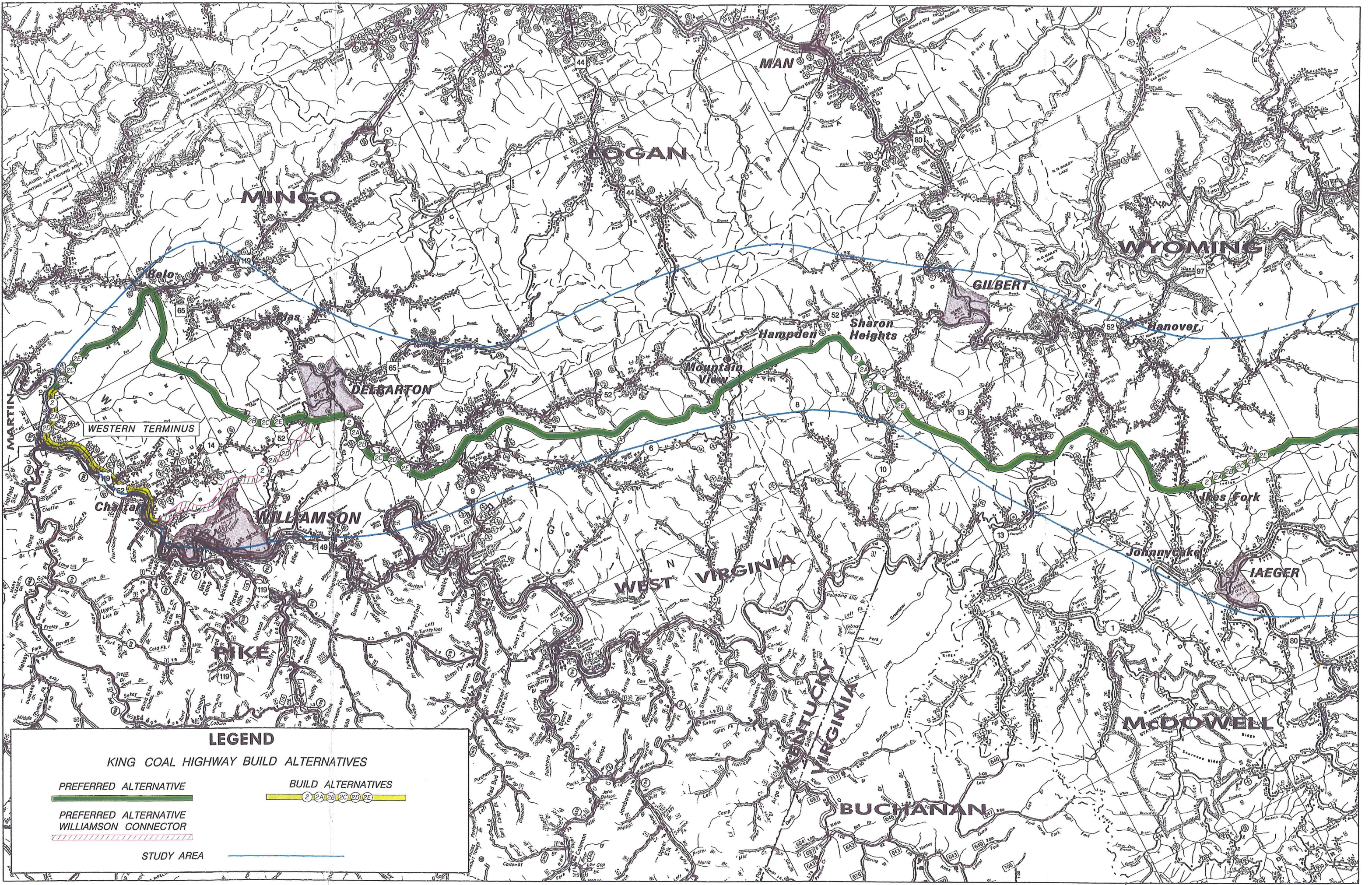
  
\_\_\_\_\_  
West Virginia State Historic Preservation Officer

4/6/2000  
Date

CONCUR:

  
\_\_\_\_\_  
West Virginia Division of Highways

4/6/00  
Date



**LEGEND**

**KING COAL HIGHWAY BUILD ALTERNATIVES**

PREFERRED ALTERNATIVE

BUILD ALTERNATIVES

PREFERRED ALTERNATIVE  
WILLIAMSON CONNECTOR

STUDY AREA



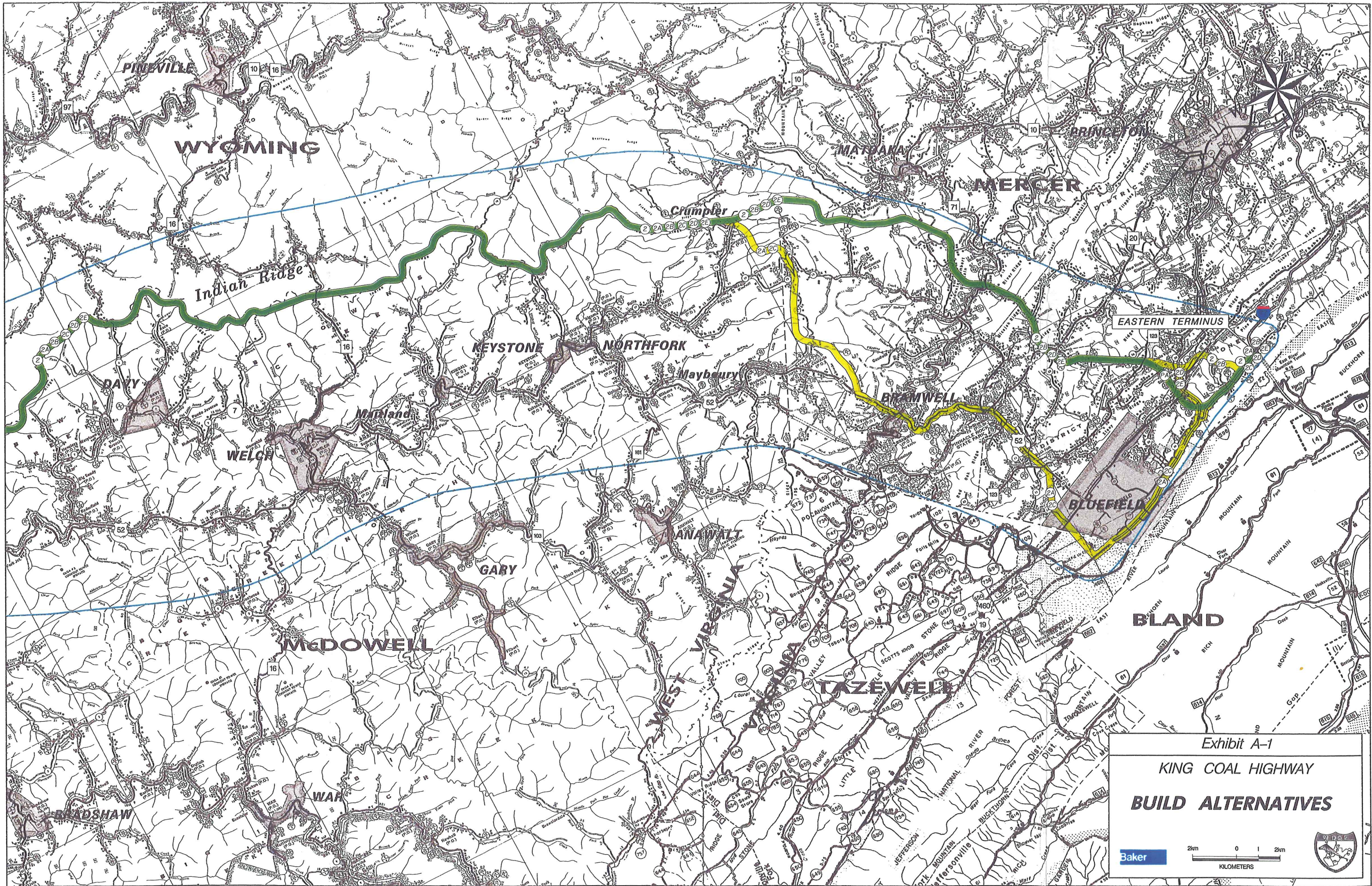
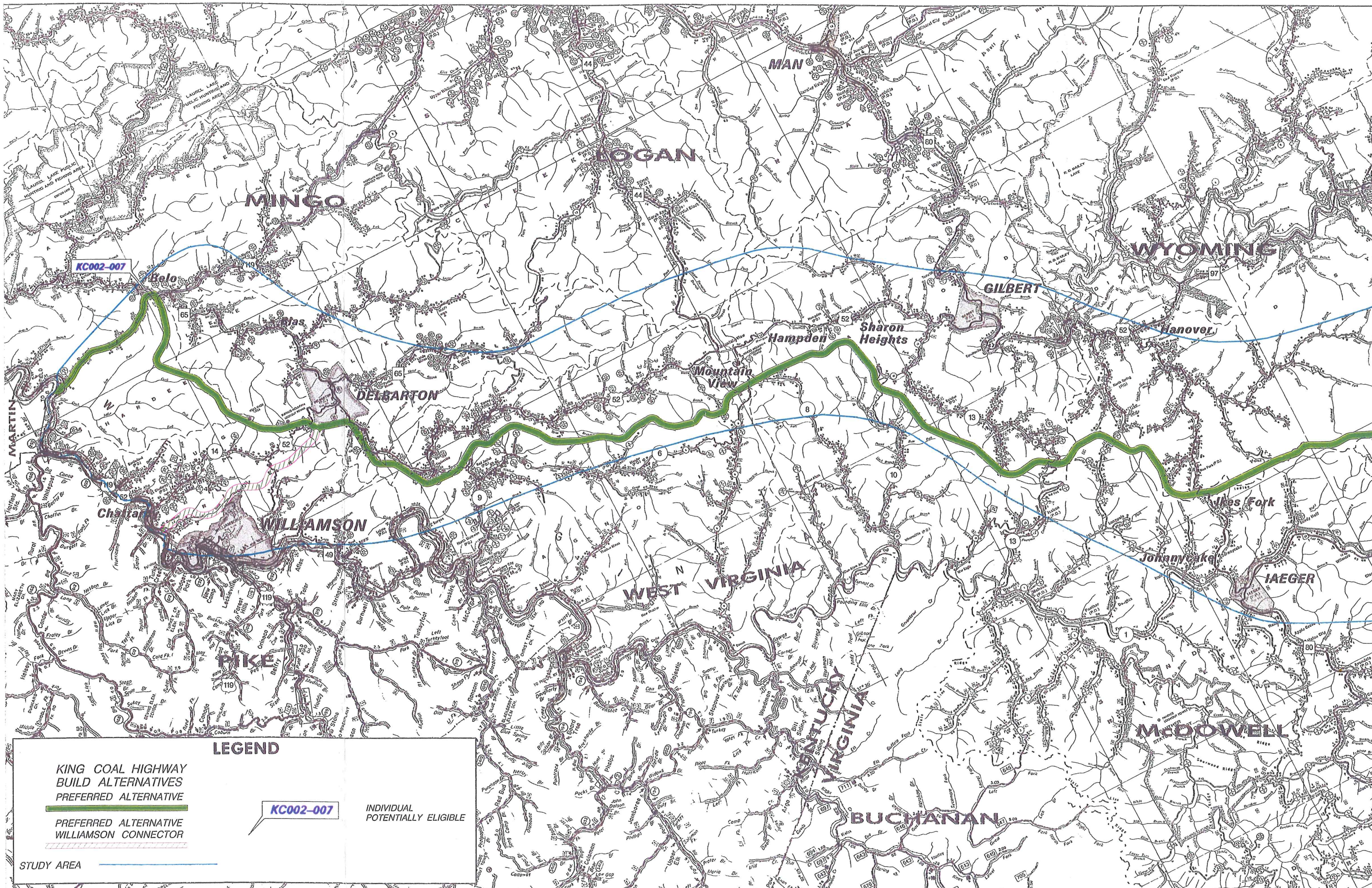


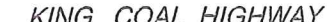
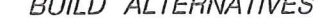


Exhibit A-1  
 KING COAL HIGHWAY  
**BUILD ALTERNATIVES**

Baker

2km 0 1 2km  
 KILOMETERS



**LEGEND**

-  KING COAL HIGHWAY BUILD ALTERNATIVES PREFERRED ALTERNATIVE
-  PREFERRED ALTERNATIVE WILLIAMSON CONNECTOR
-  STUDY AREA
-  **KC002-007** INDIVIDUAL POTENTIALLY ELIGIBLE

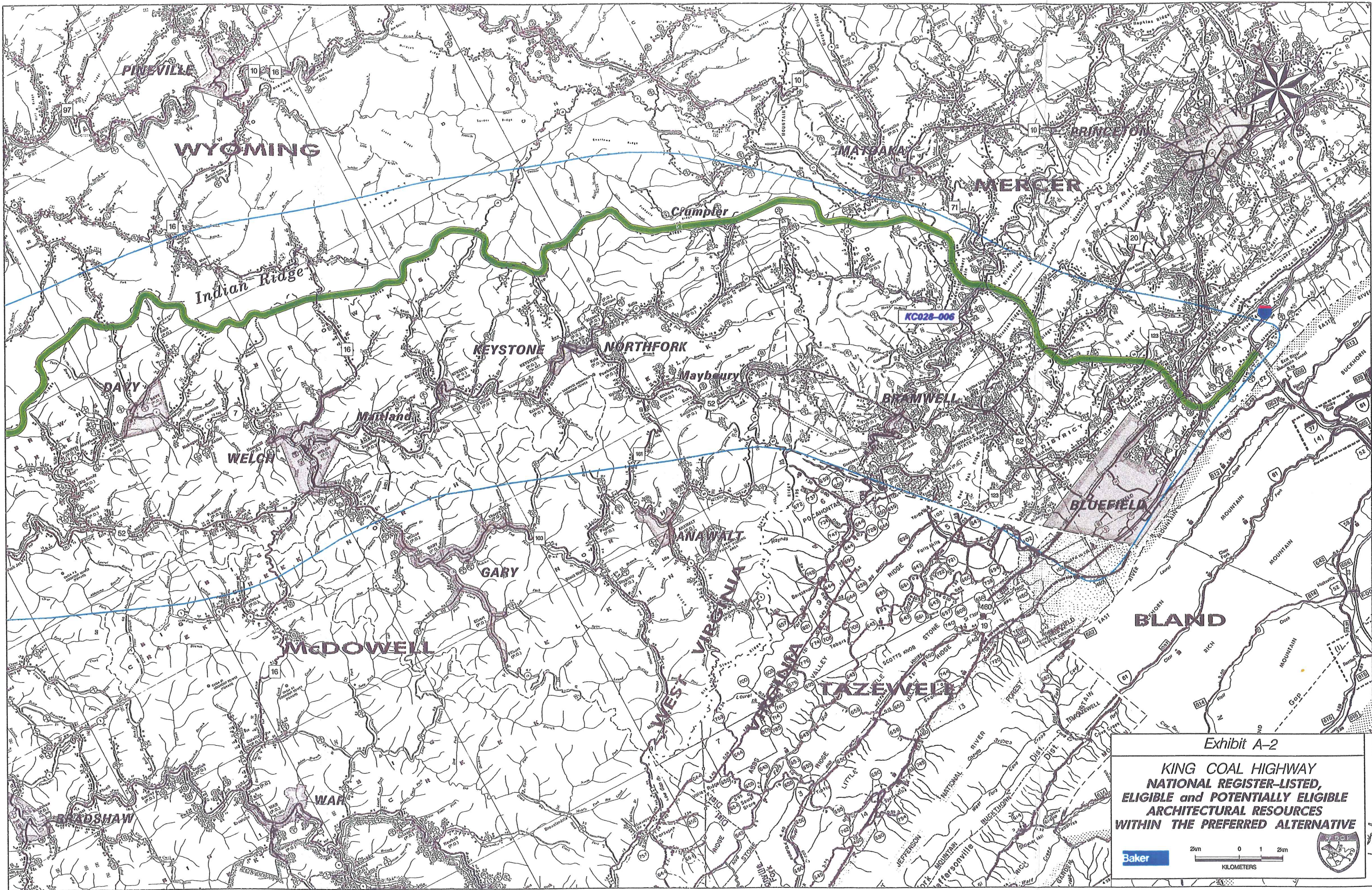
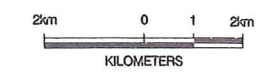


Exhibit A-2

**KING COAL HIGHWAY  
NATIONAL REGISTER-LISTED,  
ELIGIBLE and POTENTIALLY ELIGIBLE  
ARCHITECTURAL RESOURCES  
WITHIN THE PREFERRED ALTERNATIVE**

Baker



# **SECTION 4(f) FINDING**



## **SECTION 4(f) FINDING**

### **A. INTRODUCTION**

Section 4(f) of the US Department of Transportation Act of 1966, as amended, states:

The Administration may not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that (i) there is no prudent and feasible alternative to the use of land from that property; and (ii) the action includes all possible planning to minimize harm to such park, recreation area, wildlife refuge or historic site resulting from such use. (23 CFR 771.135 (a)(1), 1987.)

The evaluation of alternatives included the identification of potential Section 4(f) resources located within the study area and development of strategies to avoid and/or minimize impact to these resources. The Preferred Alternative does not result in any direct or constructive use impacts to Section 4(f) resources. The purpose of this statement is to demonstrate the application of Section 4(f) definitions to potential Section 4(f) resources in the Preferred Alternative to determine whether any Section 4(f) impact occurs.

### **B. PROPOSED ACTION**

The proposed King Coal Highway facility will provide a divided, four-lane highway with partially controlled access on new and existing locations from Williamson, West Virginia, to I-77 in the vicinity of Bluefield, West Virginia. The *King Coal Highway Purpose and Need Study* (WVDOT, 1994) was prepared in accordance with FHWA's Technical Advisory T 6640.8A (USDOT, 1987), *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*, and FHWA's memorandum entitled, *Purpose and Need in Environmental Documents* (USDOT, 1990a). The *King Coal Highway Purpose and Need Study* identified the deficiencies of the study route (US 52) and in turn represents the need for some form of transportation improvement within the study area. The following Table (Table A) provides a summary of the project purpose and need identified in the *Purpose and Need Study* (WVDOT, 1994).

In accordance with appropriate federal regulations (40 CFR 1502.14(a); 23 CFR 771.123 (c)) and the FHWA Technical Advisory T 6640.8A, a broad range of alternatives was initially developed. The alternatives were based on comments received during the project scoping meeting (September 16, 1993) *King Coal Highway Purpose and Need Study* (WVDOT, 1994), and the Alternatives Study meeting held on May 25, 1995. The broad range of alternatives was developed into four categories:

- System Wide Improvements (i.e. Transportation System Management and Improved Roadway Alternatives).
- Transit Alternatives (i.e. Mass Transit and Heavy Rail/Freight Transportation).
- Build Alternatives.
- No Build Alternative.

**TABLE A  
PROJECT NEED OVERVIEW**

<b>Factor Contributing to Project Need</b>	<b>King Coal Highway Study Conclusions</b>
Current and Future Capacities and Level of Service (LOS) of Existing Transportation Network	Year 2013 projections reveal 90 % of the study route (US 52) will be operating at or below Level of Service (LOS) D. The King Coal Highway will improve the LOS and therefore decrease travel times in the study area.
Current and Future Transportation Demands (Regional and Local)	Traffic demand exists to support a 4-lane partially controlled access highway through the study area.
Regional and Local System Linkage	King Coal Highway will enhance both regional and local system linkage, as well as modal interrelationships in the region. This will provide industries and individuals with an efficient route.
Safety and Roadway Deficiencies	Study route has higher than statewide (WV) average accident rates. Roadway deficiencies such as sharp curves and steep grades were identified.
Social Demands	King Coal Highway will improve access for emergency services as well as improve access to community services.
Economic Demands	King Coal Highway will improve access to the study area and could enhance employment and economic development opportunities.
Legislation	The U.S. Congress designated the King Coal Highway, through the ISTEA, as a high priority segment of a high priority corridor on the National Highway System.

These alternatives were analyzed in a three step screening process. The Level I analysis determined if they were able to meet the various components of the project's purpose and need. The System Wide Improvements and Transit Alternatives were eliminated from further detailed study because they did not meet the defined need for the project. Those alternatives that were found to meet the purpose and need for the project were carried forward to the Level II analysis.

In the Level II analysis, potential environmental impacts were assessed for each alternative. Those alternatives that were determined to have the potential for high levels of impacts to the human and natural environments were eliminated from detailed study. Level III analysis involved the alternatives examined in the DEIS. Based upon the comments received from the public and cooperating agencies, and based on impacts analysis of alternatives, a Preferred Alternative was identified as part of the final Level III analysis.

Alternatives evaluated in the DEIS are shown in Exhibit A-1. These alternatives included the No Build Alternative, six (6) Build Alternatives, and the Preferred Alternative, which is comprised of segments of each of the other Build alternatives and one additional segment. A detailed description of each alternative is provided in Section II of this FEIS.

The Preferred Alternative is approximately 151 kilometers (94 miles) in length. It begins in Mingo County at the intersection of US 52 and US 119 north of Williamson, West Virginia. The Preferred Alternative Preferred Alternative follows US 119 northeasterly to approximately 1.6 kilometers (1.0 mile) east of the WV 65 intersection near Belo. At this location, the Preferred Alternative proceeds south and then east crossing Buffalo Mountain and US 52. It proceeds easterly and passes to the south of Delbarton. Near Delbarton, the Preferred Alternative turns southeasterly and generally parallels US 52 which is located north of the

alternative. The Preferred Alternative crosses over Mingo County Route 9 and ascends to the ridge top which it follows easterly for approximately 40 kilometers (25 miles). As the Preferred Alternative passes to the south of Coon Knob, Hampden, and Sharon Heights, it turns south and crosses Mingo County Route 10 near Twisted Gun Gap. The Preferred Alternative continues southeasterly and then easterly, following the ridge line over the Mingo/McDowell and McDowell/Wyoming County lines. The alternative follows Indian Ridge, which is also the Wyoming/McDowell County line, eastward to Crumpler. Near Crumpler, it passes over Flat Top Mountain and parallels Pinnacle Creek. It crosses Pinnacle Creek, Mercer County Route 11, Lambert Browning Mountain, and Bluestone River.

East of the Bluestone River, The Preferred Alternative parallels Sandlick Creek and traverses the summit of Micajah Ridge. The Preferred Alternative continues easterly, crossing WV 20, Mercer County Routes 23 and 36. Atop of Hurricane Ridge, the Preferred Alternative then veers south, crossing WV 123. The Preferred Alternative then traverses Stony Ridge in a southerly direction where it crosses US 19 and US 460 to the intersection with US 52. The Preferred Alternative then follows US 52 northeasterly to its terminus at the US 52/I-77 Interchange.

The Preferred Alternative also includes a connector road (proposed 4-lane limited access highway) to facilitate efficient access to Williamson to and from the Preferred Alternative. The connector will also provide access to the Mingo County Airport. The Williamson Connector is approximately 8 kilometers (4.9 miles) in length. It begins in Mingo County at Goodman along US 52. The Connector proceeds in an easterly direction, paralleling Sugartree Creek to the summit adjacent to the Mingo County Airport. It then passes through the gap north of Sycamore Creek and crosses US 52. The Williamson Connector then proceeds easterly towards Delbarton, where it intersects with the Preferred Alternative.

### **C. POTENTIAL SECTION 4(f) RESOURCES**

There are no wildlife refuges or recreation areas in the vicinity of the Preferred Alternative. Two (2) potentially eligible historic resources are present. These Section 4(f) resources are discussed below.

#### **1. HISTORIC SITES**

There are two (2) historic resources within the Preferred Alternative. Detailed information on these resources is provided in the companion report to this FEIS: *Determinations of Eligibility for Cultural Resources, King Coal Highway Preferred Alternative* (DOE report; WVDOH, 1999). The DOE report details the resource characteristics that contribute to historic significance. A Letter Report titled "Assessments of Adverse Effects" (November, 1999), sets forth the effect determinations for these resources. The West Virginia State Historic Preservation Officer (WVSHPO) concurred with effect determinations in its December 16, 1999 letter (see FEIS Section VII).

Based on the determination of eligibility documentation, and assessment of adverse effects documentation, only two individual resources (2 railroad-related resources; KC002-007 and KC028-006) were recommended as potentially individually eligible for the NRHP. It was further concluded, based on the applicable criteria for each resource's eligibility listing, that a "no adverse effect" determination was appropriate (WVDCH letter dated December 16, 1999). Thus, the Preferred Alternative will not adversely affect any known architectural resources listed or eligible to the NRHP.

The general locations of these resources relative to the Preferred Alternative are shown on Exhibit A-2. The resources, their National Register status and criteria, determinations of effect, and WVSHPO concurrence are shown in Table A-2.

**TABLE A-2**  
**DATA SUMMARY OF ELIGIBLE AND LISTED CULTURAL RESOURCES IN THE**  
**KING COAL HIGHWAY PREFERRED ALTERNATIVE AREA OF POTENTIAL EFFECT**

*Resource Number / Name	Estimated Date of Construction	Resource Description	National Register Status/Criterion	Application of Criteria of Adverse Effect
KC002-007- Belo Segment, Lenore Branch of the Norfolk and Western Railroad	Ca.1900	Railroad Corridor - 0.76 mile segment	Recommended as Potentially Individually Eligible	*No Adverse Effect
KC028-006 - Sandlick Creek Segment, Norfolk and Western Railroad	Ca. 1900	Railroad Corridor - 0.28-mile segment	Recommended as Potentially Individually Eligible	*No Adverse Effect

Note: \*Results above are based on the *Determination of Eligibility Documentation and Preliminary Effect Assessment for the King Coal Highway Preferred Alternative* (1999). WVDCH letter dated December 16, 1999.

**a) Belo Segment, Lenore Branch of the Norfolk and Western Railroad (KC002-007)**

The resource is part of the Norfolk and Western Railroad that runs through Belo. The 0.76 mile segment of the railroad corridor consists of one set of railroad tracks on a one to two foot crushed limestone base with a slight grade. The railroad corridor also contains one at-grade railroad crossing marked by two cross-bucks.

The Belo Segment of the Norfolk and Western Railroad meets Criterion A for its association with the significant contribution of the railroad system to the development of the town of Belo, West Virginia, and the coal industry of the Pigeon Creek and Rockhouse Fork valleys from the beginning of rail service in 1920 to the end of the historic period in 1950.

**b) Sandlick Creek Segment, Norfolk and Western Railroad (KC028-006)**

The resource is part of the Norfolk and Western Railroad that runs through the Sandlick Creek Area of the Widemouth Creek Valley. The 0.28-mile segment of the railroad corridor consists of one set of railroad tracks (no longer in use) on a one to two foot crushed limestone base with a slight grade. The Sandlick Creek Segment contains two unmarked, at-grade, railroad crossings.

The Sandlick Creek segment of the Norfolk and Western Railroad meets Criterion A for its association with the significant contribution of the railroad system to the development and coal industry of the Widemouth Creek Valley of West Virginia, from the beginning of rail service in 1903 to the end of the historic period in 1950.

**2. ARCHAEOLOGICAL RESOURCES**

Phase 1a research and prehistoric predictive modeling have been conducted for the Preferred Alternative to determine the potential for archaeological sites. 23 CFR 771.135 (g)(2) states that, "Section 4(f) does not apply to archaeological sites where the Administration [FHWA], after consultation with the SHPO and the ACHP, determines that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. The exception applies both to situations where data recovery is undertaken or where the Administration decides, with agreement of the SHPO and, where applicable, the ACHP not to recover the resource." Therefore, the only archaeological sites to which Section 4(f) applies are those that are eligible for the NRHP, significant for associations beyond information potential, and recommended for preservation in place. It is possible that NRHP

eligible archaeological sites may be identified, may be adversely affected by the project, and may be mitigated in some way as stipulated in the Programmatic Agreement (see prior section of Appendix). However, it is highly *unlikely* that any sites meeting the Section 4(f) criteria (i.e. sites requiring preservation in place) will be identified in the construction limits of the Preferred Alternative. To date, no such site is known to exist in any of the five counties that comprise the greater project area. If such a site were found to exist, it would be a legitimate late discovery and would be treated according to the regulations of 23 CFR 771.135.

#### **D. IMPACT ANALYSIS**

The analysis of Section 4(f) impacts must consider both direct and indirect impacts or "use." Direct use occurs when a project requires the direct acquisition of all property, or a portion of the property within the boundary of a Section 4(f) resource, or the taking of contributing structures within a Historic District. Indirect impacts or "constructive use" occur when the transportation project does not require acquisition of land from a Section 4(f) resource but the project results in proximity impacts so severe that the protected activities, features, or attributes of the Section 4(f) resource are substantially impaired. "Substantial impairment" occurs only when the protected activities, features, or attributes of the resource are "substantially diminished" (23 CFR 771.135(p)(2)). According to 23 CFR 771, as amended, the determination of constructive use for historic resources depends on substantial impairment of the character or setting of the resource, and specifically, impairment of the characteristics of the resource that contribute to its eligibility for the National Register (23 CFR Part 771.135, paragraphs (p)(4)(ii) and (p)(5)(vi) as amended, 1991). The determination of constructive use is based on: 1) identification of the relevant features of the resource; 2) assessment of the proximity impacts, including access, visual, and noise impacts; and 3) consultation with the agency and/or officials having jurisdiction over the resource.

The following discussion evaluates direct and constructive use impacts for those resources that are considered to be Section 4(f) resources.

##### **1. HISTORIC SITES -- RAILROADS**

The two individual architectural resources (Belo Segment, Lenore Branch of the Norfolk and Western Railroad and the Sandlick Creek Segment of the Norfolk and Western Railroad) are afforded protection under Section 4(f) of the US Department of Transportation Act as historic resources eligible for listing on the National Register of Historic Places.

###### **a. Direct Use**

While illustrated on Exhibit A-2 as impacts, the project description of the Preferred Alternative assumes the railroads will be bridged such that continued use is ensured. The Preferred Alternative will not use any portion of land contained within the National Register Boundary established for the two historic resources. Therefore, the project will not result in a direct use of these resources and Section 4(f) "protection" for these resources does not apply.

###### **b. Constructive Use**

The characteristics of the two railroads that render them eligible as historic resources are the relationships of the railroads to the towns that developed adjacent to them and the mountainous setting they pass through. Because these railroads will be bridged by the Preferred Alternative, there will be no interference with access to or within the resources. Visual impacts to the resources may occur, but would not interfere with the character of the resources which are, like the proposed action, transportation facilities. Similarly, noise impacts to the resources would not constitute substantial impairment since the resources are still in active use as transportation facilities. Thus, the proposed action will not

substantially impair the characteristics of these resources that make them eligible as Section 4(f) resources. This conclusion is supported by the Section 106 findings of "no adverse effect" for these resources in the SHPO's December 16, 1999 letter (see FEIS Section VII).

Therefore, the project will not substantially impair those characteristics of the Belo Segment, Lenore Branch of the Norfolk and Western Railroad and the Sandlick Creek Segment of the Norfolk and Western Railroad for which they are eligible for the National Register of Historic Places; thus no constructive use of the historic sites will occur.

**2. ARCHAEOLOGICAL RESOURCES**

The results of the cultural resource effort conducted to date indicate that it is unlikely that the King Coal Highway will impact an archaeological site warranting preservation in place.

**E. CONCLUSION**

It is the finding of this application of Section 4(f) definitions and criteria that no resources eligible for protection under Section 4(f) will be directly or constructively used by the Preferred Alternative of the King Coal Highway project.