

prepared by US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION May 2004

Federal Highway Administration

MD 97 BROOKEVILLE PROJECT FROM SOUTH OF GOLD MINE ROAD TO NORTH OF HOLIDAY DRIVE MONTGOMERY COUNTY, MARYLAND

ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT STATEMENT/ SECTION 4(F) EVALUATION

Submitted pursuant to 42 U.S.C. 4332(2)(c), 49 U.S.C. 303, and CEQ Regulations (40 CFR 1500 et seq.)

US Department of Transportation and Federal Highway Administration

Maryland Department of Transportation State Highway Administration

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US Army Corps of Engineers US Environmental Protection Agency US Fish and Wildlife Service

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The purpose of the project is to remove the continually increasing traffic volumes from the Town of Brookeville in Montgomery County, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. The project area extends approximately two miles from south of Gold Mine Road to north of proposed Bordly Drive. The proposed action considered four new alignment alternates (one east of Brookeville-Alternate 5C; and three west of Brookeville–Alternate 7, Alternate 8A, and Alternate 8B). All new alignment alternates were designed for a two-lane, undivided, limited-access highway extending approximately from MD 108 to Holiday Drive. Alternate 7 was subsequently modified to minimize environmental impacts. Alternate 7 Modified is SHA's Selected Alternate. Impacts to social, cultural and natural environmental resources, which may result from selection of Alternate 7 Modified, are discussed in this document. Also presented are potential measures for mitigating these impacts.

5/10/04

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MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



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Maryland State Highway Administration

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Executive Summary

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

EXECUTIVE SUMMARY

1. Administrative Action

(Federal Highway Administration)

- () Draft Environmental Impact Statement
- (x) Final Environmental Impact Statement
- (x) Section 4(f) Evaluation

2. <u>Informational Contacts</u>

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3. <u>Description of Proposed Action</u>

The Maryland State Highway Administration (SHA), in cooperation with the Federal Highway Administration (FHWA) has conducted environmental and engineering studies to evaluate various transportation alternatives to remove the increasing traffic volumes from the Town of Brookeville, in Montgomery County, in order to improve traffic operations and safety conditions on existing MD 97 (Georgia Avenue) and to preserve the historic character of the Town of Brookeville. In 1979, the entire town was listed on the National Register of Historic Places as a historic district. The study limits for this project have been defined along MD 97 from south of Gold Mine Road to north of Holiday Drive. **Figure ES-1** shows the project area.

The SHA Selected Alternate for transportation improvements is Alternate 7 Modified, which proposes a two-lane roadway on new location west of Brookeville and existing MD 97. Alternate 7 Modified is similar to Alternate 7, which was presented in the Draft Environmental Impact Statement (DEIS), except that Alternate 7 Modified is shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Stream Valley Park to minimize impacts to the National Register eligible Newlin/Downs Mill Complex archeological site. This shift and proposed retaining wall design would also reduce Section 4(f) use of public parkland and the Brookeville Historic District located south of Brookeville Road. SHA's Selected Alternate would then continue in a northeasterly direction intersecting Brookeville Road west of existing MD 97 with a roundabout to serve as a traffic calming measure. The alternate would connect to existing MD 97 just north of the town limits. A portion of existing MD 97 in the Town of Brookeville would be closed to traffic and the existing MD 97 bridge over Reddy Branch would be removed when the new roadway is constructed and in operation. SHA's Selected Alternate has a design speed of 40 miles per hour and includes an open typical section, which consists of two 11-foot lanes and two ten foot shoulders (five feet paved for bicycle compatibility and five feet graded).



This Final Environmental Impact Statement (FEIS)/Section 4(f) Evaluation is a summary of the environmental analyses conducted for the MD 97 Brookeville Project. This FEIS was prepared to provide an overall view of the project area and potential impacts resulting from the various alternates that have been proposed as solutions to the existing problems experienced on MD 97. An Environmental Impact Statement (EIS) is required by the National Environmental Policy Act of 1969 (NEPA) when a major federal action may significantly affect the environment. The EIS is a decision-making tool developed to present the project need, design alternates, environmental impacts, and mitigation for public and agency review and comment.

MD 97 functions as a major north-south commuter route between the employment areas in and around the Washington Metropolitan area, including Washington, D.C. and the residential communities such as Brookeville in northern Montgomery County, Howard, and Carroll Counties. **Figure ES-2** shows the regional area. In Brookeville, MD 97 has a 90-degree bend in its horizontal alignment, which is accompanied by a steep vertical grade. The increasing volumes of peak hour traffic combined with these substandard geometrics contribute to the need to improve the overall operational characteristics of MD 97 through this historically significant community.

4. <u>Project History and Alternates Considered</u>

During the initial studies for the project dating to the mid-1960's, and again in the mid 1990's when the MD 97 Brookeville Project was resumed, citizens and members of governmental resource agencies offered comments and suggestions that relocated alternates should be studied in addition to improvements to the existing roadway through town.

A total of 13 alternates were initially studied as part of a Feasibility Study performed in 1990. A formal Project Planning Study began in 1995, an Informational Public Workshop was held in June 1995, and in early 1996 agency concurrence was received on the project's Purpose and Need Statement. SHA developed preliminary alternates (six), based on input from the public as well as comments offered by resource agencies, and presented them to the public at an Alternates Public Workshop held in May 1996. Public comments were taken at the workshop and refinements were made to some alternates while other alternates were dropped from further consideration entirely. As a result of the May 1996 meeting, the No-Build Alternate and three Build Alternates were carried forward for detailed studies: Alternate 3 Option B, Alternate 4 Modified Option A, and Alternate 5C. In May 1997, environmental regulatory agency review concurred on the Alternates Retained for Detailed Study package, and detailed environmental and engineering studies were initiated for the project. The preparation of a Preliminary DEIS was also initiated to evaluate the potential impacts and benefits of these four alternates.

By early 1998, there were concerns about the project's consistency with Maryland's newly enacted Smart Growth and Neighborhood Conservation Initiatives. Prior to circulation of a DEIS, the MD 97 Brookeville Project was placed on hold. Following the Smart Growth Legislation and an agreement between the local elected officials, the Maryland Department of Transportation (MDOT), and the Governor's Office, the project was reinitiated in April 2000.



ES-4

Final Environmental Impact Statement

Although the Town of Brookeville is located within a Priority Funding Area (PFA) where state funds may be spent on additional infrastructure that supports or encourages growth, the majority of the previously proposed bypass alignments were not. An agreement with local elected officials, MDOT, and the Governor's Office set four specific criteria to be met for design and construction of the project. Following this agreement, the MD 97 Brookeville Project was included in the FY 2003-2008 Maryland Consolidated Transportation Program for Project Planning. The four criteria and the actions taken to meet those criteria are as follows:

- (1) Montgomery County must adopt restrictions that prevent the bypass from allowing sprawl development outside the current boundaries of the Town of Brookeville. Action: An amendment to the Annual Growth Policy was adopted on April 6, 1999 by the Montgomery County Council.
- (2) A permanent easement must border the entire roadway to ensure that no future access, widening, or connection to the bypass is possible.

Action: The Maryland Environmental Trust (MET) has tentatively agreed to hold the easement pending the development of the Letter of Commitment and the Memorandum of Understanding (MOU). An exact amount and location of this easement will be prepared during the design phase of this project. Meets and Bounds Plats will be prepared and will be part of the MOU.

(3) MDOT and the Montgomery County and Howard County governments must work out a safe "traffic calming" point north of the bypass to limit future traffic to the current capacity of MD 97 through Brookeville.

Action: A roundabout is proposed north of Brookeville Road to limit traffic capacity through the area. This roundabout will also serve as a safe traffic calming point.

(4) If for any reason these controls fail, Montgomery County will reimburse the state for the full cost of the bypass.

Action: This serves to further ensure that rural areas and open space are preserved, the environment is healthy, and thriving communities enjoy their quality of life.

Relevant to the current undertaking, this agreement required that the previous alternates be reevaluated to ensure conformance with these criteria. This re-evaluation resulted in the redesign of Alternate 5C (east of Brookeville), and the development of new alternates (Alternate 7, Alternate 8A, and Alternate 8B) west of Brookeville (Figure ES-3). Two options (A-At-grade and B-Grade-separated) were under consideration for Alternate 8, which were developed to avoid and minimize environmental (i.e., floodplains, wetlands) versus community (i.e., pedestrian access) impacts. Each of the Build Alternates included the concept of a two-lane undivided limited-access roadway with shoulders.

An Informational Public Meeting was held in June 2000 to inform the public that the project had been re-initiated; to present the Smart Growth compliance criteria; to reintroduce the public to the alternates previously presented (Alternate 1, Alternate 3 Option B, and Alternate 4 Modified Option A); and to gather public input on new alternates being developed (Revised Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B). The No-Build Alternate (Alternate 1) was carried forward without changes. While it does not meet the identified project needs, the No-Build Alternate was used as a benchmark for comparison in the analysis of the Build Alternates.



ES-6

Alternate 3 Option B and Alternate 4 Modified Option A were dropped as a result of preliminary planning and public comments generated from the June 2000 Alternate Public Workshop. These alternates were dropped because they generally serve similar functions as Alternate 7 and Alternate 8, but were longer, affected a greater number of properties, and were subsequently more expensive than Alternate 7 and Alternate 8.

The following alternates were recommended to be retained for further detailed study in the DEIS: Alternate 1 (No-Build) and the four Build Alternates (Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B). The Build Alternates all include roundabouts at the ends of the bypass to address the Smart Growth criteria for traffic calming, while staying consistent with the project Purpose and Need. As part of all Build Alternates, SHA investigated solutions to the MD 97/Holiday Drive sight distance problem in response to citizen concerns at the June 2000 Alternates Public Workshop. SHA agreed to modify the existing roadway profile for MD 97 just north of Holiday Drive to improve the intersection sight distance for vehicles exiting Holiday Drive. By slightly raising the grade of MD 97 through a short depressed curve, the motorist will have a longer sight distance and the approaching vehicles will not disappear from the line of sight. The SHA agreed that this improvement would be included with all of the Build Alternates, as well as the No-Build.

An Interagency Review (IAR) meeting was held in October 2000 to discuss the Alternates Retained for Detailed Study (Alternate 1 No-Build, Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B) with the environmental review agencies. Concurrence was received from the resource agencies and these alternates were presented in the August 2001 MD 97 Brookeville Project DEIS/Section 4(f) Evaluation.

A Combined Location/Design Public Hearing was held in October 2001 at the Rosa M. Parks Middle School. The purpose of this hearing was to present the results of the engineering and environmental studies completed for the MD 97 Brookeville Project and to provide an opportunity for interested individuals, association, citizens groups, or government agencies to offer verbal or written comments. Approximately 117 citizens attended and a total of 38 public comments were made (22 oral and 16 written comments). As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate.

Subsequent to the Public Hearing, further studies were developed regarding the National Register eligible Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings that recommended the site as National Register eligible, Alternate 7 Modified was developed to minimize impacts to the archeological site. The modified alignment was presented at the January 2002 IAR meeting. An agency field view occurred in September 2002.

A draft Selected Alternate and Conceptual Mitigation Package (SACM) was circulated for agency review and comment in February 2003 and the MD 97 Brookeville Project was presented at the March 2003 IAR Meeting. Agency comments focused on the status of the draft Memorandum of Agreement (MOA) in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and a request for consideration of wildlife passage along the north side of Reddy Branch as discussed previously. The final SACM package responded to these comments and was distributed at the May 2003 IAR meeting for formal agency concurrence and comment. As a result of this process, agency concurrence (without comment) of SHA's Selected Alternate and the conceptual mitigation proposed in the SACM Package was received from the FHWA, United States Army Corps of Engineers (USACOE), United States Fish and Wildlife Service (USFWS), Maryland Department of the Environment (MDE), and the Metropolitan Washington Council of Government (MWCOG). Agency concurrence (with minor comments) was received from the United States Environmental Protection Agency (USEPA), the National Park Service, and the Maryland Department of Natural Resources (DNR). The USEPA and DNR expressed support of the reevaluation of the north-side wildlife passage; DNR offered continued coordination with SHA regarding mitigation designs. The National Park Service gave concurrence based on FHWA legal sufficiency. The Maryland Department of Planning (MDP) also concurred commenting that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl-development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP also recommended that MDOT, SHA, and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works. In response, coordination is ongoing between SHA and MET and will be resolved in Final Design. Section VI of this FEIS includes the IAR meeting minutes and signed agency concurrence forms resulting from completion of the SACM component of the Maryland Streamlined Environmental and Regulatory Process.

5. <u>Description of SHA-Selected Alternate</u>

SHA's Selected Alternate, Alternate 7 Modified, is similar to Alternate 7 except that Alternate 7 Modified is shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Stream Valley Park to minimize impacts to the National Register eligible Newlin/Downs Mill Complex archeological site that is located within the Brookeville Historic District. A retaining wall would be placed on the south side of Brookeville Road, east of the roundabout to further minimize impacts to the Newlin/Downs Mill Complex. Alternate 7 Modified has a design speed of 40 miles per hour. Alternate 7 Modified has an open typical section, which consists of two 11 foot lanes and two ten foot shoulders (five feet paved for bicycle compatibility and five feet graded). Access is limited to two roundabouts (at Brookeville Road and the southern termini). Cost is estimated at \$12.5 million.

This FEIS describes the impacts to the social and natural environments that would be expected to occur with any of the alternates discussed herein. All alternates are described in detail in Section II of this document. Section III identifies the affected environment and Section IV discusses impacts and associated mitigation. Section V is the Section 4(f) Evaluation addressing use of public parkland and historic properties. Table ES-1 is a comparison of the impacts associated with the No-Build and the five FEIS Build Alternates.

6. <u>Areas of Controversy</u>

The 1990 Feasibility Study and the 1997 Detailed Alternates Analysis resulted in resource agency concerns regarding western off-line alternates and led to the development of two eastern off-line alternates. Public opinion however, is mainly in support of the western off-line alternates, which are consistent with local master plans. As a result, and based on public input and resource agency comments received to date, there is no apparent public opposition to SHA's Selected Alternate.

7. Unresolved Issues with Agencies

There are no unresolved issues with the resource agencies at this time because the unresolved issues of the DEIS and the agency comments on the SACM package have been addressed, as discussed previously in this section, and in **Sections II**, **III**, and **IV** of this document.

TABLE ES-1 ENVIRONMENTAL IMPACT SUMMARY

	1			······································		·		
	ALTERNATES EVALUATED IN THE FEIS							
FEATURE	Alternate 1Alternate 5CAlternate 5CNo-BuildEast Bypass 5Wo		Alternate 7 West Bypass	Alternate7 Modified West Bypass	Alternate 8A At-Grade West Bypass	Alternate 8B Grade Separated West Bypass		
		Open Section	Open Section	Open Section	Open Section	Open Section		
Length (miles) ¹	0	2.12	0.72	0.72	0.95	0.95		
Cost (millions-2001 dollars)	0	\$ 34.2	\$ 12.2	Approximately \$12.5 (assuming retaining wall along Brookeville Road	\$ 13.7	\$ 18.0		
		Socio-Econon	nic Resources					
Residential Relocations (no.)	0	5	0	0	0	.0.		
Business Displacements (no.)	0	1	0	0	0	0		
Affected Properties (no.)	0	26	11	· 11	14	14		
Comprehensive Plan Compatibility	No	No	Yes	Yes	Yes	Yes		
Recreational Facilities (acres)	0	4.55	6.65	5.62	7.22	7.64		
Historic District (acres)	0	0	2.24 ^{3,4}	1.66 ^{3, 4}	1.84 3,4	2.00 ^{3,4}		
Section 106 Adverse Effects	Yes	Yes	Yes	Yes	Yes	Yes		
Total Section 4(f) ⁶ (acres)	0	4.55 ^{2 parks}	6.65 ^{1 park}	5.62 ^{1 park}	7.22 ^{1 park}	7.64 ^{1 park}		
Impacted Waste Sites (no.)	0	0	1	1	2	1		
Air Quality (SIP Conformance)	0	Yes	Yes	Yes	Yes	Yes		
Noise Receptors (no.) ²	0	8	10	10	10	10		
The second se		Natural R	lesources					
Prime Farmland Soils (acres)	0 -	25.88	4.84	4.53	5.50	5.34		
Statewide Important Soils (acres)	0	5.63	1.79	1.63	7.50	8.51		
Wetlands (acres)	. 0	0.21	0.13	0.12	0.11	0.17		
Streams ⁷ (linear feet)	0	482.12	1169.2	1211.8	1067.32	1191.72		
FEMA 100-year Floodplains (acres)	0	2.59	3.34	3.22	3.03	3.34		
Forest Cover (acres)	0	11.50	10.47	9.02	13.53	14.2		

NOTES:

1

Alignment length does not include frontage, access roads and exclude additional length for traffic roundabouts.

Noise levels 66 dBA or greater or those which increase 10 dBA or more over ambient levels. 2

Included within Reddy Branch Stream Valley Park Acreages. 3

One park property, two locations. 4

For this alternate, impacts do not include right-of-way needed for storm water management. All other alternates include right-of-way impacts for storm water management ponds. Includes overlapping acreage of the Brookeville Historic District within impacted Public Parkland. 5

6

Based on re-evaluation, the impact numbers decreased from the Selected Alternate and Conceptual Mitigation Package. 7

8. <u>Related Projects in the Project Area</u>

The Montgomery County Department of Public Works, in cooperation with the Maryland-National Capital Park and Planning Commission (M-NCPPC), initiated a study of Bordly Drive from Georgia Avenue to connect with the Brookeville Farm development located east of Holiday Drive. The County extended the road a distance of approximately 1,800 feet to where the developer of the Brookeville Farms subdivision completed its portion of Bordly Drive. The typical roadway section includes a pavement width of 24 feet with 8-foot shoulder on each side, and a bike path on the south side. The connecting road was completed in Fall 2003.

9. <u>Summary of Environmental Impacts</u>

A more detailed discussion of environmental impacts and recommended mitigation measures where appropriate are also identified in **Section IV** of this FEIS.

Table ES-1 provides a comparison summary of environmental impacts associated with each of the proposed alternates considered within this FEIS.

Natural Environment

Less than one-quarter acre of wetlands would be impacted with SHA's Selected Alternate. SHA's Selected Alternate would cross two streams, Meadow Branch and Reddy Branch, with impacts of approximately 1,211.8 linear feet. These streams in the Hawlings River sub-watershed and the Patuxent River watershed are Use IV waters (Recreational Trout) and may require an in-stream work restriction from March 1 to May 31. SHA's Selected Alternate would impact approximately 3.2 acres of floodplain. The proposed MD 97 structure over Reddy Branch will be designed to accommodate wildlife passage along Reddy Branch by providing an eight-foot vertical and 25foot horizontal clearance along one side of the stream as agreed to by the agencies. As a result of agency concurrence on the SACM package, SHA will evaluate the north side passage option during final design when topographic survey of the area is completed. Conceptual design of the Meadow Branch crossing consists of a box culvert in accordance with the Maryland Department of the Environment (MDE) design criteria. Design of the Reddy Branch bridge and Meadow Branch culvert will be coordinated with the federal and state resource agencies as part of the permitting requirements. Stream restoration and wetland mitigation sites within Reddy Branch Stream Valley Park have been coordinated with and approved by the agencies including written concurrence from M-NCPPC. Agency coordination letters are included in Section V and Section VI of this FEIS. These include agency comments on the May 2003 SACM package and M-NCPPC's May 1, 2003 letter approving locations of stream restoration and wetland mitigation within Reddy Branch Stream Valley Park.

Publicly Owned Parks and Recreation Areas

SHA's Selected Alternate would impact 5.6 acres of Reddy Branch Stream Valley Park, compared to 5.3 acres for Alternate 7. SHA met with M-NCPPC on May 5, 2003 to discuss mitigation within Reddy Branch Stream Valley Park. Mitigation for both the temporary and Section 4(f) permanent use of public parkland is addressed in Section V (Section 4(f) Evaluation) of this FEIS. The Section 4(f) Evaluation includes M-NCPPC's signed concurrence of parkland mitigation as presented in SHA correspondence dated November 25, 2003. Section V also includes M-NCPPC's concurrence letter dated May 1, 2003 approving temporary use of sites in Reddy Branch Stream Valley Park for stream restoration and wetland replacement.

D

Final Environmental Impact Statement

Historic Resources

The Maryland Historical Trust (MHT) has determined that the Build Alternates retained for detailed study and the SHA Selected Alternate 7 Modified would have an adverse effect on the National Register of Historic Places listed Brookeville Historic District. Approximately 1.7 acres right-of-way (ROW) would be required from the historic district by SHA's Selected Alternate. The Section 106 MOA included in this document describes mitigative measures, including landscaping which will reduce the adverse effect of visual intrusion on the Brookeville Historic District. The FHWA has been notified that the Advisory Council on Historic Preservation (ACHP) does not believe that their participation to resolve adverse effects is needed. The MOA has been signed by MHT, SHA, and FHWA and will be filed pursuant to 36CFR800.6(b)(iv) (Section VI).

Archeological Resources

The SHA Selected Alternate 7 Modified will have an adverse effect on the National Register eligible Newlin/Downs Mill Complex (Site 18MO368), which is significant both individually and as a contributing resource to the Brookeville Historic District. SHA's Selected Alternate was shifted to the west by 30-40 feet in order to minimize impacts to the site. Approximately 700 linear feet of the millrace system would be affected, but not the identified features and significant archeological deposits associated with the mill and miller's house. In the MOA, Phase III data recovery and placement of interpretive signs are stipulated as Section 106 mitigation, provided that the site cannot be avoided during the design phase of this project.

Socio-economic and Smart Growth

No displacements would occur with SHA's Selected Alternate. No land use changes are anticipated as the result of the project. The relocation of MD 97 is identified in the 1980 Olney Comprehensive Plan. SHA's Selected Alternate would be located outside of the county defined PFA. To address Smart Growth requirements and maximize the potential for unplanned development, the MET has tentatively agreed to hold the easement pending the development of the Letter of Commitment and the MOU. The MDP has commented that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project, and recommended that MDOT, SHA, and MDP discuss the steps necessary for the submittal of this project to the State Board of Public Works. In response, a Letter of Commitment has been submitted by SHA to MET for signature (Section VI, Page B-78).

10. Federal or State Actions Required (Permits, Approvals, Etc.)

Section 404 of the Clean Water Act/Section 10 of the Rivers and Harbors Act

Federal permit authorization is administered by the USACOE pursuant to Section 404 of the Clean Water Act (Federal Water Pollution Control Act) (33 U.S.C. 1344) of 1972, as amended, and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). This permit process regulates the discharge of dredge and fill material or the placement of structures into waters of the United States, including jurisdictional wetlands.

Section 401 of the Clean Water Act: Water Quality Certification

Federal/State permit authorization is administered jointly by the USACOE and the MDE pursuant to Section 401 of the Clean Water Act (33 U.S. C. 1344) and the Annotated Code of Maryland (COMAR) 26.08.02.10. This permit authorization regulates the discharge of fill material into federal and state waterways in conjunction with Section 404 of the Clean Water Act.

National Environmental Policy Act (NEPA)

Federal approval authorization is administered by the FHWA pursuant to the NEPA of 1969 (42 U.S.C. 4321). This approval process provides a comprehensive review/oversight of activities affecting the natural environment with the objective of ensuring protection of its natural, cultural, and historical elements.

National Pollution Discharge Elimination System (NPDES)

Federal permit authorization is administered by the USEPA and the MDE pursuant to the Clean Water Act (33 U.S.C. 1344) of 1972 as amended, particularly in conjunction with Section 402 of the Water Quality Act of 1987. This permit process regulates the discharge of point-source pollutants into federal and/or state waterways.

Section 4(f) of the US Department of Transportation Act of 1966

Section 4(f) of the US Department of Transportation Act of 1966, 49 U.S.C. 303(c), states that the use of land from a significant publicly-owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site (as determined by the officials having jurisdiction over the resource) as part of a federally-funded or approved transportation project is permissible only if there are no feasible and prudent alternates to the use and that the proposed action includes all possible planning to minimize harm to the property. Section V of this FEIS is the Section 4(f) Evaluation prepared for the MD 97 Brookeville Project.

Section 106 of the National Historic Preservation Act

Federal and state coordination is undertaken by the FHWA, the SHA, and the MHT (State Historic Preservation Officer, SHPO), in consultation with the ACHP, pursuant to the National Historic Preservation Act of 1966, as amended. Activities within proximity of historical structures are evaluated in order to determine the effect of the undertaking and to protect and preserve significant historical and archeological resources. A Section 106 MOA has been fully executed and includes specific actions and measures designed to constitute adequate and acceptable mitigation of adverse effects of SHA's Selected Alternate. The signed MOA is included in **Section VI**.

Maryland State Non-tidal Wetland Permit Authorization

State permit authorization is administered by the MDE pursuant to the Nontidal Wetlands Protection Act, Environmental Article, Section 5-901. This permit process regulates impacts caused to non-tidal wetlands and/or their associated 25-foot buffers.

Maryland State Waterway Construction Permit Authorization

State permit authorization is administered by the MDE pursuant to the Waterway Construction Law, Environmental Article, Section 16-101. This permit process regulates construction activities within state waterways.

Maryland Reforestation Law

State approval authorization is administered by the DNR pursuant to the Maryland Reforestation Law, Natural Resources Article, Section 5-103, as amended. This approval process regulates forest disturbance resulting from roadway construction activities, in which roadway construction projects utilizing state funding must replace impacted forests on an acre-for-acre (1:1) basis.

Α.

ENVIRONMENTAL ASSESSMENT FORM

MD 97 Brookeville Project From South of Gold Mine Road to North of Holiday Drive Montgomery County, MD

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use is in keeping with the provisions of 1500.4(d) and 1506.2 and 06 of the Council of Environmental Quality Regulations, effective July 31, 1979, which recommend that duplication of federal, state, and local procedures be integrated into a single process.

The checklist identifies specific areas of the natural and social-economic environment, which have been considered while preparing this environmental assessment. The reviewer can refer to the appropriate section of the document, as indicated in the "Comment" column of the form, for a description of specific characteristics of the natural or social-economic environment within the proposed project area. It will also highlight any potential impacts, beneficial or adverse that the action may incur. The "No" column indicates that during the scoping and early coordination processes, that specific area of the environment was not identified to be within the project area or would not be impacted by the proposed action.

		<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
Land	Use Considerations			
1.	Will the action be within the 100-year floodplain?	<u>X</u>		<u>See III-H, IV-H</u>
2.	Will the action require a permit for construction or alteration within the 50-year floodplain?		X	
3.	Will the action require a permit for dredging, filling, draining or alteration of a wetland?	<u>X</u>		See III-I, IV-I
4.	Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?		<u>X</u>	
5.	Will the action occur on slopes exceeding 15%?	X		See III-C, IV-C
6 .	Will the action require a grading plan or a sediment control permit?	X		See III-C, IV-C
7.	Will the action require a mining permit for deep or surface mining?		X	
8.	Will the action require a permit for drilling a gas or oil well?		X	
9.	Will the action require a permit for airport construction?		X	
10.	Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?		<u>X</u>	

B.

ENVIRONMENTAL ASSESSMENT FORM (Continued) MD 97 Brookeville Project From South of Gold Mine Road to North of Holiday Drive Montgomery County, MD <u>YES</u> <u>NO</u> COMMENTS 11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland? X See III-A, IV-A 12. Will the action affect the use of any natural or manmade features that are unique to the county, state, or nation? <u>X</u> 13. Will the action affect the use of an archeological or historic site or structure? <u>X</u> See III-B, IV-B . Water Use Considerations 14. Will the action require a permit for the change of the course, current, or crosssection of a stream or other body of water? X See III-G, IV-G 15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction? X 16. Will the action change the overland flow of stormwater or reduce the absorption capacity of the ground? <u>X</u> See III-G, IV-G 17. Will the action require a permit for the drilling of a water well? X 18. Will the action require a permit for water appropriation? <u>X</u> 19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water? <u>X</u> 20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives? X 21. Will the action result in any discharge into surface or sub-surface water? <u>X</u> See III-G, IV-G 22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit? X See III-G, IV-G

ENVIRONMENTAL ASSESSMENT FORM (Continued) MD 97 Brookeville Project From South of Gold Mine Road to North of Holiday Drive Montgomery County, MD

			<u>YES</u>	<u>NO</u>	COMMENTS
C.	Air Us	se Considerations			
	23.	Will the action result in any discharge into the air?	<u>X</u>		<u>See III-K, IV-K</u>
	24.	If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?		<u>X</u>	
	25.	Will the action generate additional noise which differs in character or level from present conditions?	<u>X</u>		<u>See 111-L, IV-L</u>
	26.	Will the action preclude future use of related air space?		<u>X</u>	
	27.	Will the action generate any radiological electrical, magnetic, or light influences?		X	
D.	Plants	and Animals			
	28.	Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?	<u>X</u>		See III-J, IV-J
	29.	Will the action result in the significant reduction or loss of any fish or wildlife habitats?	<u>X</u>		<u>See III-J, IV-J</u>
	30.	Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?		<u>X</u>	
E.	Socio-	economic			
	31.	Will the action result in a pre-emption or division of properties or impair their economic use?	x		See 111-A TV-A
	32.	Will the action cause relocation of activities, structures, or result in a change in the			<u></u>
		population density or distribution?	<u>X</u>		<u>See III-A, IV-A</u>
	33.	Will the action alter land values?	<u>X</u>		See III-A, IV-A
	34.	Will the action affect traffic flow and volume?	<u>x</u>		See 1-B
	35.	Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?		X	

F.

0

ENVIRONMENTAL ASSESSMENT FORM (Continued) MD 97 Brookeville Project

From South of Gold Mine Road to North of Holiday Drive Montgomery County, MD	

		<u>YES</u>	<u>NO</u>	COMMENTS
36.	Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?		X	
37.	Is the action in accord with federal, state, regional and local comprehensive or functional plans, including zoning?	X		
38.	Will the action affect the employment opportunities for persons in the area?		X	
39.	Will the action affect the ability of the area to attract new sources of tax revenue?	<u>X</u>		<u>See III-A, IV-A</u>
40.	Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?		<u>X</u>	
41.	Will the action affect the ability of the area to attract tourism?		<u>X</u>	
Other	Considerations			
42.	Could the action endanger the public health, safety or welfare?		<u>X</u>	
43 <u>.</u>	Could the action be eliminated without deleterious effects to the public health, safety or welfare?		X	<u>See I-B</u>
44.	Will the action be of statewide significance?		<u>X</u>	
45.	Are there any other plans or actions (federal, state, county or private) that in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare or environment?		X	
46.	Will the action require additional power generation or transmission capacity?		<u>X</u>	
47.	This agency will develop a complete environmental effects report on the proposed action.			

Section I. Purpose of and Need for the Action

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

I. <u>PURPOSE AND NEED FOR THE ACTION</u>

A. PROJECT DESCRIPTION

The MD 97 Brookeville Project includes proposed transportation improvements to MD 97 (Georgia Avenue) in the vicinity of the Town of Brookeville in Montgomery County, Maryland (Figure I-1). The project area extends approximately two miles from south of Gold Mine Road to north of Holiday Drive and includes the corporate limits of the Town of Brookeville (Figure I-2).

B. BACKGROUND AND HISTORY

Brookeville is a unique crossroads town because of its relatively unaltered 18th century architecture, its pristine and tranquil setting, and its tie to our Country's history. Among the many historic buildings in Brookeville, the Madison House is especially noteworthy. On August 26, 1814, President Madison sought shelter there for the night when the British burned Washington, during the war of 1812. Since that time, the town has been referred to as the "United States Capital for a Day". The Town of Brookeville is recognized as a Montgomery County historic district and was listed on the National Register of Historic Places in 1979.

Today, the Town of Brookeville remains relatively untouched with its quaint, curving streets and enveloping trees, which distinguish the area from the modern and encroaching development of areas such as Olney located about one mile to the south (Figure I-2). Brookeville residents are concerned that the increasing traffic volumes will alter their town's historic character.

The June 1980 Approved and Adopted Master Plan for Olney recognizes that Brookeville is an important historic resource for the entire county. The Olney Master Plan supports the designation of the area around Brookeville for agricultural and open space preservation and the relocation of MD 97 to the west of Brookeville, to preserve the town's historic character. The Olney Master Plan's agricultural and open space recommendations will help preserve Brookeville's historic setting. The Olney Master Plan also notes that property owned by the M-NCPPC and designated for anticipated transportation use for improvement of MD 97 is leased to the Longwood Community Center for use as recreational fields.

In 1990, a feasibility study for improving traffic flow throughout the town was initiated. The SHA investigated improvements within the Brookeville Historic District and also studied the Master Plan Alignment. A Project Planning Study was initiated in January 1995 and the MD 97 Brookeville Project appears in the current Maryland Department of Transportation's FY 2003-2008 Consolidated Transportation Program (CTP), but only for project planning studies.





C. EXISTING CONDITIONS

Regionally, MD 97 is an arterial highway serving the east Montgomery County corridor and central Maryland from Washington, D.C. and the Capital Beltway (I-495) to I-70 in Howard County. MD 97 functions as a major north-south commuter route between the employment areas in and surrounding Washington, D.C., and the residential communities north of Brookeville, including northern Montgomery County, Howard, and Frederick Counties (Figure I-1).

Within the Town of Brookeville, MD 97 experiences a sharp "dog-leg" bend in horizontal alignment (Figure I-3) accompanied by steep grades in vertical alignment. The resulting "S" curve along High Street, Market Street, and Georgia Avenue includes roadway geometrics that are substandard in design. Both north of, and within the project area, MD 97 is a two-lane roadway with 11 to 12-foot lane widths, zero to five foot shoulder widths and a ROW width of 40 feet. However, less than one mile south of the project area, traffic demand has necessitated the improvement of MD 97 to a multi-lane divided roadway from Olney to Washington, D.C. (Figure I-1). No access controls are in place.

The 1995 Average Daily Traffic (ADT) volumes were approximately 9,000 vehicles per day passing through Brookeville. These traffic volumes are forecasted to double to approximately 18,000 vehicles per day by the year 2020. In addition, during the PM peak period there is significant back-up of vehicles at the intersection of MD 97 and Market Street in the northbound direction. Similarly, during the AM peak period, a continuous stream of slow moving traffic can be observed at this intersection in the southbound direction.

The numerous driveways, narrow roadway, poor vertical and horizontal alignment, and a northbound stop condition at the T-intersection of High Street and Market Street contribute to the transportation problem within the Town of Brookeville (Figure I-3).

1. <u>Roadway Deficiencies</u>

The existing MD 97 roadway conditions in Brookeville range in width from 22 to 24 feet with shoulders from 0 to 5 feet. At the T-intersection of Market Street and High Street, an inadequate sight distance exists for MD 97 drivers traveling northbound along High Street (Figure I-3). The existing vertical grade and "S" curve along Market Street interfere with the northbound driver's sight distance thus forcing the driver out into the intersection. Northbound drivers traveling through Brookeville on MD 97 (High Street in Brookeville) must turn left at the T-intersection at Brighton Dam Road (Market Street in Brookeville) from a stop condition. These northbound drivers are regularly observed positioning themselves 1 to 1.5 additional car lengths beyond the stop bar to judge if traffic is approaching from the right on Brighton Dam Road and from the left on southbound MD 97. Slightly further north on MD 97, the existing horizontal and vertical curve also affects the driver's sight distance in both the northbound and southbound directions. North on MD 97 where Market Street transitions back into Georgia Avenue, the existing horizontal and vertical curve also affects the driver's sight distance. Both the steep vertical down grade of seven percent transitioning to ten percent and the sharp horizontal curve to the right (130 feet radius) create the sight distance problem along this section of MD 97.



There are other elements that also impede the driver's sight distance within the Town of Brookeville. These elements include trees, utility poles, and homes positioned close to the roadway (Figure I-3). Consequently, the posted speed limit has been reduced from 40-mph north and south of Brookeville to 20-mph in the Town of Brookeville.

At the T-intersection, large vehicles (school buses and trucks) traveling southbound along MD 97 are unable to make a right turn from Market Street onto High Street without crossing the centerline of the opposing northbound traffic. This is primarily due to the inadequate turning radius (50 feet) on the southwest corner. In order to prevent crossing the centerline, large vehicles making right turns southbound occasionally encroach upon the privately owned historic residential property in the southwest corner of the intersection. Figure I-3 identifies the limits of the Brookeville Historic District, which coincides with the corporate limits of the Town of Brookeville.

D. PURPOSE FOR PROJECT

The project's purpose is to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. The project limits, which extend for approximately two miles on MD 97 from south of Gold Mine Road to north of Holiday Drive (Figure I-2), are adequate to address the transportation problems and define logical study limits. The previously mentioned roads (Georgia Avenue, Market Street, Brighton Dam Road, and High Street) comprise the intersecting roads in the immediate vicinity of an existing 90-degree turn in the center of town, which is the major impediment to improving traffic flow.

E. NEED FOR IMPROVEMENT

1. **Operations**

Within the Town of Brookeville, MD 97 is part of a T-intersection at Market Street and High Street. MD 97 forms the western and southern legs of this intersection while Market Street/Brighton Dam Road forms the eastern leg. Northbound MD 97 traffic is controlled at the intersection by a stop sign (Figure I-3), which allows traffic to enter the intersection from the minor road (Market Street), at the expense of the major road (MD 97). During the evening peak hour, queues (lines) up to 25 vehicles have been observed on northbound High Street waiting to turn left at Market Street.

The poor geometrics of the roadway and the "dog-leg" or "S" curve located along MD 97 (High Street, Market Street, and Georgia Avenue) cause a potentially unsafe condition for drivers. In Brookeville, the inadequate geometrics and roadway operations are incompatible with roadway operations north and south of the town and present a safety problem to motorists who are unfamiliar with the road. These conditions, together with the increasing volume of traffic passing through the Town of Brookeville, continue to affect the tranquility and small town atmosphere that Brookeville has known for nearly 200 years.

2. <u>System Continuity</u>

The continuity of the MD 97 roadway is disrupted upon entering Brookeville. As explained previously, MD 97 transitions from a heavily used, commuter roadway north and south of Brookeville to a quaint and winding road within the historic Town of Brookeville. The large volume of commuter traffic along MD 97, north and south of Brookeville, must pass through the historic district, utilizing High Street and Market Street, which contain substandard geometrics for these volumes (Figure I-3). With the future traffic volumes expected to approximately double, the Town of Brookeville will be divided into two separate sides, east of and west of MD 97. This directly conflicts with the character of the historic town.

MD 97 carries predominantly through traffic and is the only major roadway that links the Town of Brookeville with surrounding towns and other commuting corridors (Figure I-1 and Figure I-2). An Origin and Destination Study was conducted in April 2000 along MD 97 from MD 108 to MD 650 during the morning and evening peak hours of operation. It was found that 84 percent of southbound, morning traffic and 71 percent of northbound, evening traffic passed through the Town of Brookeville. This can be attributed to the roadway's direct connection between many bedroom communities in Carroll, Frederick, Baltimore, Howard, and Montgomery Counties and the businesses in the metropolitan area of Washington D.C. (Figure I-1).

3. <u>Traffic</u>

a. Average Daily Traffic

The ADT volume along the study section for 1995 was approximately 9,000 Vehicles Per Day (VPD) south of Brookeville and 8,500 VPD north of Brookeville. Trucks account for five percent of the traffic volume. The forecasted ADT for the design year, 2020, is approximately 18,000 VPD south of Brookeville and 17,000 VPD north of Brookeville. This represents a doubling in the volumes that MD 97, through Brookeville, would need to accommodate.

b. Level of Service

The Level of Service (LOS) for a roadway is a qualitative measure of the operational conditions within a traffic stream, on that roadway. It describes conditions in terms of speed, travel time, comfort, convenience, and safety. An explanation of the LOS is as follows:

Level A - free traffic flow, low volumes, higher speeds

Level B - stable traffic flow, some speed restrictions

- Level C stable flow, increasing traffic volumes
- Level D approaching unstable flow, heavy traffic volumes, decreasing speeds
- Level E unstable flow, high volumes nearing roadway capacity, delays
- Level F forced flow with traffic delays

Both north and south of Brookeville, MD 97 operates at a LOS D based on 1995 traffic conditions considered to be current (Figure I-3). In the design year 2020, the existing roadway will operate at a LOS D north of Brookeville and LOS E south of Brookeville.

Currently, the T-intersection at Market Street and High Street operates at a LOS A but only after the long queues waiting in turn to pass through the intersection arrive at the intersection. However, the LOS is D along High Street south of the T-intersection, thus resulting in the long queues. These long queues together with the stop controlled intersection result in a degradation of Brookeville's historic character and small town ambiance as the vehicles wait in queues contributing to both noise and air pollution. This condition will continue to worsen noise and air quality as the design year approaches with a LOS F in the PM (Figure I-3).

4. Accident History

The accident history from January 1996 to October 1999 shows 36 police-reported accidents in the project area. These resulted in an accident rate of 154.1 accidents per 100 million vehicle miles of travel (acc/100mvm). This rate is higher, but not significantly so, than the statewide average accident rate of 140.7 acc/100mvm for all similarly designed highways now under state maintenance. This may be due to the fact that traffic is traveling slowly through the center of town. Approximately 28 percent of all accidents resulted from collisions with fixed objects, 22 percent from rear end collisions, 19 percent from left turn collisions, eight percent from right-angle collisions, and three percent each from collisions with parked cars and opposite direction collisions. Also, 22 percent of the total accidents were truck-related. None of the traffic study rates, with the exception of left turn collisions and truck-related accidents, are significantly higher than the statewide average rate for each type of collision. Of the total number of accidents, 53 percent involved personal injuries and 47 percent involved property damage only. There were no fatal accidents within the project area. Approximately 11 percent of the accidents reported were the result of excessive speed or a failure to reduce speed. The rear end accidents and failure to reduce speed are attributed to the stop condition along MD 97.

F. CONCLUSION

Brookeville is a unique crossroads town because of its relatively unaltered 18th century architecture, its pristine and tranquil setting, and its tie to the history of the United States. The Town of Brookeville is listed as a historic district on the National Register of Historic Places. Brookeville residents are concerned that the increasing traffic volumes will continue to alter the historic character of the town. The numerous driveways, narrow roadway, poor vertical and horizontal alignment along the MD 97 "dog-leg", and the northbound stop condition at the T-intersection of Market Street and High Street all contribute to the transportation problems within the Town of Brookeville. Improvements to MD 97 are necessary to alleviate existing and future congestion and safety problems in town that will, in turn, preserve the historic Town of Brookeville's quality of life, original character, and local charm. The project will also benefit commuters passing through the area by minimizing the congestion and safety problems associated the current roadway configuration along MD 97 within the Town of Brookeville and at the T-intersection of Market and High Streets.

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Section II. Alternates

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration
II. <u>ALTERNATES</u>

A. TYPICAL SECTIONS RECOMMENDED FOR DETAILED STUDY

Based on projected traffic volumes addressed in **Section I**, and due to the Smart Growth agreement criteria established to comply with the Smart Growth Legislation discussed in the Executive Summary, a two-lane typical section was originally chosen and two options (open section and closed section) were considered for the four DEIS Build Alternates (Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B). **Figure II-1** depicts the open and closed typical sections. Impact quantities for both typical sections for each of the four DEIS Build Alternates compared to SHA's Selected Alternate, identified later in this section, are provided in **Section IV** of this FEIS. The open section was chosen for SHA's Selected Alternate typical sections in order to be consistent with existing MD 97 roadway sections where SHA's Selected Alternate would tie into existing MD 97 at the northern and southern ends, and would be consistent with the rural nature of the study area including the forested Reddy Branch Stream Valley Park. The open section would also accommodate proposed stormwater management and facilitate traffic flow, particularly for larger vehicles, through the proposed roundabouts which were added to the DEIS Build Alternates as a traffic calming measure.

B. ALTERNATES RECOMMENDED FOR DETAILED STUDY

Consistent with the intent of the Maryland Smart Growth legislation as discussed in the Executive Summary and in accordance with the Maryland Streamlined Environmental and Regulatory Process, the following five alternates were carried forward for detailed study in the DEIS: Alternate 1 (No-Build), Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B. Figure II-2 illustrates the location of DEIS Build Alternates including roundabouts. The roundabouts were added to address the Smart Growth criteria and remain consistent with the project's Purpose and Need (Section I), which states that the project should remove the continually increasing traffic volumes from the Town of Brookeville; improve traffic operations and safety on existing MD 97; and preserve the historic character of the Town. These were concurred with by the regulatory resource agencies during the project development phase of the project. For the four DEIS Build Alternates and the SHA Selected Alternate, the SHA would also modify the existing roadway profile for MD 97 just north of Holiday Drive to improve the intersection sight distance for vehicles exiting Holiday Drive (Figure II-2). This was a concern raised by citizens at the June 2000 Informational Public Meeting.

1. <u>Alternate 1</u>

Alternate 1 (No-Build) consists of maintaining the existing two-lane, undivided roadway with shoulder widths ranging from zero to five feet from Gold Mine Road to 100 feet south of the Market Street and High Street intersection to north of Brookeville Road. A small portion of MD 97 along Georgia Avenue, between its intersection with High Street and Brookeville Roads, is currently a 25-foot, curbed section of roadway with a small sidewalk along the northbound roadway extending from 200 feet south of the T-intersection to 150 feet north of the T-intersection. Sidewalks exist on both sides of Market Street from the T-intersection east to the town limits. Minor improvements would be made to MD 97 as part of the maintenance and safety operations; however, routine maintenance operations would not measurably affect the roadway capacity or relieve the roadway's congestion.





Alternate 1 (No-Build) was not selected because it does not satisfy the Purpose and Need. Minor improvements for normal traffic maintenance and safety operations will not improve the degrading roadway capacity. The quality of life for the Town of Brookeville would not be enhanced by the selection of the No-Build Alternate because commuter through traffic would continue to deteriorate the quality of life in the historic Town.

2. <u>Alternate 5C</u>

Alternate 5C would provide a 2.1-mile long bypass for the commuter traffic on the east side of Brookeville while existing MD 97 through town would be used predominantly for local, in-town traffic (Figure II-2 through Figure II-3B). A 50-mph design speed was proposed for this longer alignment that would depart from existing MD 97 in a northeasterly direction near Gold Mine Road and then turn to the north to approach Brighton Dam Road and Reddy Branch Stream Valley Park. It would cross over both of these at a point where the Reddy Branch Stream Valley Park is parallel to Brighton Dam Road, a location suggested by the USACOE and the USFWS during the project development process. Alternate 5C would continue north, crossing over Lubar Drive and proposed Bordly Drive, and would pass underneath the PEPCO transmission lines. It would turn northwest and rejoin existing MD 97 approximately 2,000 feet north of the proposed Bordly Drive. There would be a frontage road connecting MD 97 to the Camp Bennett Driveway. For this alternate to comply with Smart Growth criteria, there would be roundabouts at the southern and northern termini. Alternate 5C is the longest and the most expensive alternate (\$34.2 million) but was retained in the DEIS because it would avoid ROW impacts to the Brookeville Historic District. It addresses the Purpose and Need of the project and would have the least impact to the Reddy Branch Stream Valley Park. The alternate would also impact the viewshed of the historic district.

Alternate 5C was not selected because of substantially higher project cost, lack of public support, and greater stream, wetland, and prime farmland soil impacts as described in Section IV of this FEIS. The cost of Alternate 5C (\$34.2 million) nearly triples the estimated \$12.5 million cost of SHA's Selected Alternate. Alternate 5C is the only alternate that impacts two public parks (Hawlings River Stream Valley Park and Reddy Branch Stream Valley Park) and bisects Reddy Branch Stream Valley Park to the east of Brookeville. It is not compatible with the local Comprehensive Plans. It is the only alternate that will result in both residential relocations (5) and a business displacement (1). Only two (out of 38) comments received at the Combined Location/Design Public Hearing expressed support for Alternate 5C. In addition, approximately 20 of the 38 total public comments indicated opposition to Alternate 5C.

3. <u>Alternate</u> 7

Alternate 7 would provide a 0.7-mile long bypass for the commuter traffic on the west side of Brookeville while existing MD 97 through town would be used predominantly for local, in-town traffic (Figure II-2, Figure II-4A and Figure II-4B). Alternate 7, designed for 40-mph, would begin at a roundabout located west of MD 97 and north of the Longwood Community Center. Access to Brookeville would be via the northeast side of the roundabout. Alternate 7 would exit from the roundabout in a northwesterly direction and continue through the M-NCPPC property, reserved for transportation use, and through the Reddy Branch Stream Valley Park. It would cross Brookeville Road approximately 500 feet west of existing MD 97 at a roundabout and continue to

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the northeast. The roundabout at Brookeville Road would have four legs, two for the bypass and two for Brookeville Road. The alternate would connect to existing MD 97 approximately 700 feet north of the intersection with Brookeville Road. The portion of existing MD 97 between this new connection and the Reddy Branch Bridge would be closed. Consequently, southbound motorists destined for the Town of Brookeville would have to pass through the roundabout at Brookeville Road to access existing MD 97 in town. Alternate 7 would cost an estimated \$12.2 million. Compared to Alternate 8A and Alternate 8B, described below, the horizontal and vertical alignments of Alternate 7 would be more in character with the area.

Alternate 7 was not selected mainly because it would result in greater impacts to the Brookeville Historic District (2.2 acres) and the Newlin/Downs Mill Complex archeological site when compared to the SHA Selected Alternate 7 Modified, which is similar to Alternate 7 except for a 30-40 feet shift to the west to minimize impacts to the core of the archeological site. An element of the Purpose and Need for the project is to preserve the historic character of the town.

4. <u>Alternate 8A: Roundabout</u>

Alternate 8A would provide a 0.9-mile long bypass for the commuter traffic on the west side of Brookeville (west of Alternate 7), while existing MD 97 through town would be used predominantly for local, in-town traffic. Alternate 8A, shown on **Figure II-2**, **Figure II-5A** and **Figure II-5B**, has a 40-mph design speed. It would depart from existing MD 97 just south of the Longwood Community Center and head in a northwesterly direction, passing through a roundabout at the same location as the roundabout in Alternate 7. The alternate would continue northwest through the M-NCPPC property reserved for transportation use and through the Reddy Branch Stream Valley Park. It would cross Brookeville Road approximately 600 feet west of existing MD 97 at a three-leg roundabout (two for the bypass and one for Brookeville Road to/from the west). From the roundabout, the alignment would continue northeast and connect to existing MD 97 approximately 600 feet north of the intersection with Brookeville Road. The portion of Brookeville Road between the roundabout and the existing intersection of MD 97 would be closed to traffic. The cost for Alternate 8A would be \$13.7 million. The horizontal and vertical alignments of Alternate 8A would be more in character with the area when compared to Alternate 8B.

Alternate 8A serves the same function as Alternate 7 by removing the traffic flow from the Town of Brookeville and removing the traffic out of the Town of Brookeville. Alternate 8A was not selected because of the lack of public support, it is more expensive and would have greater environmental and cultural resource impacts to Reddy Branch Stream Valley Park and the Brookeville Historic District when compared to the SHA Selected Alternate 7 Modified.

5. <u>Alternate 8B: Bridge</u>

Alternate 8B would be a 0.9-mile long bypass for the commuter traffic on the west side of Brookeville (west of Alternate 7) while existing MD 97 through town would be used predominantly for local, in-town traffic. Alternate 8B has a 50-mph design speed and is shown on **Figure II-2, Figure II-6A** and **Figure II-6B**. This alternate would follow a similar alignment as Alternate 8A through the roundabout, the M-NCPPC property reserved for transportation use, and the Reddy Branch Stream Valley Park for approximately 2,000 feet northwest from the roundabout.











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The Alternate 8B alignment would then separate from Alternate 8A by curving to the east and crossing Brookeville Road on a bridge approximately 600 feet west of the intersection with existing MD 97. It would continue in a northeasterly direction and connect to MD 97 with a three-leg roundabout (one for the bypass and two for existing MD 97) located approximately 800 feet north of the intersection of Brookeville Road. The existing alignment of Brookeville Road would not be altered with this alignment and access would not be provided directly from the bypass to or from Brookeville Road. The cost for Alternate 8B would be \$18 million, which is approximately \$5.5 million greater than the SHA Selected Alternate 7 Modified.

Alternate 8B was not selected because of lack of public support, its higher cost, and greater environmental and cultural resource impacts when compared to the SHA Selected Alternate 7 Modified. This includes adverse effects to the viewshed of the historic district resulting from the grade separation over Brookeville Road. The elevated structure would be within sight distance from the historic district, which is a concern expressed by citizens of Brookeville.

C. COMBINED LOCATION/DESIGN PUBLIC HEARING

The SHA held a Combined Location/Design Public Hearing on October 3, 2001 at the Rosa M. Parks Middle School. The purpose of the Public Hearing was to present the results of the engineering and environmental studies completed for the MD 97 Brookeville Project and to provide an opportunity for interested individuals, association, citizen groups, or government agencies to offer verbal or written comments. Twenty-two people provided public testimony and 16 people provided written comments. Out of the 38 total public comments (oral and written comments), 71 percent (27 comments) supported a Build Alternate of some type. Sixty-two percent (10 comments) of the Public Hearing speakers supported Alternate 7 (Western Bypass) and 19 percent (3 comments) supported Alternate 8B (Grade-Separated Western Bypass). There was no support for either Alternate 5C (Eastern Bypass) or Alternate 8A (At-Grade Western Bypass).

Of the 16 written comments received, 35 percent (6 comments) supported Alternate 8B (Grade-Separated Western Bypass), 30 percent (5 comments) supported Alternate 7 (Western Bypass) and 12 percent (2 comments) supported Alternate 5C (Eastern Bypass). There was no support for Alternate 8A (At-Grade Western Bypass). Section VI of this FEIS summarizes the public comments made at the Public Hearing, copies of the written comments submitted by the public, and SHA responses.

D. DESCRIPTION OF THE SHA SELECTED ALTERNATE

Subsequent to the Combined Location/Design Public Hearing, further studies were conducted regarding the National Register eligible Newlin/Downs Mill Complex archeological site. The Newlins/Downs Mill Complex archeological site is partially located within the Brookeville Historic District where it overlaps the Reddy Branch Stream Valley Park, and then extends to the west within the park. As a result of the Phase II archeological study and findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. It would also reduce impacts within the National Register listed Brookeville Historic District and the Reddy Branch Stream Valley Park as discussed in **Section V** (Section 4(f) Evaluation) of this FEIS.

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The SHA Selected Alternate is Alternate 7 Modified (Figure II-2, Figure II-7A and Figure II-7B), with points of access occurring at roundabouts at Brookeville Road and the southern termini (north of Gold Mine Road). SHA's Selected Alternate is similar to Alternate 7 except that the Alternate 7 Modified is shifted approximately 30-40 feet west through the Reddy Branch Stream Valley Park just south of the roundabout located at Brookeville Road. A retaining wall would be placed on the south side of Brookeville Road, east of the roundabout, to further minimize impacts to the Mill Complex wheel race platform. This, in turn, would reduce Section 4(f) land acquisition from 2.2 to 1.7 acres within the Brookeville Historic District that is also located within Reddy Branch Stream Valley Park. SHA's Selected Alternate would then continue in a northeasterly direction crossing Brookeville Road west of existing MD 97 at a roundabout and then continue to the northeast. The roundabout at Brookeville Road would have four legs, two legs for the bypass (through traffic) and two legs for access westbound and eastbound on Brookeville Road. The alternate would connect to existing MD 97 north of the roundabout at Brookeville Road. A portion of existing MD 97 north of Brookeville Road would be closed. The existing structure over Reddy Branch Stream would also be removed in conjunction with the closing of this portion of MD 97. Consequently, southbound motorists destined for the Town of Brookeville would have to pass through the roundabout at Brookeville Road to access existing MD 97 in the Town of Brookeville.

In response to public comments made at the Combined Location/Design Public Hearing, SHA's Selected Alternate would also modify the existing MD 97 roadway profile north of town just north of Holiday Drive to improve the intersection sight distance for vehicles exiting Holiday Drive. By slightly raising the grade of MD 97 through a short depressed curve, the motorist will have a longer sight distance and the southbound approaching vehicles will not disappear from the line of sight. SHA's Selected Alternate has a design speed of 40 miles per hour. SHA's Selected Alternate has an open typical section, which consists of two 11-foot lanes and two 10-foot shoulders (five feet paved for bicycle compatibility and five feet graded (Figure II-1)). The open section is consistent with recommendations made by the MDP in their comments on the DEIS as the State Clearinghouse coordinator for intergovernmental review. Section VI includes the federal and state agency comments on the DEIS with SHA responses, including references to the FEIS, where appropriate.

E. MARYLAND STREAMLINED ENVIRONMENTAL AND REGULATORY PROCESS

The MD 97 Brookeville Project has been processed in accordance with the Maryland Streamlined Environmental and Regulatory Process involving coordination with federal and state resource agencies. This involved agency concurrence of the Alternates Retained for Detailed Study for the DEIS. It has also involved federal and state resource agency coordination and concurrence of SHA's Selected Alternate. A draft Selected Alternate and Conceptual Mitigation (SACM) package was circulated for agency review and comment in February 2003 and the MD 97 Brookeville Project was presented at the March 2003 IAR. Agency comments focused on the status of the draft MOA in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and a request for consideration of wildlife passage along the north side of Reddy Branch.







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The draft SACM Package dated February 2003 recommended the south side of Reddy Branch for wildlife passage based on non-surveyed contour mapping. In response to USACOE and USFWS comments for a north side passage, additional evaluations were made by SHA. It was concluded that the north side might be possible, however, a final decision will need to await accurate ground surveys as part of project design. The design goal will be the agreed to eight-foot vertical and 25-foot horizontal clearance on one side, preferably along the north side of Reddy Branch. Should topographic conditions not allow for adequate clearance along the north side, the south side passage will be pursued by SHA as part of final project design. The final SACM package incorporated these recommendations and was distributed at the May 2003 IAR meeting for formal concurrence and comment by the participating agencies.

As a result of this process, agency concurrence (without comment) of SHA's Selected Alternate and the conceptual mitigation proposed in the SACM Package was received from the FHWA, USACOE, USFWS, MDE and the Metropolitan Washington Council of Government (MWCOG). Agency concurrence (with minor comments) was received from the USEPA, the NPS and DNR. The USEPA and DNR expressed support of the reevaluation of the north-side wildlife passage; DNR offered continued coordination with SHA regarding mitigation designs. The National Park Service gave concurrence based on FHWA legal sufficiency. The MDP also concurred, commenting that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP also recommended that MDOT, SHA, and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works. In response, coordination is ongoing between SHA and MTE and will be resolved in Final Design. **Section VI** of this FEIS includes the March 2003 IAR meeting minutes and signed agency concurrence forms resulting from completion of the SACM component of the Maryland Streamlined Environmental and Regulatory Process.

F. CONCLUSION

As concluded in the project's final SACM Package and as summarized in **Table II-1**, SHA's Selected Alternate is consistent with state and local planning goals and would result in less socioeconomic and environmental impacts when compared to the DEIS Build Alternates. In most categories, it is the least impactive alignment of the DEIS western alternates, none of which involve displacements. It impacts the least amount of prime farmland soils (4.5 acres); statewide important soils (1.6 acres); and forest cover (9.0 acres) with only 0.12 acres of impacted wetlands; 1,212 linear feet of impacted stream; and 3.2 acres of impacted floodplain.

The \$12.5 million dollar cost of SHA's Selected Alternate is \$300,000 more expensive than Alternate 7, which is the least expensive of the DEIS Build Alternates. This additional cost is to build the proposed retaining wall in order to minimize impacts to the National Register eligible Newlin/Downs Mill archeological site. The retaining wall would also reduce Section 4(f) use to 1.7 acres (from 2.2 acres) of the Brookeville Historic District that is located within Reddy Branch Stream Valley Park where public parkland use would be reduced from 6.6 acres to 5.6 acres for SHA's Selected Alternate. Based on these findings, it can be concluded that the SHA Selected Alternate 7 Modified is the least environmentally damaging practical alternative of those identified in this FEIS/Section 4(f) Evaluation.

II. Alternates

			ALTERNATES E	VALUATED IN THE FE	IS .			
FEATURE	Alternate 1 No-Build	Alternate 5C East Bypass ⁵	Alternate 7 West Bypass	Alternate7 Modified West Bypass	Alternate 8A At-Grade West Bypass	Alternate 8B Grade Separated West Bypass		
		Open Section	Open Section	Open Section	Open Section	Open Section		
Length (miles)	0	2.12	0.72	0.72	0.95	0.95		
Cost (millions-2001 dollars)	0	\$ 34.2	\$ 12.2	Approximately \$12.5 (assuming retaining wall along Brookeville Road	\$ 13.7	\$ 18.0		
		Socio-Econon	nic Resources	·	· · · · · · · · · · · · · · · · · · ·	*		
Residential Relocations (no.)	0	5	0	0	0	0		
Business Displacements (no.)	0	1	0	0	0	0		
Affected Properties (no.)	0	26	11	11	14	14		
Comprehensive Plan Compatibility	No	No	Yes	Yes	Yes	Yes		
Recreational Facilities (acres)	0	4.55	6.65	5.62	7.22	7.64		
Historic District (acres)	0	0	2.24 ^{3, 4}	1.66 ^{3, 4}	1.84 ^{3, 4}	2.00 ^{3,4}		
Section 106 Adverse Effects	Yes	Yes	Yes	Yes	Yes	Yes		
Total Section $4(f)^{6}$ (acres)	0	4.55 ^{2 parks}	6.65 ^{1 park}	5.62 ^{1 park}	7.22 ^{1 park}	7.64 ^{1 park}		
Impacted Waste Sites (no.)	0	0	1	1	2	1		
Air Quality (SIP Conformance)	0	Yes	Yes	Yes	Yes	Yes		
Noise Receptors (no.) ²	0	8	10	10	10	10		
Natural Resources								
Prime Farmland Soils (acres)	0	25.88	4.84	4.53	5.50	5.34		
Statewide Important Soils (acres)	0	5.63	1.79	1.63	7.50	8.51		
Wetlands (acres)	0	0.21	0.13	0.12	0.11	0.17		
Streams ⁷ (linear feet)	0	482.12	1169.2	1211.8	1067.32	1191.72		
FEMA 100-year Floodplains (acres)	0	2.59	3.34	3.22	3.03	3.34		
Forest Cover (acres)	0	11.50	10.47	9.02	13.53	14.2		

TABLE II-1 ENVIRONMENTAL IMPACT SUMMARY

NOTES: 1

Alignment length does not include frontage, access roads and exclude additional length for traffic roundabouts.

Noise levels 66 dBA or greater or those which increase 10 dBA or more over ambient levels. 2

Included within Reddy Branch Stream Valley Park Acreages. 3

One park property, two locations. 4

For this alternate, impacts do not include right-of-way needed for storm water management. All other alternates include right-of-way impacts for storm water management ponds. Includes overlapping acreage of the Brookeville Historic District within impacted Public Parkland. 5 6

Based on re-evaluation, the impact numbers decreased from the Selected Alternate and Conceptual Mitigation Package. 7

II. Alternates

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Section III. Affected Environment

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

III. AFFECTED ENVIRONMENT

The primary focus of this section is to provide a baseline condition to assess the location and magnitude of anticipated impacts. The environmental consequences are presented in Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation).

A. SOCIAL, ECONOMIC, AND LAND USE

The social, economic, and land use conditions within Montgomery County and the MD 97 study area and vicinity (Figure I-1 and Figure I-2), as discussed below, are based on various sources of information including US Census Bureau data, regional planning data, and local conditions.

1. Social Environment

a. Population Characteristics

Statistical data regarding population demographics was gathered from the US Census Bureau, the M-NCPPC, and the MDP (formerly Maryland Office of Planning, MOP), Planning Data Services.

(1) Montgomery County

According to the 2000 Census, Montgomery County remains the most populous jurisdiction in the State of Maryland and it is the second largest jurisdiction in the Washington Metro region (Fairfax County, VA is first). Montgomery County's population grew to 873,341 persons, a 15.4 percent increase over 1990's total population of 757,027 (Table III-1). Montgomery County's growth between 1990 and 2000 (15.4%) outranked the population growth at the national (13.2%) and state (10.8%) level. M-NCPPC estimates that the county population in 2010 will be 975,000, and the 2020 population will be 1,050,000 (M-NCPPC, 2001). The county as a whole is expected to gain population during the next two decades, although the rate of population increase is anticipated to decline after 2020, as depicted in Figure III-1.

"Baby boomers" (those born between 1946 and 1964) pushed the median age of county residents from 33.9 in 1990 to 36.8 in 2000 (Table III-1). Age distribution data indicated that the groups with the highest percentage of persons in 2000 were the 25 to 54 age group (47.5% of total population); and the under 19 age group (27.2% of total population). The 65 and older age group in 2000 was 11.2 percent of the total population. According to the M-NCPPC population forecast, the percentage of elderly in the county is expected to increase to 12.9 percent in 2010, the brink before baby boomers join the over 65 ranks, and continue upward to 14.9 percent of the total population by 2025 (M-NCPPC, 2001). According to the 2000 Census, 62 homes for the physically handicapped are located within Montgomery County, however, none are located within the project study area.

Racial diversity continues to expand in Montgomery County as the population growth in the County's minority groups exceeds the change in total population between 1990 and 2000. Between these years, minority population grew by 145,439 and total population saw an increase of 116,314 **(Table III-1)**. Minorities accounted for 125 percent of the county's population growth in this period, and minorities rose from 27 percent of the total population in 1990 to 40 percent in 2000 (M-NCPPC, 2001).

	Рор	Percent	
Category	1990	2000	Change 1990-2000
Total Population	757,027	873,341	15.4
Median Age	33.9	36.8	8.6
Under 5 years	57,138	60,173	5.3 ·
5 to 19 years	137,221	178,040	30
20 to 24 years	51,479	43,684	-15.1
25 to 34 years	148,947	126.567	-15.0
35 to 44 years	133,794	155.708	16.4
45 to 54	88,855	132,870	49.5
55 to 59	32.056	45.652	42.4
60 to 64 years	30.046	32.490	8.1
65 years and over	77.491	98 157	27
Race		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1
One race	757.027	843.224	114
White	580.635	565 719	-2.6
Black or African American	92 267	132 256	43 3
American Indian and Alaska Native	1 841	2 544	38.2
Asian	61 654	98 651	60.0
Native Hawaijan and Other Pacific Islander	327	/12	26.0
Some other Race	20 303	412	115.0
Two or more races 1		45,042	113.0 NA
Race alone or in combination with one or more other races: ¹	INA	50,117	INA
White	NA	587 681	N A
Black or African American	NA NA	142 507	INA NA
American Indian or Alaska Nativa		6 620	INA NIA
A sign	NA NA	107 795	INA NA
Native Howaiian and Other Desific Islander	INA NA	10/,/05	
Some other Page	NA NA	1,492	NA NA
Hispania an Lating and Dasa	NA	59,421	
Hispanic of Latino and Race	55 694	100 (04	907
Mayican	33,084	100,604	80.7
	4,880	8,917	82.5
	3,934	5,319	35.2
	3,005	2,739	-8.9
Other Hispanic or Latino	43,859	83,629	90.7
Educational Attainment	<u> </u>		15.0
Population 25 years and older	512,839	594,034	15.8
Less than 9 ⁻ grade	19,937	25,877	29.8
9 ⁻ to 12 ⁻ grade, no diploma	28,355	31,599	11.4
High school graduate (includes equivalency)	85,907	86,009	0.1
Some college, no degree	94,332	99,098	5.1
Associate Degree	28,177	27,371	-2.9
Bachelor's Degree	137,105	160,754	17.2
Graduate or professional degree	119,026	163,326	37.2
Source: US Census Bureau, 1990 and 2000 Census of Popul	lation;		

TABLE III-1 Montgomery County Population Characteristics

NA

MDP, Planning Data Services, May 2001, General Population Characteristics Not available

Census 2000 terminology/categories are used for race data. Because individuals could only report one race in Census 1990 and could report one or more races in Census 2000, data on race for 1990 and 2000 are not comparable.





Montgomery County has a high percentage of adults who obtained a higher level of education (Table III-1); 55 percent of the county's population 25 years or older has a Bachelor's degree or higher (M-NCPPC, 2001) (Figure III-2).





(2) Olney and Vicinity Planning Area

The project area (Figure I-2) is located within a portion of the Olney and Vicinity Planning Area (Planning Area 23) (Figure III-4). This planning area is 46.9 square miles, and is the largest single planning area in the county with regards to land acreage (M-NCPPC, 1997).

For this analysis, the M-NCPPC 1997 Census Update Survey Data was used for the Olney and Vicinity Planning Area because the US Census Bureau does not compile data for Planning Areas. US Census Bureau level data do not match M-NCPPC Planning Area Boundaries.

In 1997, the total population for the Olney and Vicinity Planning Area was 33,290 persons, with the majority of the population's age distribution being between the ages of 30 and 64 (53%). The 5 to 17 age group was the second highest with 23 percent of the total planning area population. The under 5 age group comprised 7.6 percent; and the 65 and over age group totaled 5.3 percent of the planning area population (Figure III-3) (M-NCPPC, 1997).





In 1997, the Olney and Vicinity Planning Area had a 7.4 percent Black/African American population, 6.8 percent Asian or Pacific Islander population, and 1.4 percent "Other" races. The "Other " number was derived from American Indians and write-in entries such as multi-racial, multi-ethnic, or Hispanic origin groups (M-NCPPC, 1997). The population of Hispanic origin was 5.3 percent of the total county population. In comparison to the county's ethnic population figures, this planning area's percentages for Black/African American, Asian, and Hispanic Origin groups were less than the county's corresponding figures.

In 1997, the educational attainment of the Olney and Vicinity Planning Area population aged 25 and older consisted of the following: 6.9 percent had less than a high school diploma; 30.5 percent had a high school diploma; 4.9 percent attended an associate or trade school; 28.8 percent had a bachelor's degree; and 28.8 percent had a graduate, professional, or doctoral degree (M-NCPPC, 1997).

(3) Census Tracts 7013.04 and 7013.09

According to the US Census Bureau, the Town of Brookeville is partially divided between two Census Tracts, 7013.04 and 7013.09. The dividing line between these two tracts is Brookeville Road and MD 97 from the Town of Brookeville south to MD 108 (Figure III-4 and Figure III-5). Table III-2 lists general population characteristics for Census Tracts 7013.04 and 7013.09.

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III. Affected Environment

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Planning Area Boundary Limit of Project Area

Map Legend

Census Tract Boundary

Brookeville Town Corporate Limits

Source Legend

- Transfer Development Rights (TDR) Receiving Area
- **RE-2** Residential Estate, 2 Acre (2 acres per dwelling unit)
- **RE-1** Residential Estate, 1 Acre (40,0000 square feet per dwelling unit)
- **R-200** One-Family Detached, Large Lot (20,000 square feet per dwelling unit)
- **R-60** One-Family Detached Residential (6,000 square feet per dwelling unit)
- C-1 Local Commercial
- **RMH-200** One-Family Detached (20,000 square feet) Single-wide mobile home option
- C-T Commercial Transitional
- R-30 Multi-Family Residential

Rural Density Transfer Zone One lot per 20 acres; option to sell development rights

Rural Cluster Zone One lot per 5 acres

Source: Olney Master Plan approved and adopted June, 1980. Montgomery County, Maryland



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Legend Census Tract Boundary Brookeville Town Corporate Limits

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Category	Census Tract 7013.04		Percent	Census Tract 7013.09		Percent Change
	1990	2000	Change	1990	2000	Change
Total Population	6,870	6,146	-10	5,214	8,690	67
Median Age	38.3	41.1	7	36.8	39.1	6
Under 5 years	457	337	-26	300	314	5
5 to 19 years	1,793	1,458	-19	1,009	2,107	109
20 to 24 years	454	227	-50	233	250	7
25 to 34 years	719	474	-34	768	722	-6
35 to 44 years	1,366	996	-27	851	1,683	98
45 to 54	1,347	1,199	-11	813	1,393	71
55 to 59	269	589	119	287	495	72
60 to 64 years	202	372	84	229	331	44
65 years and over	263	494	88	724	1,085	50
Race						
One race	NA	6,044	NA	NA	8,501	NA
White	6,171	5,410	-12	4,674	6,914	48
Black or African American	366	315	-14	587	932	59
American Indian and Alaska Native	18	17	-6	3	14	367
Asian	289	246	-15	119	536	350
Native Hawaiian and Other Pacific Islander	6	3	-50	0	1	NA
Some other Race	26	53	104	33	104	215
Two or more races ¹	NA	102	NA	NA	189	NA
Race alone or in combination with one or more other	er races: 1					
White	NA	92	NA	NA	127	NA
Black or African American	NA	8	NA	NA	24	NA
American Indian or Alaska Native	NA	0	NA	NA	9	NA
Asian	NA	2	NA	NA	24	NA
Native Hawaiian and Other Pacific Islander	NA	0	NA	NA	0	NA
Some other Race	NA	0	NA	NA	0	NA
Hispanic or Latino and Race ²					• • • • • • •	······
Hispanic or Latino (of any race)	211	223	6	99	352	256
Mexican	32	38	19	20	115	475
Puerto Rican	28	30	7	9	39	333
Cuban	35	36	3	16	30	88
Other Hispanic or Latino	116	119	3	54	69	28
Educational Attainment						
Population 25 years and older	4,166	4,096	-2	3,672	5,738	56
Less than 9 th grade	54	38	-30	131	191	46
9 th to 12 th grade, no diploma	195	93	-52	248	197	-21
High school graduate (includes equivalency)	816	699	-14	753	952	26
Some college, no degree	995	911	-8	725	927	28
Associate Degree	205	208	-1	142	217	53
Bachelor's Degree	1,185	1,279	8	917	1,657	81
Graduate or professional degree	716	359	-50	756	1,597	111

Source:

US Census Bureau, 1990 and 2000 Census of Population; MDP, Planning Data Services, May 2001, General Population Characteristics

NA Not available

Census 2000 terminology/categories are used for race data. Because individuals could only report one race in Census 1990 and could report one or more races in Census 2000, data on race for 1990 and 2000 are not comparable.

(4) Town of Brookeville

According to the 2000 Census, the total population for the Town of Brookeville was 120 persons **(Table III-3)**. The median age in Brookeville was 39.3 years, with the majority of the Town's population in the 35-44 age group (21.7% of total town population).

Category	Popu	Percent Change	
Category	1990	2000	1990-2000
Total Population	54	120	122
Median Age	36.7	39.3	7
Under 5 years	7	9	29
5 to 19 years	10	25	150
20 to 24 years	4	6	50
25 to 34 years	7	10	43
35 to 44 years	11	26	136
45 to 54	7	18	157
55 to 59	1	7	600
60 to 64 years		7	133
65 years and over		12	200
		12	200
	51	110	119
	52	110	110
white	52	ļ	125
Black or African American	·····	0	
American Indian and Alaska Native		0	0
Asian	1	0	-100
Native Hawaiian and Other Pacific Islander	0	0	0
Some other Race	1	· 1	0
Two or more races ¹	NA	2	. NA
Race alone or in combination with one or more other races			
White	NA	119	NA
Black or African American	NA	0	NA
American Indian or Alaska Native	NA	2	NA
Asian	NA	0	NA
Native Hawaiian and Other Pacific Islander	NA	0	NA
Some other Race	NA	1	NA
Hispanic or Latino and Race		L	
Hispanic or Latino (of any race)	1	3	200
Mexican	1	0	-100
Puerto Rican	····	1	NA
Cuban	0	0	
Other Hignanic or Latino	·····	······	NA
Educational Attainment		2	
Domulation 25 years and older	22	72	121
Fopulation 25 years and order		//	121
Ω^{th} to 12^{th} and a no distance	····		-100
9 to 12 grade, no dipioma	<u> </u>	3	150
rign school graduate (includes equivalency)	<u> </u>	<u>۲۱</u>	
Some college, no degree	4	9	125
Associate Degree		1	
Bachelor's Degree	15	19	27
Graduate or professional degree	5	26	420
ource: US Census Bureau, 1990 and 2000 Census of Popula	ation; MDP, Planning I	Data Services, M	ay 2001, <i>General</i>
Population Characteristics			
NA Not available			

TABLE III-3 Town of Brookeville Population Characteristics

Not available Census 2000 terminology/categories are used for race data. Because individuals could only report one race in 1990 and could report one or more races in Census 2000, data on race for 1990 and 2000 are not comparable.

b. Environmental Justice

Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*), issued on February 11, 1994, requires federal agencies to administer and implement programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations. Minority is identified as "individual(s) who are members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black/African American (not of Hispanic origin), or Hispanic." Also, low-income populations "should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty." These population groups are to be provided public information and an opportunity to participate in the project development process.

Brookeville is a rural area that is not heavily populated, having a population of only 120 people in 2000. The census tracts that encompass the project area and the Town of Brookeville (Figure III-4) have a low percentage of minorities (Table III-2 and Table III-3). Contact with Salem United Methodist Church revealed a very low percentage of these population groups in their membership. No minority groups were visually identified in the project area during field visits. Montgomery County recreation officials have indicated a recent increase in the ethnic diversity of users at the Longwood Community Center, located in the study area (Montgomery County of Recreation, 2001). Community outreach efforts will continue, as the project transitions into the final design phase.

According to the Department of Health and Human Service (DHHS), two percent of the families in Census Tract 7013.04 were below the poverty level in 1999, and one percent was below the poverty level in Census Tract 7013.09. According to DHHS, the Town of Brookeville was identified as having two families and six individuals having poverty status in 1999.

New development, occurring primarily to the east of Brookeville, consists of large single family houses on lots approximately two acres in size. The median household income for Brookeville is \$88,629, which is well above the state level of \$52,868.

c. Neighborhoods

Brookeville remains a small town consisting of approximately 52 buildings (Brookeville Planning Commission, 1994) and 120 residents (US Census Bureau, 2000). In general, the Brookeville residences are two-story brick single-family detached units on half acre or two acre lots, with a few smaller bungalow or cottage-style homes along MD 97. The historic Brookeville Academy, which served as a boys' school in the early 19th century, now houses local government offices, with future anticipated use as a community facility for the general public of Brookeville.

The major north-south thoroughfare in this small town is MD 97 (Georgia Avenue), which links the various communities along the corridor. East-west traffic travels mainly along Brookeville Road and Brighton Dam Road coming in and going out of Brookeville. A sidewalk exists on the north side of the MD 97 and Brighton Dam Road intersection.

The neighborhoods in the project area are located on **Figure III-6**. The Town of Brookeville is located in the center of the project area. The Holiday Hills residential subdivision is at the northern end of the project area and the Olney Mill Community is situated to the west. Sunnymeade is a small cluster of homes along Brighton Dam Road just east of town. The homes, built throughout the 1990's, share a private entrance off of Brighton Dam Road. South of Sunnymeade, four new homes are being constructed, which will also share a private entrance off of Brighton Dam Road.

There are three established residential developments, Manor Oak, Oak Grove, and Gold Mine Crossing, south of Gold Mine Road and east of MD 97, which is southeast of the project area. Holiday Hills is a very small community of single-family detached homes on Holiday Drive and Paul Drive. These are mostly two-story dwellings with a few ranch-style homes. Much of the property in this subdivision is undeveloped at this time. Olney Mill is an established community north of Olney and west/southwest of the project area (Brookeville Knolls, part of Olney Mill, is the closest neighborhood to the Town of Brookeville). Olney Mill, including Brookeville Knolls, is comprised of single-family detached homes built in the 1970's. Most of these are two-story colonial or bi-level style homes. This community appears to have a high level of cohesion because there is a pathway along MD 97 for pedestrian/bicycle traffic and two facilities, the Belmont Elementary School and the Longwood Community Center, within the neighborhood that promote community interaction. These two facilities are located in the north and east sections of the neighborhood, respectively and are discussed further in the "Community Facilities and Services" section of this document. Homes are currently being constructed in the new Oak Grove subdivision, at the southern end of the project area. This residential development is comprised of large executive-style homes.

In the center of the Town of Brookeville, at the intersection of Market Street and High Street, three new houses are being constructed. These homes, located behind Sydney Roter Real Estate, will share a private entrance off of Market Street.

In 1984, a Citizen's Planning Committee was formed to provide planning guidance to the Town Commissioners. Brookeville's Comprehensive Plan, adopted in 1994, was completed with considerable input from the citizens. As evidenced in the Comprehensive Plan, pedestrian and vehicular circulation patterns are an important aspect of the community of Brookeville. The village circulation system is addressed in the plan, with goals to maintain green space and fence rows; provide public access to planned public space, in particular the Reddy Branch Stream Valley Park; and incorporate the historic streetscape pattern of the town into plans for any future road improvements to serve the existing community and future development (Brookeville Planning Commission, 1994).

d. Community Facilities and Services

Information regarding community facilities was obtained through field visits to the project area and a review of county and local mapping. Community facilities and services in the project area and vicinity are located on **Figure III-6**. As shown, several facilities are located outside the project limits but still serve the citizens of the area. ADA compliance as it relates to pedestrian accessibility will be considered by SHA during final design.

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(1) Educational Facilities

There are no educational facilities directly within the project area; however, buses from local schools transport students along MD 97 throughout the project area. Students travel MD 97 on four buses to Greenwood Elementary School located on Gold Mine Road, southeast of the project area (Figure III-6). Elementary school students in the project area also attend Belmont Elementary School, located in the northern portion of the Olney Mill community; however, buses traveling to Belmont do not use MD 97, according to the Montgomery County Public Schools' Transportation Division. Middle school students in the project area attend either Rosa M. Parks Middle School or William H. Farquhar Middle School, both located outside the project area. One bus travels on MD 97 in Brookeville to Rosa M. Parks; buses traveling to William H. Farquhar do not use MD 97. Students of high school age attend Sherwood High School, southeast of the project area along MD 108 in Ashton. Three buses use MD 97 in the project area transporting students to and from Sherwood High School (Interview with Beverly Love, 2001).

(2) Religious Facilities

The Salem United Methodist Church is the only religious facility directly within the project area (Figure III-6). The church is located on the west side of MD 97 at its intersection with Church Street. Just south of Gold Mine Road on the east side of MD 97 is the Marian Fathers Novitiate, which functions as a retreat facility and as a regional conference center (Figure III-6). Camp Bennett, located north of Holiday Drive, is privately owned and operated by the Central Union Mission (Figure III-6). Throughout the year, Camp Bennett functions as a recreational retreat facility for inner city youth and for church groups from various denominations, as well as a substance abuse rehabilitation center (Interview with Chaplain Steve Hoey, 2001).

(3) Health Care Facilities

There are no hospitals or medical facilities in the immediate project area. The closest medical facility is the Brooke Grove Health Center located approximately 7.5 mile southeast of the project area on Marden Lane, which is off of MD 108. The Sharon Nursing Home is also on Marden Lane in the immediate vicinity of the Brooke Grove Health Center. Montgomery General Hospital is located approximately 1.3 miles southeast of the project area, on MD 108.

(4) Emergency Services

The Brookeville area is serviced by the Wheaton-Glenmont District of the Montgomery County Police, located in Glenmont approximately 8.7 miles south of Brookeville. The closest police station is located in Olney, approximately 0.28 miles west of the MD 97/MD 108 intersection, outside of the project area limits. The Sandy Spring Fire and Rescue Company No. 40, located on MD 97 about 1.4 miles south of the MD 97/MD 108 intersection, covers the Brookeville area.

(5) Recreational Facilities and Parks

Three publicly owned public recreational facilities are located within the project area: Reddy Branch Stream Valley Park, Longwood Community Center, and Hawlings River Stream Valley Park. Reddy Branch Stream Valley Park is administered by M-NCPPC and is a conservation park with no active recreational facilities existing or proposed (Figure III-6). Passive recreation activities are allowed throughout the park property. Hiking and other nature-oriented activities are also allowed even though the park does not maintain a trail system.

Longwood Community Center is owned by Montgomery County and maintained by the Montgomery County Department of Recreation. Shared use includes the M-NCPPC Department of Parks, the M-NCPPC Park Police and Drop-In Station, and the Olney Youth Services. The recreational facility includes a soccer field with two baseball diamonds adjacent to MD 97, two tennis courts behind the building, and picnic tables in the front portion of the property under the trees. There is a recreational building for indoor activities, including basketball, volleyball, aerobics and weight training/exercise classes, and various activities for seniors, children, teens, and adults. The center was originally acquired in a joint effort between the county and the community. The community raised approximately 140 percent of their agreed upon amount of funding required to finance the acquisition and establishment of the facility.

According to the 1980 Olney Master Plan, the baseball/softball field is located on property that is presently leased by the Longwood Community Center but is owned by M-NCPPC and has been designated for transportation use in anticipation of the future improvements to MD 97 (M-NCPPC, 1980). The area designated for transportation use was factored into the plan for the recreational facility at the time it was being developed for recreational and community uses (Figure III-6).

Hawlings River Stream Valley Park is part of Montgomery County's multi-jurisdictional regional conservation system (Figure III-6). It totals 554 acres and is located at the north end of the project area, primarily east of the project area where it joins with the Reddy Branch Stream Valley Park.

Camp Bennett is also located in the project area at the northern end of the project limits. As previously mentioned, this facility is privately owned and operated. It is open to church groups of various denominations, as well as inner city youth associated with their ministry program, as a retreat center. Recreational opportunities include camping, swimming, hiking, volleyball, softball, and basketball. Accommodations at the facility include four dormitory style cabins to house up to 64 people, a dining room, meeting room, and chapel (Interview with Chaplain Steve Hoey, 2001).

(6) Civic and Quasi-Public Facilities

The Brookeville Academy Community Center, at which the Town Office and archives are located, is the only civic facility in the project area (Figure III-6). It also has general-purpose rooms and rental facilities for community meetings, lectures, and non-profit groups (Allan, 2001). The closest libraries for residents in the project area are the Olney Branch of the Montgomery County Public Library and the Rockville Regional Library.

(7) Utilities

Electricity in the project area is provided by the Potomac Electric Power Company (PEPCO). Municipal water and sewer services are provided throughout Brookeville and the surrounding area by the Washington Suburban Sanitary Commission (WSSC). According to the Montgomery County Department of Water and Waste Management, there is a pumping station in Brookeville. Few homes still use private well and septic systems in the vicinity. Verizon (formerly Bell Atlantic) is the primary telephone service provider and Montgomery Cable TV provides cable service to project area residents.

2. Economic Environment

Information regarding the economic environment in Montgomery County and the Town of Brookeville was obtained from the US Census Bureau, the Maryland Department of Licensing and Labor Relations, and the M-NCPPC.

a. Employment Characteristics

Table III-4 identifies the employment characteristics for Montgomery County and the Town of Brookeville. **Table III-5** lists income and poverty information for the county and Brookeville.

(1) Montgomery County

Job growth in Montgomery County was strong during the late 1990s and into the beginning of this decade. Estimates based on data from the Maryland Department of Licensing and Labor Relations show that yearly job growth has ranged from 14,700 to 27,000 jobs from 1997 to 2000 (M-NCPPC, 2003).

In Montgomery County, the numbers of workers residing and working in the same jurisdiction in 2000 was 455,331. In 2000, the Montgomery County population 16 years and over in the labor force was 477,123. This indicates that the majority of Montgomery County workers reside and work in Montgomery County.

The federal government is a major component of Montgomery County's economy. It is an employer, a tenant and landowner, and a purchaser of goods and services. As an employer, almost 60,000 workers are in federal employment, and the federal government is a major source of income for Montgomery County residents and workers in the county. During fiscal year 2000, the federal government paid workers in the county \$3.2 billion in wages and salaries. It also paid county residents \$2.5 billion in direct payments to individuals for retirement and other benefit programs (M-NCPPC, 2003). Table III-4 lists the various employment sector categories and the number of persons employed within each. According to the 2000 Census, approximately 80 percent of the residents of Census Tracts 7013.04 and 7013.09 work within the State of Maryland and of these, 64 percent work within Montgomery County. Table III-4 identifies the employment characteristics for Montgomery County and the Town of Brookeville.

(2) Town of Brookeville

Commercial facilities within the project area are located on **Figure III-6**. From north to south, these include the seasonal Brookeville Farms Nursery along MD 97, and McDonnell Contracting located to the rear of the nursery at the northern end of the project area, on the east side of MD 97 (**Figure III-6**). Further south on the east side of MD 97 in Brookeville is a pet grooming shop, Linda's Dog Designs. There are also three small businesses in town including a realtor, a certified public accountant, and a plumbing company. The Inn at Brookeville Farms and the Marian Assisted Living Facility are located along the southern portion of the project area.

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TABLE III-4 Employment Characteristics - 2000

Cotogory	Montgom	ery County	Town of Brookeville		
Category	Number	Percent	Number	Percent	
Employment Status					
Population 16 years and over	675,119	100	79	100	
In Labor Force	477,123	70.7	57	72.2	
Civilian labor force	473,851	70.2	57	72.2	
Employed	458,824	68	57	72.2	
Unemployed	15,027	2.2	0	0	
Armed Forces	3,272	0.5	22	27.8	
Not in Labor Force	197,996	29.3	22	27.8	
Commuting to Work					
Workers 16 years and over	455,331	100	57	100	
Car, truck, or van – drove alone	313,935	68.9	36	63.2	
Car, truck, or van – carpooled	49,802	10.9	7	12.3	
Public Transportation (including taxicab)	57,528	12.6	0	0	
Walked	8,806	1.9	6	105	
Other means	3,324	0.7	0	0	
Worked at Home	21,936	4.8	8	14.0	
Mean travel time to work	32.8	NA	30.2	NA	
Employed civilian population ≥16 years	458,824	100	57	100	
Occupations				uit t t t t t t t	
Management, professional, and related	259,774	56.6	32	56.1	
Service	52,848	11.5	10	17.5	
Sales and office	100,859	22.0	9	15.8	
Farming, fishing, and forestry	403	0.1	0	0	
Construction, extraction, and maintenance	23,986	5.2	5	8.8	
Production, transportation, and material moving	20,954	4.6	1	1.8	
Industry		<u> </u>			
Agriculture, forestry, fishing and hunting, mining	920	0.2	0	0	
Construction	23,240	5.1	7	12.3	
Manufacturing	19,536	4.3	0	0	
Wholesale trade	7,081	1.5	0	0	
Retail trade	41,078	9.0	2	3.5	
Transportation and warehousing, and utilities	11,562	2.5	0	0	
Information	26,677	5.8	3	5.3	
Finance, insurance, real estate, rental and leasing	37,016	8.1	3	5.3	
Professional, scientific, management, administrative,	89,884	19.6	7	12.3	
Educational health and social services	01 257	10.0	15	26.2	
Arts entertainment regreation ecoemmodation and	91,557	19.9	15	20.5	
food services	31,645	6.9	5	8.8	
Other services (except public administration)	32,522	7.1	8	8.8	
Public administration	46,306	10.1	10	17.5	
Class of Worker					
Private wage and salary workers	326,975	71.3	35	61.4	
Government workers	99,644	21.7	15	26.3	
Self-employed workers in own not incorporated	31,322	6.8	7	12.3	
Unpaid family workers	883	0.2	0	0	

Source: US Census Bureau, Census 2000;

Maryland Department of Labor, Licensing and Regulation, 2002; M-NCPPC, Research and Technology Center, 2002

NA Not applicable

Catagory:	Montgom	ery County	Town of Brookeville		
Category	Number	Percent	Number	Percent	
Income in 1999					
Households	324,940	100	40	100	
Less than \$10,000	12,040	3.7	3	7.5	
\$10,000 to \$14,999	8,046	2.5	0	0	
\$15,000 to \$24,999	18,325	5.6	1	2.5	
\$25,000 to \$34,999	24,406	7.5	0	0	
\$35,000 to \$49,999	41,248	12.7	7	17.5	
\$50,000 to \$74,999	65,955	20.3	4	10.0	
\$75,000 to \$99,999	49,573	15.3	11	27.5	
\$100,000 to \$149,000	56,565	17.4	2	5.0	
\$150,000 to \$199,999	24,199	7.4	5	12.5	
\$200,000 or more	24,583	7.6	7	17.5	
Medium household income (dollars)	71,551	NA	88,629	NA	
With earnings	283,214	87.2	36	90	
Mean earnings	89,643	NA	129,417	NA	
With Social Security Income	60,754	18.7	10	25	
Mean Social Security Income (dollars)	11,531	NA	8,790	NA	
With Supplemental Security Income	6,426	2.0	0	0	
Mean Supplemental Security Income (dollars)	6,396	NA	0	NA	
With public assistance income (dollars)	4,258	1.3	0	NA	
Mean public assistance income (dollars)	3,222	NA	0	NA	
With retirement income	56,332	17.3	7	17.5	
Mean retirement income	31,195	NA	20,843	NA	
Families	226,024	100	28	100	
Less than \$10,000	5,199	2.3	2	7.1	
\$10,000 to \$14,999	3,739	1.7	0	0	
\$15,000 to \$24,999	9,813	4.3	1	3.6	
\$25,000 to \$34,999	12,998	5.8	0	0	
\$35,000 to \$49,999	23,878	10.6	3	10.7	
\$50,000 to \$74,999	42,908	19.0	4	14.3	
\$75,000 to \$99,999	37.379	16.5	7	25.0	
\$100,000 to \$149,000	46,905	20.8	1	3.6	
\$150,000 to \$199,999	21,122	9.3 ·	4	14.3	
\$200,000 or more	22,083	9.8	6	21.4	
Medium family income (dollars)	84,035	NA	93,444	NA	
Demonto Status in 1000	No. below	% below	No. below	% below	
Poverty Status in 1999	poverty level	poverty level	poverty level	poverty level	
Families	8,428	3.7	2	7.1	
Families with female householder, no husband	3 755	11.5	2	40	
present	5,755	11.3	۷	40	
Individuals	47,024	5.4	6	5.5	
\geq 18 years	33,508	5.2	5	6.7	
≥ 65 years	5,467	5.9	3	25	

TABLE III-5 Income and Poverty - 2000

Source: US Census Bureau, Census 2000;

Maryland Department of Labor, Licensing and Regulation, 2002;

M-NCPPC, Research and Technology Center, 2002

NA Not applicable
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Taxes for residents within the project area include a real property tax rate of \$0.75 per \$100 for Montgomery County and \$0.08 per \$100 for the state of Maryland. Within the project area, residents of Brookeville have a property tax of \$0.19 per \$100, which is paid to the county, and then the Town of Brookeville is reimbursed (Montgomery County, 2002). Other taxes include a state sales tax of five percent on retail sales, business personal property tax rate of \$1.89 per \$100 for Montgomery County; state corporate income tax of seven percent on net income attributable to business transacted within Maryland; state personal income tax which is a graduated tax rate peaking at 4.85 percent of taxable income in excess of \$3,000; and Montgomery County personal income tax of 2.90 percent of the taxable income.

Compared to the rest of the nation, Maryland is a wealthy state, with statewide measures of high incomes and low poverty. The US Census Bureau's Supplemental Survey from 1990 to 2000 has revealed that Maryland is more diverse, better educated, and wealthier than 10 years ago. Maryland is one of the top four states in median income. Being a high-income state, Maryland also has a relatively low level of poverty. Estimates from the 2000 Supplemental Survey list Maryland's overall poverty rate at 9.3 percent, substantially below the national rate of 12.5 percent, and tied for ninth lowest in the Nation (US Census Bureau, 2002).

Montgomery County's poverty rate in 2000 was 5.4 percent (MDP, 2002). The median household income for Montgomery County in 2000 was \$71,551, compared to the state level of \$52,868. For Brookeville, the poverty rate in 2000 was 5.5 percent, and the median household income was \$88,629.

3. Land Use

Information on existing, proposed, and planned land use, and comprehensive planning was gathered through available county and municipal planning documents, and interviews with planning officials.

a. Existing

Land use within the project area includes a mixed use of residential, commercial, parkland, forest, croplands, and open grasslands (Figure III-7). Residential areas include the historic Town of Brookeville, the Holiday Drive subdivision and numerous individual homes throughout the project area. Commercial development in the project area consists of six small businesses located on Georgia Avenue, one located on Brighton Dam Road, and one located on Bordly Drive (Figure III-6). The Reddy Branch Stream Valley Park covers a significant percentage of the project area and is located along either side of Reddy Branch. The park is predominantly forested.

Within the Town of Brookeville, there are two land use categories: Historic Village Residential and Historic Village Commercial. There are two Historic Village Commercial properties in the Town of Brookeville, both of which are located along MD 97 (Figure III-8). Refer to Section III.B for further discussion of cultural resources.

The M-NCPPC has adopted a *Functional Master Plan for the Preservation of Agriculture and Rural Open Space* (M-NCPPC, 1980, updated 1988). The plan recommends techniques to protect and preserve farmland and rural open space. The project area is located within two agricultural protection areas of the county. The project area west of existing MD 97 is within the Rural





Density Transfer Zone or "RDT" zone (see **Figure III-3**). One dwelling unit is permitted per 25 acres of farmland. The project area east of existing MD 97 is located within the Rural Cluster Zone. In this zone, overall density is one dwelling unit per five acres and the tract is 100 acres in size. The number of permitted dwelling units is 20. The cluster option would allow these 20 units to be grouped on lots as small as two acres on approximately 40 percent of the parcel, or 40 acres.

b. Future

As shown in **Figure III-4**, the upper portion of Planning Area 23, designated Rural Density and Rural Cluster zoning, is predominately agricultural in nature. **Figure III-7** shows the existing land use conditions. Planned land use within the project limits is consistent with the existing land use conditions, in that growth is limited to areas adjoining ongoing development and not within the extensive Reddy Branch Stream Valley Park. Currently, two subdivisions are under construction. South of Sunnymeade, off of Brighton Dam Road, a small subdivision, consisting of four homes, is under construction. The other subdivision, consisting of three homes, is currently being constructed and is located off of Market Street. No other subdivisions have been proposed within the project area.

The Town of Brookeville (Figure III-8) has adopted the Brookeville Zoning Ordinance, which is designed to preserve and protect its historic heritage, and allow reasonable flexibility for new development, changes in existing structure, and current and future uses throughout the Town in a manner consistent with the goals and objectives of the Brookeville Comprehensive Plan, as amended.

Future land use in the State of Maryland is guided by the October 1997 "Smart Growth Neighborhood Conservation Initiatives." The intent is to direct state funding for growth-related projects to areas designated by local jurisdictions as PFAs. PFAs are existing communities and other locally designated areas as determined by local jurisdictions in accordance with "smart growth" guidelines.

The Smart Growth Neighborhood Conservation Initiatives are intended to direct development to existing towns, neighborhoods, and business areas by directing state infrastructure improvements to those places. PFA boundaries were determined by Montgomery County on October 2, 1998. The municipal boundary of the Town of Brookeville is a PFA boundary (Figure III-8). The majority of the previously proposed MD 97 Brookeville Project's bypass alternates, and three of the four Build Alternates retained for further study, were not within the PFA. As a result, the MD 97 Brookeville Project is subject to the following four conditions. The four criteria and the actions taken to meet those criteria are as follows:

• Under local ordinance, Montgomery County is to adopt, through appropriate enforceable action, restrictions that will prevent this bypass from allowing sprawl development. Any capacity a bypass might add to the network cannot be used to allow development outside the current boundaries of the Town of Brookeville.

Action: An amendment to the Annual Growth Policy was adopted on April 6, 1999 by the Montgomery Council.

• A permanent easement held by a third party entity such as the MET must border the entire roadway to ensure that no future access, widening, or connection to the bypass is possible.

Action: The MET has tentatively agreed to hold the easement pending the development of the Letter of Commitment and the Memorandum of Understanding (MOU). An exact amount and location of this easement will be prepared during the design phase of this project. Meets and Bounds Plats will be prepared and will be part of the MOU. SHA submitted a Letter of Commitment to MET for signature on July 29, 2003 (Section VI).

• Montgomery County, the MDOT and Howard County governments must work out a safe "traffic calming" point north of the bypass to limit future traffic to the current capacity of MD 97 through Brookeville.

Action: A roundabout is proposed north of Brookeville Road to limit traffic capacity through the area. This roundabout will also serve as a safe traffic calming point.

• If for any reason these controls fail, Montgomery County will reimburse the state for the full cost of the bypass.

Action: This serves to further ensure that rural areas and open space are preserved, the environment is healthy, and thriving communities enjoy their quality of life.

4. <u>Visual Quality</u>

Viewsheds were determined by review of land use mapping and field reconnaissance throughout the project area to assist in the evaluation of the visual quality of the area. A viewshed is "the surface area visible from a given viewpoint or series of viewpoints; it is also the area from which that viewpoint or series of viewpoints may be seen" (FHWA, 1981). It may also be defined as, "a tool for identifying the views that a project could actually affect" (FHWA, 1981).

Existing Visual Environment

The existing project area is comprised of rural farmland in the northern portion, suburban residential developments in the southern portion, and the historic district in the central eastern portion of the project area. There is also forested land in the northern project area that is generally associated with Reddy Branch Stream Valley Park. Sensitive receptors in the project area considered for visual quality include the residential communities within the project area, Longwood Community Center, Reddy Branch Stream Valley Park (Figure III-6 and Figure III-7), and the Bordley's Choice historic site and the Brookeville Historic District (Figure III-8), as discussed in the next section.

B. CULTURAL RESOURCES

Identification and evaluation of historic architectural and archeological resources were conducted in accordance with federal and state laws, which protect significant cultural resources. Federal and state mandates for cultural resources protection include: the U.S. Department of Transportation Act of 1966, as amended in 1968; the NEPA of 1969; the National Historic Preservation Act of 1966, as amended; 36 CFR Part 800 Protection of Historic Properties (Final Rule December 12, 2000); Executive Order 11593; the MHT Act of 1990 (Article 83B, Sections 5-619 of the Annotated Code of Maryland); and Article 83B, Sections 5-617 and 5-618 of the Annotated Code of Maryland.

Identification and evaluation of cultural resources were performed in accordance with the standards established in Standards and Guidelines for Architectural and Historical Investigations in Maryland (MHT, 2000); Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole, 1994); Collections and Conservation Standards (MHT, 1999); and Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (NPS, 1983).

Background research and field surveys were conducted to facilitate identification of the cultural resources identified on **Figure III-9**. Review of previous planning and research studies, existing inventories of historic properties and previous survey information, and historic maps, was undertaken. The research was conducted in consideration of the magnitude and nature of the undertaking, degree of federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects. Reports were prepared to facilitate evaluation of the cultural resources. These documents include: Determination of Eligibility Forms; *Phase IB Archeological Identification Survey for MD 97: Brookeville Study, Montgomery County, Maryland* (Goodwin, 1997); *Phase IB Archeological Identification Survey for Additional Alternates Proposed for MD 97: Brookeville Bypass, Montgomery County, Maryland* (Goodwin, 2000). Phase II archeological and historical investigations at Sites 18MO368 and 18MO460 for SHA project # MO746B11, MD 97 from Gold Mine Road to north of Holiday Drive, Montgomery County, Maryland (Goodwin, 2002).

All cultural resources identified during the architectural and archeological surveys were submitted to the SHPO for National Register eligibility determinations, or comment on the need for further evaluation. Historic properties were evaluated in accordance with criteria of the National Register of Historic Places. These criteria state that "the quality of significance in American History, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and: that are associated with events that have made a significant contribution to the broad patterns of our history (Criterion A); or that are associated with the lives of persons significant in our past (Criterion B); or that embody the distinctive characteristics of a type, period, or method of construction that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); or that have yielded, or may be able to yield, information important in prehistory or history" (Criterion D) (36 CFR 60.4, and National Register Bulletin No. 15). Correspondence documenting prior consultation with the SHPO and other interested parties is provided in **Section VI**.



1. Historic Resources

The term "historic standing structures" refers to any above-ground building, structure, district, or object that attributes to our cultural past. When these resources meet the criteria for listing in the National Register of Historic Places, they are historic properties that must be considered under the requirements of the National Historic Preservation Act. Two historic sites are listed on or determined eligible for the NRHP and are located with the Area of Potential Effect (APE). The project's APE and the locations of the sites (Brookeville Historic District (M23-65), and Bordley's Choice (M23-66) are illustrated on Figure III-9. A description of each property and its significant characteristics are provided below.

The SHPO has concurred (April 16, 2001) that the two historic resources are within the APE and listed on or determined eligible for the National Register. The resources are discussed below:

a. Brookeville Historic District (M:23-65)

The Brookeville Historic District, a late 19th-century crossroads village, is significant for its architecture and its history as a commercial and service center for the surrounding agricultural area. The Town of Brookeville was originally settled by Richard Thomas in 1794 and was chartered by the legislature in 1808. Brookeville was incorporated in 1890 making it the oldest incorporated municipality in Montgomery County. It functioned as a center for education and commerce and was home to progressive agronomists including Thomas Moore who made several significant contributions to advance the farming industry, at first locally, then nationally. During the War of 1812, President James Madison fled Washington, D.C. during a short-lived British occupation of the capital and directed the federal government for two days from the home of Caleb Bently (now known as the Madison House – Appendix G), a farmer in Brookeville. Brookeville comprises an important collection of well-preserved buildings spanning the late 18th-20th centuries in a pristine setting. The Brookeville Academy (circa 1810) was one of the first private academies in Montgomery County (Appendix G). Homes reflecting both Federal style and Gothic Revival architecture (Appendix G) were common in the early and mid-1800s. respectively. The original road pattern of the historic village remains relatively unaltered, and is essential to its historic character.

In the early 20th century automobiles were introduced which changed the traffic patterns around Brookeville. More products were developed in factories rather than in small artisan's shops. This changed the demographics and markets ending the commercial base of Brookeville. The town became a predominantly residential community.

In 1979, Brookeville was listed on the National Register as a historically significant 19th century rural settlement. In 1985, the Montgomery County Historic Preservation Ordinance was adopted. Subsequently, in 1986, the town was designated as a Master Plan Historic District to be protected under that Ordinance (Brookeville Planning Commission, 1994). Brookeville remains a small town consisting of approximately 52 buildings (Brookeville Planning Commission, 1994) and 120 residents (US Census Bureau, 2000).

The historic district boundary coincides with the boundary for the Town of Brookeville. The SHPO concurred with the Town's eligibility and National Register boundaries (September 29, 1995).

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Associated with the Town of Brookeville and within Reddy Branch Stream Valley Park, is the Oakley Cabin Trail (Figure III-9). The existing half-mile manmade trail partially connects the Town of Brookeville with the historic African American Oakley Cabin, which is located to the west of the project area. Oakley Cabin, which was originally built for slaves and later became the center of a small roadside Free Black community, is the only publicly owned African American historic site in Montgomery County that is open to the public. Historically, the Oakley Cabin Trail ran most of the way along an old mill race for Newlin's Mill in Brookeville. It was established and used by people who lived in the community and worked at Newlin's Mill, which is described below under archeological resources.

b. Bordley's Choice (M:23-66)

Bordley's Choice consists of a massive fieldstone dwelling structure and associated dependencies constructed between 1763 and 1869. In its early years, the plantation was associated with the prominent Riggs family of Montgomery County. In 1869, the original stone house was purchased and enlarged for use as the prestigious Brookeville Academy for boys and as Mrs. Porter's School for the Education of Young Ladies in 1869. In 1941, the property was restored for use as a private dwelling. In 1961, the house was purchased by an institution and the dining room converted to a chapel. The house reverted to private ownership in 1966 and is the home of the present owners.

The property's environmental setting is encompassed within 20.4 acres, which includes the main house, stable, and entrance to the main house. The house is a three bay by four bay house. It has a two-story porch with a flat roof supported by two Doric columns. Segmental and flat brick arches and sills adorn the window openings. The windows are six over nine paned windows with louvered shutters. Two dormer windows are on the north side of the house, four on the west and three on the east. Each dormer has a gabled roof. The roof is covered by slate tiles.

The property is significant for its association with the development of education in Montgomery County (Criterion A), and for its embodiment of distinctive characteristics associated with stone building construction (Criterion C). The SHPO has concurred with the eligibility and National Register boundaries for the resource (September 29, 1995; April 16, 1996).

2. <u>Archeological Resources</u>

The term "archeological resources" refers to all evidences of past human occupation that can be used to reconstruct the lifeways of past peoples. These include sites, artifacts, environmental and all other relevant information, as well as the contexts in which they occur. In accordance with the laws previously referenced, all archeological (prehistoric and historic) sites must be evaluated for their eligibility for the National Register by the SHPO.

The APE for archeological investigations was defined by the limits of proposed ROW and limits of ground disturbance associated with worst case impacts under all alternates retained for detailed study. Archeological identification investigations were conducted within the APE to ascertain the range and number of historic and prehistoric period archeological resources present, and to make recommendations for further evaluations for eligibility to the National Register.

III-25

Three archeological sites were determined to be potentially significant for information they may contain as documented in SHPO correspondence dated April 16, 2001 (Section IV). These resources are described below:

Site 18MO368 is the remains of the 18th-19th century Newlin/Downs Mill complex containing numerous features including a well, retaining wall, building foundations, mill wheel, and mill race. This National Register eligible site is considered an archeological resource and not a historic structure by the MHT because it consists of a collection of building ruins/foundations and below ground resources such as a well and a mill race. It is likely this site can contribute important information concerning the industrial economy and community planning in the Maryland Piedmont during a time period characterized by agrarian intensification and internal improvement (1780–1860).

Site 18MO387 is the remains of the Pleasant Hill Plantation and Cemetery, associated with the historically important Riggs Family from the mid-18th to early 20th centuries. Although the property encompassed a dwelling, associated outbuildings, and a cemetery, there are no extant historic standing structures associated with this site. However, the property does retain physical features of the setting including extant topography, road traces, and the spatial relationship between the structural ruins and the physical features of the site.

Site 18MO460 is the remains of a 19th and 20th century domestic occupation associated with the historic village of Brookeville. The observed horizontal and vertical patterning of artifacts and the potential for sub-surface features suggest that the site may have sufficient integrity to provide information regarding local agriculture and village development during the period of agrarian intensification and internal improvement (1780 - 1860).

C. TOPOGRAPHY, GEOLOGY, AND SOILS

1. <u>Topography</u>

The topography of the project area is slightly to moderately sloping, with elevations ranging from 326 to 514 feet above mean sea level. The average elevational gradient is approximately 11 feet per mile. Within the central portion of the project area, the lowest elevations occur along Reddy Branch. Lower elevations also occur in the extreme northern portion of the project area, along an unnamed tributary to the Hawlings River. Both of these larger stream systems have well-established, broad floodplains, while most of the other tributaries throughout the project area are generally found in well-confined valleys.

Slopes within the project area generally range from 0 to 15 percent but, steeper slopes, some greater than 25 percent, are common along the margins of the larger floodplains and in the confined valleys, which emanate from the higher elevations (Figure III-10).



III-27

2. Geology

The project area is located in the eastern portion of Montgomery County, within the eastern division of the Piedmont physiographic province. This area consists predominantly of metamorphic rocks of Paleozoic age. The project area consists of boulder gneiss and norbeck quartz diorite of the Wissahickon Formation. Boulder gneiss, the dominant rock type, is characterized by thick bedded to massive pebble-and boulder-bearing, arenaceous to elitic metamorphic rock and is typically a medium-grained, garnetoligoslase-mick-quartz gneiss. Norbeck quartz diorite ranges from weakly foliated quartz diorite to strongly gneissic and schistose rock with recrystallized textures (Maryland Geological Survey, 1968).

3. <u>Soils</u>

Information on Montgomery County soil series, Prime Farmland Soils, Soils of Statewide Importance, and Locally Important and Unique Soils was obtained from consultation with the Montgomery Soil Conservation District and review of the *Soil Survey of Montgomery County*, *Maryland* (United States Department of Agriculture (USDA), 1995).

Figure III-11 on page III-31 shows the soils mapped within the project area. According to the *Montgomery County, Maryland Soil Survey Interim Report* (USDA, 1990), there are 17 soil mapping units within the project area. **Table III-6** on page III-30 lists these soil mapping units, and identifies potential erosion hazard, depth to seasonal highwater table, drainage class, and other characteristics that could potentially affect highway construction. The ten soil series within the project area are briefly described below:

Baile Series (6A) - Very deep and poorly drained; formed in alluvium and in the underlying material weathered mainly from mica schist and gneiss; generally in upland depressions and along drainageways.

Blocktown Series (116D, 116E) - Shallow and well-drained; formed in material weathered from phyllite and schist; generally found on Piedmont Plateau.

Brinklow Series (16B, 16C, 16D) - Moderately deep and well-drained; formed in material weathered from acid crystalline rocks; generally found on broad ridgetops and side slopes in the uplands on the Piedmont Plateau.

Codorus Series (53 Option A) - Very deep and moderately well-drained or somewhat poorly drained; formed in recently deposited alluvium derived mainly from metamorphic and crystalline rocks; found on smooth floodplains.

Gaila Series (1B, 1C) - Very deep and well-drained; formed in material weathered from quartz muscovite schist; generally found on uplands.

Glenelg Series (2B, 2C) - Very deep and well-drained; formed in material weathered from schist and gneiss; generally found on uplands.

Glenville Series (5A, 5B) - Very deep, moderately well drained or somewhat poorly drained, with a slowly permeable layer; formed in residuum and colluvium derived from schist, gneiss, and other crystalline rocks; found along drainageways and in low areas on uplands.

Hatboro Series (54A) - Very deep and poorly drained; formed in alluvium derived from metamorphic and crystalline rocks; generally found on floodplains.

Occoquan Series (17B, 17C) - Deep and well drained; formed in material weathered from gneiss and schist; generally found on broad ridgetops and side slopes in the uplands.

Wheaton Series (66UB) - Very deep and well-drained; formed in material weathered from schist and gneiss; found in areas that have been altered by heavy equipment.

D. CLIMATE

Climatological data were obtained from the *Soil Survey of Montgomery County, Maryland* (USDA, 1995), as presented in **Table III-7**.

Month	Average Daily Temperature	Average Daily Maximum	Average Daily Minimum	Average Precipitation	Average Snowfall	
	D	egrees Fahrenhei	t	Inches		
January	33.2	42.6	23.8	2.81	5.2	
February	35.4	45.9	24.8	2.65	3.9	
March	44.2	55.8	32.6	3.53	3.6	
April	54.8	67.7	41.9	3.19	0.1	
May	63.9	76.5	51.3	3.79	0.0	
June	71.5	83.6	59.4	3.92	0.0	
July	75.7	87.4	64.0	3.77	0.0	
August	74.2	85.7	62.6	4.34	0.0	
September	67.8	79.7	55.8	3.12	0.0	
October	57.1	69.3	44.8	2.91	0.0	
November	46.4	57.1	35.7	2.96	1.0	
December	36.8	46.4	27.2	2.89	3.5	

Table III-7	Climatic Char	acteristics of	f Montgomerv	County.	Marvland
	Cumune Chui	$u_{c_1c_1}$	I I I U III S U III U I J	Cominy,	TITTEL A COLLEGE

Source: USDA, Natural Resources Conservation Service, 1995.

The study area experiences hot summers and mild winters, with precipitation fairly frequent throughout the year. The summer months usually experience more precipitation than the other months of the year, with thunderstorms being the primary source of precipitation (Carpenter, 1983). The total annual precipitation is about 40 inches. Approximately 55 percent of the annual precipitation occurs between April and September. The growing season for most crops falls within this period. The average relative humidity in mid-afternoon is approximately 55 percent. Average and maximum summer temperatures are 74 degrees Fahrenheit [F] and 86 degrees F, respectively. Average and minimum winter temperatures are 35 degrees F and 25 degrees F, respectively. The prevailing wind is from the west-northwest. The average wind speed is highest, 11 miles per hour, in the spring. (USDA, 1995).

Map	Soll Mapping Unit	Erosion	Depth to High	Drainage Class	Potential	Restrictive Sail Features
Symbol		Potential	Water Table		Frost	A ffecting Highway
			m(ft)		Action	Construction
6A	Baile silt loam, 0-3% slopes	Slight	0-0.15 (0-0.5)	very deep and poorly drained	High	Severe: wetness, frost action
116D	Blocktown channery silt loam, 15-25% slopes, very rocky	Moderate	>1.8 (>6.0)	shallow and well drained	Moderate	Severe: slopes
116E	Blocktown channery silt loam, 25-45% slopes, very rocky	Severe	>1.8 (>6.0)	shallow and well drained	Moderate	Severe: slopes
16B**	Brinklow-Blocktown complex, 3-8% slopes	Slight	>1.8 (>6.0)	well drained, gently sloping	Moderate	Moderate: depth to rock, shrink-swell
16C**	Brinklow-Blocktown channery silt loams, 8-15% slopes	Slight	>1.8 (>6.0)	well drained, moderately steep	Moderate	Moderate: depth to rock, shrink-swell, slope, frost action
16D	Brinklow-Blocktown channery silt loams, 15-25% slopes	Moderate	>1.8 (>6.0)	well drained, moderately steep	Moderate	Severe: Slope
53A	Codorus silt loam, 0-3%	Slight	>0.3-0.6	very deep, moderately well drained	High	Severe: flooding, frost action
	slopes, occasionally flooded		(1.0-2.0)	or somewhat poorly drained		
1B*	Gaila silt loam, 3-8% slopes	Slight	>1.8 (>6.0)	very deep and well drained	Moderate	Moderate: frost action
1C**	Gaila silt loam, 8-15% slopes	Moderate	>1.8 (>6.0)	very deep and well drained	Moderate	Moderate: slope, frost action
2B*	Glenelg silt loam, 3-8% slopes	Slight	>1.8 (>6.0)	very deep and well drained	Moderate	Moderate: frost action
2C**	Glenelg silt loam, 8-15% slopes	Slight	>1.8 (>6.0)	very deep and well drained	Moderate	Moderate: slope, frost action
5Å	Glenville silt loam, 0-3%	Slight	0.15-0.9	very deep and moderately well	High	Severe: wetness, frost action
<u> </u>	Slopes		(0.5-3.0)	drained or somewhat poorly drained		
26	slopes	Slight	0.15-0.9	very deep and moderately well drained or somewhat poorly drained	High	Severe: wetness, frost action
54A	Hatboro silt loam, 0-3% slopes, frequently flooded	Slight	0-0.15 (0-0.5)	very deep and poorly drained	High	Severe: flooding, wetness, frost action
17B*	Occoquan loam, 3-8% slopes	Slight	>1.8 (>6.0)	deep and well drained	Moderate	Moderate: frost action
17C**	Occoquan loam, 8-15% slopes	Slight	>1.8 (>6.0)	deep and well drained	Moderate	Moderate: slope, frost action
66UB	Wheaton-Urban land complex, 0-8% slopes	Slight		very deep and well drained soils intermixed with urban land	Moderate	Moderate: frost action

TABLE III-6 Characteristics of Soils Within the Study Area

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Note: * denotes Prime Famland Soils; ** denotes Soils of Statewide Importance

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E. FARMLANDS

Farmlands are primarily limited to the northern portion of the project area, north and west of Holiday Drive. Typical crops include hay, corn, soybean, and other agricultural crops. The cropland west of MD 97 is part of larger farm that extends beyond the project area. The farmland east of MD 97 within the project area is currently surrounded by parkland to the north and east, and grassland to the south.

The Montgomery Soil Conservation District was consulted to determine which soils within the project area are classified as Prime Farmland Soils, Unique Farmland Soils, Soils of Statewide Importance, or Locally Important Soils.

Prime Farmland Soils and Soils of Statewide Importance located within the project area are shown on **Figure III-12**. Approximately 60 percent of the project area consists of Prime Farmland Soils or Soils of Statewide Importance. There are no Unique or Locally Important Soils in Montgomery County.

Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses (the land could be cropland, pasture land, forest land, or other land, but not urban built-up or water). It has the soil quality, growing season and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Prime Farmland Soils generally have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable acidity or alkalinity, an acceptable salt content, and few or no rocks. They are permeable to water and air. Prime Farmland Soils are not excessively erodible or saturated with water for a long period of time and they either do not flood frequently or are protected from flooding. The Prime Farmland Soils within the project area include:

1B - Gaila silt loam, 3 to 8 percent slopes 2B - Glenelg silt loam, 3 to 8 percent slopes 17B - Occoquan loam, 3 to 8 percent slopes

Soils of Statewide Importance are for the production of food, feed, fiber, forage, and oilseed crops. Criteria for defining and delineating this land are determined by appropriate state agencies. Additional farmlands of statewide importance include those that are nearly Prime Farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. The Soils of Statewide Importance within the project area include:

1C - Gaila silt loam, 8 to 15 percent slopes
2C - Glenelg silt loam, 8 to 15 percent slopes
16B - Brinklow-Blocktown complex, 3 to 8 percent slopes
16C - Brinklow-Blocktown complex, 8 to 15 percent slopes
17C - Occoquan loam, 8 to 15 percent slopes





F. **GROUNDWATER RESOURCES**

A review of the WSSC records was conducted to determine if the project area was served by public water and sewer. This review showed that WSSC provides public sewer and water service for approximately two-thirds of the project area, especially to the west of MD 97 and south of Brighton Dam Road. The remaining one-third of the project area is served by private wells for water and septic systems for sewage disposal.

According to the MDE, Water Rights Division, the only aquifer in the area is the Lower Pelitic Schist of the Wissahickon Formation, which is located just east of the project area where the Tridelphia Reservoir is located (Gapinko, 1997). The USEPA has identified the project area to be within a drinking water area designated as a sole source aquifer. A sole source aquifer supplies 50 percent or more of the drinking water for a given area.

The MDE, Water/Wastewater Permits Division was also contacted to determine the occurrence of wells within the project area (Smith, 2001). The well records obtained from this division confirmed that slightly over one-third of the project area is served by private wells. The dominant water use from extraction of the wells is for domestic use. A small number of wells within or nearby the project area extract water for farming, or test, observation, and monitoring purposes. Groundwater quality data was not requested from Montgomery County Department of Permitting Services; however, a response from this department revealed no groundwater monitoring information (Stephens, 2001).

G. SURFACE WATER RESOURCES

Physiography, Drainage, and Geology 1.

The physiography and geology within the study area was discussed previously in Section III-C.2. The entire project area is drained by tributaries to the Patuxent River.

2. Hydrology

The main riverine system within the defined project area is Reddy Branch and its associated tributaries, including Meadow Branch. In addition to Reddy Branch, an unnamed tributary to the Hawlings River is located on the extreme northern project area boundary. Reddy Branch is a large tributary of the Hawlings River, and flows in an eastern direction through the south-central portion of the project area. Reddy Branch receives drainage from approximately 75 percent of the project area, or 660 acres within the project area. Due to the dominant drainage area of Reddy Branch within the project area and because all alternates require crossing this system, this stream was field investigated for the purposes of stream characterization. The confluence of Reddy Branch and the Hawlings River is located outside (downstream) of the project area. Both Reddy Branch and Hawlings River are within the Rocky Gorge subwatershed, which is part of the Patuxent River watershed.

Reddy Branch generally has a well-established, broad floodplain, while most of its tributaries are in well-confined valleys of the project area. The stream channel is well-defined throughout the project area with an average bank height of approximately four to seven feet and an average streambank width between 25 and 30 feet. The substrate in the mainstem of Reddy Branch primarily consists of gravels and cobbles intermixed with fines. The tributaries are generally dominated by larger gravel and cobble material. Stream flow gaging data was obtained from the United States Geological Survey (USGS, Water-Data Report MD-DE-95-01) (Appendix B). The closest gaging station is located southeast (downstream) of the project area, along Hawlings River.

Per the United States Coast Guard publication "Bridges over the Navigable Waters of the United States Atlantic Coast (COMATPUB P16590.1), Hawlings River and Reddy Branch are not listed as navigable waters. A letter was sent to the United States Department of the Interior, NPS requesting a listing of any nearby streams on the Federal Inventory of Scenic and Wild Rivers. A response was not received. The DNR has designated the Patuxent River as a State Scenic and Wild River. The project area does not include any portions of the mainstem of Patuxent River. However, the stream systems throughout the project area are located within the Patuxent River watershed and are therefore still subject to review by DNR relevant to Scenic and Wild River Program.

3. Channel Classification

To aid in the characterization of the stream systems within the project area, a preliminary classification effort was conducted using <u>A Classification of Natural Rivers</u> (D. Rosgen, 1996). Rosgen's classification system categorizes stream channels with like attributes using an alphanumeric system. In general, Rosgen's stream types follow a continuum based on slope, with "A" channels typical of high gradient mountain streams; "C" channels representing low gradient floodplain regions; and "B" channels as intermediates between "A" and "C". Other types described by Rosgen include: braided, "D" channels; highly sinuous and narrow "E" channels typical of marsh or meadow landscapes; and "F" and "G" channels with natural or induced entrenched conditions. Channels are further described using a numeric system 1 through 6, based on site-specific conditions such as bed material, slope and planform (i.e., horizontal dimensions and pattern of a stream, such as width and sinuosity) characteristics. The system has utility as a communications tool to aid in the visualization of the broad channel restoration activities including transportation planning efforts that involve stream crossings.

To develop a preliminary classification for the channels within the project area, representative crosssections were taken along Reddy Branch and supporting tributaries. Cross-section locations were preliminarily established on photogrammetric mapping (two-foot contour intervals) along reaches of similar slope and valley configurations and further refined in the field. Seven sections were established within the project area (Figure III-13). Appendix B contains data collected at each of the seven sections, including the offset location and rod depth used to determine the relative elevation along the stream cross-section. The elevations were then plotted to develop a graphical representation of each stream cross-section. Table III-8 summarizes the channel classification results.

Section	Slope (m/m) (a)	Width (m)	Width/ Depth Ratio (b)	Entrenchment (c)	Substrate	Sinuosity (a)	Rosgen Stream Class.
1	0.01	9.54	13.83	1.35	Gravel	1.28	F4
2	0.025	9.39	22.4	1.28	Cobble	1.28	B3
3	0.04	4.07	8.23	1.53	Gravel	1.1	A4
4	0.004	7.33	6.01*	2.35	Gravel	1.46	C4
5	0.04	4.31	13.51	1.25	Cobble	1.1	B3
6	0.009	8.32	17.14	1.16	Gravel	1.28	F4
7	0.0067	8.01	10.13*	1.19	Gravel	1.28	F4

TABLE III-8 Stream Classification Parameters

*Values fall outside the range for width/depth ratio under Rosgen's classification system.

(a) Slope and sinuosity were determined from calculations based on 2 ft contour interval photogrammetric mapping.

(b) Width/Depth is bankfull width divided by average bankfull depth.

(c) Entrenchment is floodprone width divided by bankfull width.

With the exception of the channel reach at Section 2, Reddy Branch was characterized primarily as an "F-4" channel type. Rosgen's general description of an "F" channel is a meandering, riffle/pool channel on low gradients and a high width/depth ratio. These meandering channel types are generally entrenched in highly weathered material, and are laterally unstable with high bank erosion rates. The sub-classification of "4" indicates that the channel material of Reddy Branch consists primarily of gravel.

Along many portions of Reddy Branch, the channel was characterized by high five to seven foot banks appearing to inhibit floodplain access. Under Rosgen's system, the entrenched condition means that at two times the maximum bankfull depth, a floodprone area (assumed as the 50-year storm elevation by Rosgen) is not accessible. This usually is a result of either channel degradation (bed lowering) and/or filling (encroachment along the floodplain). This condition exacerbates channel bed and bank erosion and can result in significant removal and transport of sediments. A number of reaches along Reddy Branch are currently exhibiting bank and bed erosion problems. It should be noted, however, that without verification of the bankfull flow condition (from detailed field investigations) and flood elevation frequencies, the degree of entrenchment is an estimate, at best. It is possible that the channel floods frequently enough (as informed by local residents) that bank stress is of a shorter duration and entrenchment values obtained here are solely artifacts of Rosgen's system. It is obvious from field investigations, however, that numerous reaches are exhibiting bank erosion problems typical of "F" channel types.

The reach at Section 2 was classified as a "B-3" channel type. Rosgen's general description of a "B" channel is a moderately entrenched, riffle-dominated channel, with infrequently spaced pools, stable banks, and moderate gradients. Colluvial deposition and/or residual soils are associated with this channel type, and are generally found in narrow, gently sloping valleys. This reach of approximately 400 feet was the only "B" type channel found along the mainstem of Reddy Branch in the project area. Many of the tributaries draining to Reddy Branch are stable "A" and "B" type channels. Rosgen describes "A" channel types as steep, entrenched, cascading, step/pool streams. These channels exhibit high energy/debris transport associated with depositional soils. The "A" and "B" channel types are typical of high to moderate relief areas. These tributaries have well-vegetated riparian zones and minimal bed and bank erosion.





Meadow Branch, a tributary to Reddy Branch (located west of MD 97 and just south of Brookeville Road) does not exhibit the characteristics typical of most of the tributaries within the project area. The lower section of this tributary (Section 6) appears to be somewhat confined (probably by bed lowering and floodplain encroachment); however, the surrounding riparian zones and contributing watershed are well-vegetated (Figure III-13).

In general, Rosgen's classification system indicates stable tributary streams and a mainstem (Reddy Branch) that appears to be actively adjusting itself causing entrenched conditions and localized bed and bank erosion problems.

4. Water Quality

The streams within the project area are designated by MDE as "Use IV-P - Recreational Trout Waters and Public Water Supply". Use IV-P waters include cold or warm waters which have the potential for or are capable of holding or supporting adult trout for put-and-take fishing, managed as a special fishery by periodic stocking and seasonal catching, and use as a public water supply. Water quality criteria specified for Use IV-P waters are as follows:

<i>Bacteriological</i>	There may sufficient qu COMAR 26
Dissolved Oxygen (DO)	5 mg/l
[emperature	23.8° C (75' waters, whic
рН	6.5 - 8.5
Furbidity	Maximum o (Nephelome
<i>Toxic Substance Criteria</i>	All toxic sul public wate consumption

Water quality data was requested from the USEPA Storage and Retrieval (STORET) system. The STORET system is a database of sampling sites and their associated water quality data. The data and information requested by USEPA's database was only for specific sampling sites within or nearby the defined project area. The results of the database retrieval revealed no sampling sites immediately within the project area; however, one sampling site was identified along Reddy Branch, downstream of the project area. The period of record for various water quality parameter measurements from this station is from 1971 to 1984. A summary table of water quality parameter measurements at this station is included in **Appendix C**. The STORET information shows that, in general, water criteria for Use IV-P streams have been met. However, more recent data (1984 to present) was not available.

not be any sources of pathogenic or harmful organisms in uantities to constitute a public health hazard (as defined in 5.08.02.03-3).

⁶ F) (maximum) or the ambient temperature of the surface chever is greater.

of 150 units at any given time or 50 units as a monthly average eter Turbidity Units).

ibstance criteria to protect fresh water aquatic organisms and er supplies and the wholesomeness of fish for human n.

H. FLOODPLAINS

The 100-year floodplain limits have been identified and delineated based on mapping provided by the Federal Emergency Management Agency (FEMA). The entire project area lies within the Patuxent River Basin. FEMA-designated 100-year floodplains within the study area are associated with Reddy Branch and Meadow Branch. Floodplain boundaries for Reddy Branch and Meadow Branch are shown on **Figure III-13**.

The 100-year floodplain associated with the mainstem of Reddy Branch is generally wooded consisting of numerous Reddy Branch wetlands. A large fallow field is also situated on this floodplain along Brighton Dam Road, portions of which are emergent wetland.

The floodplain associated with Meadow Branch is mostly forested. One palustrine emergent/scrubshrub wetland was identified east of the tributary. One portion of this floodplain consists of a maintained residential lawn, is located just south of Brookeville Road and west of existing MD 97.

I. WETLANDS

Proposed development activities within waters of the United States (WUS), including jurisdictional wetlands, are subject to review, approval, and comment by various federal and state agencies in accordance with Section 404 of the US Clean Water Act. These agencies include, but are not limited to, the USACOE, MDE, the USFWS, and the DNR. The federal/state wetland and waterway permit process in Maryland is a combination of different permit authorization categories, and depending upon the type and category of the proposed activity, may include and necessitate review by different federal and/or state agencies. In Maryland, the permit process is a joint process between the USACOE and MDE, and is identified as the Maryland State Programmatic General Permit (MSPGP).

State wetland and waterway permits are typically included in the MSPGP authorization. A MDE Water Quality Certification (WQC), governed under Section 401 of the US Clean Water Act, may be required, particularly if a Section 404 permit is necessary. MDE permits, for non-tidal or tidal wetland impacts and/or waterway construction activities, may be required depending upon the extent of impacts, either independently or as part of the overall MSPGP process.

Wetlands within the project area were identified and field delineated in October 1995 following methods contained in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). A detailed *Wetland Identification and Delineation Report* was prepared in November 1995, detailing the findings of the wetland delineation. A Jurisdictional Determination of the wetland boundaries was conducted on December 5, 1995, with agency representatives from the USACOE and the USFWS present at the review. Minor modifications to the original *Wetland Identification and Delineation Report* (November, 1995) resulted from the jurisdictional determination (SHA) field meeting minutes and the *Wetland Identification and Delineation Report Addendum* (December, 1995). The Jurisdictional Determination for the project was to expire on December 5, 2000. Based on an October 2000 meeting with regulatory agency personnel including the USACOE, the permit was extended by two years and was set to expire on December 5, 2002. Based on conversations with the USACOE (Paul Wettlaufer) in February 2003, the Jurisdictional Determination, for the purposes of the FEIS, will remain valid.

III. Affected Environment

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The wetland identification/delineation and the jurisdictional field review determined a total of 20 nontidal wetland areas, two large unvegetated WUS systems, and several open water ponds within the project area (Figure III-14). Of the 20 identified wetlands in the project area, two include unvegetated WUS systems. The two large unvegetated WUS systems include: Reddy Branch (part of Wetland 1), the unnamed tributary to the Hawlings River (part of Wetland 2), and any tributaries associated with either of these two larger systems. Most of the identified vegetated wetland areas are associated with an adjacent riverine system. The functions and values for each wetland were evaluated following *The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach* (USACOE, New England Division, 1993), and these data sheets are included in **Appendix D**. This methodology of wetland function-value evaluation rates the following functions/values: groundwater recharge/discharge; floodflow alteration; fish and shellfish habitat; sediment/toxicant/pathogen retention; nutrient removal/ retention/ transformation; production export; sediment/shoreline stabilization; wildlife habitat; recreation; educational/ scientific value, uniqueness/heritage; visual quality/aesthetics; and threatened or endangered species habitat.

Identified vegetated wetlands within the MD 97 Brookeville Project area can be broken down into three primary classifications including palustrine forested, palustrine scrub-shrub, and palustrine emergent. Some of the identified wetlands consist of more than one vegetation classification. Descriptions of these wetlands are given below. **Table III-9** contains a summary of relevant information about each wetland including classification(s), size, and principle functions.

Wetland 1 - Riverine (Waters of the United States)

Wetland 1 is predominantly a riverine system WUS that is located in the central portion of the project area (Reddy Branch). Reddy Branch, which flows from west to east through the central portion of the project area, is a major tributary to Hawlings River, and this system also includes Meadow Branch and other unnamed tributaries that discharge to Reddy Branch. The Cowardin classification associated with this system is a riverine, upper perennial system with unconsolidated cobble/gravel bottom (R3UB1). Most of the tributaries that drain into Reddy Branch also have this classification; however, some are classified as riverine, intermittent streams (R4UB1). Although Wetland 1 is predominantly a riverine system, several vegetated wetlands are associated with this system (hydrologically connected). Descriptions of vegetative wetlands associated with Wetland 1 are provided below. According to the *Montgomery County, Maryland Soil Survey Interim Report* (USDA, 1990), Codorus silt loam (53A) soils dominate the underlying portions of Reddy Branch. This soil type is described as being very deep and moderately well to somewhat poorly drained.

Wetland 2 - Riverine (Waters of the United States)

Wetland 2 is a riverine system WUS associated with the unnamed tributary to the Hawlings River, and is located in the extreme northern portion of the project area, to the east and west of MD 97. The majority of the unnamed tributary falls just outside the project area limits; however, the floodplain and a small portion of this large tributary bisect the northernmost portion of the project area (on the east side of MD 97). In addition, three other tributaries that discharge to the unnamed tributary from the south are located within the limits of the project area (to the east and west of MD 97). The dominant Cowardin classification associated with this system is a riverine, upper perennial system with unconsolidated cobble/gravel bottom (R3UB1). Although Wetland 2 is predominantly a riverine system, several vegetated wetlands are associated with this system.





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Wetland Number	Cowardin Classification	Wetland Size (acres)	Principal Functions
1	WUS		
			Groundwater Recharge/Discharge
			Floodflow Alteration
1-A	PEM/PSS	0.27	Sediment/Toxicant Retention
			Nutrient Removal
			Visual Quality/Aesthetics
	· · · · · · · · · · · · · · · · · · ·		Groundwater Recharge/Discharge
			Floodflow Alteration
		0.17	Sediment/Toxicant/Pathogen Retention
1-B	PEM	0.17	Production Export
			Sediment/Shoreline Stabilization
			Wildlife Habitat
			Groundwater Recharge/Discharge
			Floodflow Alteration
1-C	PFO	0.32	Sediment/Toxicant/Pathogen Retention
1-0	110	0.52	Nutrient Removal
			Production Export
			Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant/Pathogen Retention
			Nutrient Removal
1-D	PFO	0.14	Production Export
			Sediment/Shoreline Stabilization
			Wildlife Habitat
			Visual Quality/Aesthetics
<u> </u>	DEM/DEO	0.27	Nutrient Removal
1-£	<u>FEW/FFO</u>	0.27	Groundwater Becharge/Discharge
			Sediment/Toxicant/Dathagen Detention
1-F	PFO	2.30	Nutrient Removal
			Braduction Export
			Crewn dwrsten Desharge/Discharge
		1	Groundwater Recharge/Discharge
			Floodflow Alteration
1-G	PFO	0.19	Sediment/Toxicant/Pathogen Retention
			Production Export
ļ			Nildlife Unkitet
	11710		wildine Habitat
2	wus		
			Floodflow Alteration
2A	PEM/PFO	0.47	Sediment/Ioxicant/Pathogen Retention
			Nutrient Removal
	· · · · · · · · · · · · · · · · · · ·		Production Export
		1	Groundwater Recharge/Discharge
28	PFO	0.13	Nutrient Removal
20	110	0.15	Production Export
			Wildlife Habitat
			Groundwater Recharge/Discharge
	DEO	0.12	Nutrient Removal
2C	PFU	0.15	Production Export
		1	Wildlife Habitat

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Wetland	Cowardin	Wetland Size	Principal Functions
Number	Classification	(acres)	r meipai r uncuons
			Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant/Pathogen Retention
	DEO	0.17	Nutrient Removal
3	PFO	0.17	Production Export
		·	Sediment/Shoreline Stabilization
			Wildlife Habitat
			Visual Quality/Aesthetics
			Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant/Pathogen Retention
			Nutrient Removal
4	PEM/PSS	0.11	Production Export
			Sediment/Shoreline Stabilization
			Wildlife Habitat
			Visual Quality/Aesthetics
		······	Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant/Pathogen Retention
7	PEM/PFO	0.51	Nutrient Removal
			Sediment/Shoreline Stabilization
			Visual Quality/Aesthetics
			Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant/Pathogen Retention
8	PEO	PFO 0.05	Nutrient Removal
0	110		Production Export
			Sediment/Shoreline Stabilization
		,	Visual Quality/Aesthetics
			Groundwater Recharge/Discharge
			Floodflow Alteration
10	PEO	0.17	Nutrient Removal
10	110	0.17	Sediment/Shoreline Stabilization
}			Wildlife Habitat
	PEO	0.05	No Principal Functions
	110	0.00	Groundwater Recharge/Discharge
			Floodflow Alteration
			Sediment/Toxicant Retention
12	PFO	0.38	Nutrient Removal
			Production Export
			Sediment/Shoreline Stabilization
		· · · · · · · · · · · · · · · · · · ·	Groundwater Recharge/Discharge
			Floodflow Alteration
13	PEM/PSS	0.25	Sediment/Toxicant Retention
		0.20	Nutrient Removal
			Sediment/Shoreline Stabilization
			Groundwater Recharge/Discharge
			Floodflow Alteration
10	DEM/DCC	0.06	Sediment/Toxicant/Pathogen Retention
10	PEM/PSS		Nutrient Removal
			Wildlife Habitat
10	DEO	0.02	No Principal Functions
17	riu	0.02	

TABLE III-9 Wetland Characteristics (Continued)

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According to the *Montgomery County, Maryland Soil Survey Interim Report* (USDA, 1990), Hatboro silt loam (54A) soils underlie that portion of Hawlings River within the project area. This soil type, commonly found on floodplains, is described as being very deep and poorly drained. No one particular soil type appears to underlie any of the three unnamed tributaries to Hawlings River.

Wetland Nos. 1-C, 1-D, 1-F, 1-G, 2-B, 2-C, 3, 8, 10, 11, 12, 19

These wetlands are all classified as palustrine forested, broadleaved deciduous (PFO1), and are associated with either Reddy Branch or the unnamed tributary to Hawlings River. The dominant vegetation within these forested wetland areas primarily includes red maple (*Acer rubrum*) in the overstory and spicebush (*Lindera benzoin*) in the understory. Other species typically found in one or more of these areas include black willow (*Salix nigra*), American sycamore (*Celtix occidentalis*), and green ash (*Fraxinus pennsylvanica*). The hydrophitic criterion is satisfied within these wetland areas, as greater than 50 percent of the dominant species are considered facultative or wetter. Soil borings in these areas revealed the presence of hydric soils as evidenced by a low matrix chroma and/or evidence of hydric soil indicators such as mottling. Hydrology indicators throughout these areas included visual observation of saturation or inundation of soils, drift lines, oxidized root channels, water-stained leaves, morphological plant adaptations, or wetland drainage patterns.

Wetland Nos. 1-B, 2-A

Both of these wetlands are classified as palustrine emergent, persistent wetlands (PEM1). Wetland 1-B is located on the Reddy Branch floodplain, just north of Brighton Dam Road. Dominant vegetation within this wetland includes nepal microstegium (*Eulalia viminea*), tall goldenrod (*Solidago altissima*), and flat-top fragrant goldenrod (*Euthamia graminifolia*). Wetland 2-A, located in the northern portion of the project area, just west of MD 97, is dominated by Canada clearweed (*Pilea pumila*), creeping jenny (*Lysimachia nummularia*), goldenrod (*Solidago spp.*), and spotted touch-me-not (*Impatiens capensis*). In addition, this wetland has a small forested component associated with it, immediately south of the dominant emergent portion. Hydric soil indicators for these wetlands included low chromas, mottling, and/or gleying. Hydrology indicators included inundation, saturation of soils, oxidized root channels, hummocking, and/or wetland drainage patterns.

Wetland No. 1-A

Wetland 1-A is classified as both a palustrine emergent, persistent, seasonally saturated wetland (PEM1E) and a palustrine scrub shrub, broad-leaved deciduous, seasonally saturated wetland (PSS1E). This vegetated wetland area is situated around an open water pond, and receives flow from a small connected tributary. The pond then drains from south to north via an unnamed tributary to Reddy Branch. Dominant vegetation within the emergent portion includes soft rush (*Juncus effusus*), straw-color flatsedge (*Cyperus strigosus*), and bushy seedbox (*Ludwigia alternifolia*). The scrub-shrub portion of this system is fringe vegetation around an open water pond and is dominated by black willow. Soil profiles revealed the presence of oxidized root channels and wetland drainage patterns.

III-44

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Wetland 1-E

Wetland 1-E was originally classified as both a palustrine, aquatic bed, floating-leaved wetland (PAB4), and a small, palustrine forested, broad-leaved deciduous, seasonally saturated wetland (PFO1E). A review of this wetland as part of the jurisdictional determination with the USACOE revealed that the aquatic bed portion of this area has converted to an emergent (PEM) area. This wetland is located east of MD 97, and is hydrologically connected to an unnamed tributary to Reddy Branch that flows from north to south. It appears that the emergent portion of the wetland is located in the northern portion of the area and consists primarily of red maple. This wetland exhibited soils with low chromas as well as several hydrology indicators including water-stained leaves, hummocking, and wetland drainage patterns. The forested portion of the wetland appears to be receiving hydrologic input from a hillside seep at the northern limit of the wetland.

Wetland 4

Wetland 4 consists of two wetland classifications including palustrine emergent, persistent, seasonally saturated (PEM1E) and palustrine scrub-shrub, broad-leaved deciduous, seasonally saturated (PSS1E) wetlands. This wetland is located in the central portion of the project area, east of MD 97, and on the southern floodplain of Reddy Branch. Dominant vegetation within the wetland includes nepal microstegium, Canada wood-nettle (*Laportea canadensis*), spotted touch-me-not, and black willow. The soils within the wetland exhibited low chroma and mottles throughout the profile. Although the soils were not quite saturated, they were very moist to the surface. Hydrology is provided by roadside runoff settling into this relatively large, depressional area. In addition, this wetland also receives hydrologic input from groundwater. Hydrology indicators observed on site included oxidized root channels and wetland drainage patterns.

Wetland 7

Wetland 7 is classified as both a palustrine emergent, persistent, seasonally saturated wetland (PEM1E) and a palustrine forested, broad-leaved deciduous, seasonally saturated wetland (PFO1E). This wetland is located within the central portion of the project area, on the east side of MD 97, and north of Brighton Dam Road. This floodplain wetland consists of a fallow, open field, and an adjacent forested area. The wetland/upland boundary within the field area follows a well-defined vegetation break. The wetland area contained creeping jenny, an obligate herbaceous species, fox sedge (*Carex vulpinoidea*), and several large black willows. In addition, the wetland area also exhibited hydric soil indicators including low chroma and mottles within 18 inches of the surface. Supporting hydrology is provided primarily by a channelized unnamed tributary (located south of the wetland and south of Brighton Dam Road), which carries flow to this wetland. As the tributary crosses under Brighton Dam Road, the stream is no longer channelized and diffuses water over the wetland.

Wetland 13

Wetland 13 is classified as both a palustrine emergent, persistent, seasonally saturated wetland (PEM1E) and a palustrine scrub-shrub, broad-leaved deciduous, seasonally saturated wetland (PSS1E). This wetland is located on the west side of MD 97, immediately east of Meadow Branch.

Dominant vegetation within this wetland includes spicebush, sedge (*Carex spp.*), rice cut-grass (*Leersia oryzoides*), American sycamore (*Platanus occidentalis*), smooth alder (*Alnus serrulata*), and spotted touch-me-not. The soils sampled on site exhibited low chromas and mottles throughout the profile with oxidized root channels observed in the upper profile. Hydrology supporting this wetland is provided by an unnamed intermittent stream channel that diffuses water over the wetland and allows water to settle within the broad, flat area. The wetland also receives hydrologic input from the groundwater during wetter seasons. Hydrology indicators observed within the wetland include saturation, hummocking, oxidized root channels, and wetland drainage patterns. This wetland is hydrologically connected to the adjacent unnamed tributary to Reddy Branch.

Wetland 18

Wetland 18 is classified as both palustrine emergent, persistent, seasonally saturated (PEM1E) and palustrine scrub-shrub, broad-leaved deciduous, seasonally saturated (PSS1E) wetland. This wetland is located in the extreme western portion of the project area, south of Brookeville Road. Dominant vegetation within this wetland includes spotted touch-me-not, soft rush, and arrow-wood (*Viburnum dentatum*). Soils sampled on site revealed low chroma readings at depths exceeding 20.3 cm (8 inches) and mottles throughout the soil profile. Hydrology appears to be supported by surface runoff, groundwater inputs, and possible floodflows from Reddy Branch. Hydrology indicators observed on site include oxidized root channels throughout the soil profile, hummocking, water-stained leaves, and wetland drainage patterns.

J. VEGETATION AND WILDLIFE

1. Vegetation

Five vegetative community types were identified throughout the project area: Tulip Poplar Forest Association (*Liriodendron tulipifera*), Sycamore-Green Ash-Box Elder-Silver Maple Forest Association (*Platanus occidentalis, Fraxinus pennsylvanica, Acer negundo, and Acer saccharinum*), Oak-Hickory Forest Type, Cropland and Grassland (**Figure III-15**). The project area has been identified in *The Vegetation Map of Maryland* (Brush *et al.*, 1977) as being dominated by the Tulip Poplar Forest Association. One other forest type, Oak-Hickory, has been included as well but is not considered as a separate forest association by Brush (Brush, *et. al.*, 1977). The Oak-Hickory cover type within the Piedmont typically refers to the white oak (*Quercus alba*), black oak (*Quercus velutina*), northern red oak (*Quercus rubra*), pignut hickory (*Carya glabra*), and mockernut hickory (*Carya tomentosa*) as the associate canopy species.

Forest cover, especially large contiguous forest cover, is dominant along Reddy Branch and along other waterways along second and third order tributaries leading to Reddy Branch as well as along steep slopes. Forest remnant patches and hedgerows are evident throughout the project area along property lines and roadways. Cropland, primarily dominant in the central portion of the project area, consists of hay meadows, corn, soybean, and other farm crops. Grasslands are limited to non-forested fallow fields and maintained turf areas. A description of each community, including their locations, follows.



Tulip Poplar Forest Association

The dominant forest cover in the project area is the Tulip Poplar Forest Association. This forest cover type comprises approximately 30 percent of the entire project area. Tulip poplar forests are common to moist or mesic sites. Even though this species is often found in small patches, large uninterrupted and often pure stands of poplar are common. This is evident throughout the project area. Examples of pure stands are evident along the southeastern portion of the project area (immediately north of Reddy Branch) and immediately south of Brighton Dam Road. This species dominance is temporary in a successional scale due to an intolerance of shade. Subsequently, there are small patches where oaks are dominant among a larger tulip poplar dominated stand. Areas that are typically xeric, such as on rocky slopes, are more oak dominated.

The tulip poplar forest stands identified in the project area include a wide range of successional stages and ages. Stands range from early and almost pure 40+ year-old poplar stands to mixed aged stands of oaks and poplar, with a large portion of trees estimated to be 60-70 years old. However, there are many trees, mostly oaks, estimated to be over 100 years old.

Tulip poplars 24 inches and greater were commonplace in several stands, especially along Brighton Dam Road and in the northern portion of the project area. Trees over 35 inches in diameter at breast height (DBH) are predominantly either along forested riparian corridors, lower portions of forested steep slopes, or as individual trees on residential properties.

Several localized populations of shingle oak (*Quercus imbricaria*) were identified throughout the project area, primarily within portions of early stage tulip poplar dominated forests. Shingle oak is currently included in the DNR, Wildlife and Heritage Division's List of Rare, Threatened, and Endangered Plant Species as a state watchlist candidate. The watchlist status is not provided legal protection by the DNR and is defined as an uncommon species which is thought to be secure in the state, but that is being monitored in order to fully determine whether enough populations exist before the DNR removes the species from the list. The protection area for this species is more appropriately described as a Unique and Sensitive Area. The protection area as well as tulip poplar forests containing shingle oaks are not afforded any special protection by DNR. The terrestrial habitat field survey has identified several populations, other than those identified within the protection areas, primarily along the upland slopes adjacent to Reddy Branch east of MD 97 and south of Brighton Dam Road.

Sycamore-Green Ash-Box Elder-Silver Maple Forest Association

This forest association is common along the floodplains of streams and rivers throughout the Piedmont. Within the project area, this forest association is evident throughout the 100-year floodplain of Reddy Branch and several of the tributaries leading to Reddy Branch, accounting for six percent of the project area.

No one canopy species is dominant throughout the floodplain. The dominance of any one of these species is typically limited to small patches or sections along the floodplain. Common understory tree and shrub species include ironwood (*Carpinus caroliniana*), spicebush, greenbriers (*Smilax spp.*), and multiflora rose (*Rosa multiflora*).

According to the *Maryland Forest Conservation Manual* (Metropolitan Washington Council of Governments, 1991), plant species common to these associations have been provided in tables included in **Appendix E**.

Oak-Hickory Forest Type

The areas that have been identified as oak-hickory are evident along rocky slopes and are adjacent to tulip poplar stands. Many of the understory species evident in the oak-hickory forests are similar to those listed in the Tulip Poplar Forest Association, especially flowering dogwood (*Cornus florida*) and southern arrowwood (*Viburnum dentatum*). These forests represent a small portion (three percent) of the project area.

A significant tree report was submitted to the SHA in November 1995, briefly describing the forest communities and included a list of all the significant and/or champion trees identified within the project area including the approximate location of each tree (KCI Technologies, 1995). Significant trees are defined as those trees that are either 75 percent of the DBH of the known state champion tree for individual species or are 35 to 40 inches DBH or greater. The selection of trees with a DBH greater than 35 to 40 inches was based on the uniqueness of this size for all tree species within the project area. Often, trees with a DBH of 24 inches have been the size of interest relevant to laws such as the Maryland Forest Conservation Act; however, this is a common DBH for certain species to attain (such as tulip poplar).

Champion trees are those trees that are known to be the largest of that species in the State of Maryland based on the *Big Tree Champions of Maryland* (Prenger and Brook, 1990). A total of 133 trees were identified that were considered significant trees. Most of these trees are located along the floodplain of Reddy Brach or on private residential properties.

Cropland

Areas dominated by cropland are primarily limited to the northern portion of the project area, along MD 97. Typical crops include hay, corn, soybean, and other farm crops.

Grassland

The grasslands are those non-forested areas that have recently been left fallow or are maintained turf. Large parcels of grasslands include fallow farm fields dominated by a variety of herbaceous vegetation such as grasses (*Poa spp.*), multiflora rose, and goldenrod. Examples of this are the fields immediately north of the Holiday Drive subdivision. One grassland parcel located immediately east of the Holiday Drive subdivision has recently been largely converted to individual single-family homes. Smaller parcels of grasslands from one acre in size or less are evident throughout the project area including individual private residences. Many examples of this vegetative community, if not maintained, will revert to forest cover.

2. <u>Wildlife</u>

Fauna surveys within the project area were conducted in May and June of 1997. Techniques used to identify the presence of wildlife included direct visual/audible observations and indirect observations such as the presence of tracks, cavities, nests, fecal material, carcasses, etc. In addition, information was obtained from the DNR on potential species likely to be identified within the project area. Other sources included a review of field guides and professional judgment. Wildlife observed throughout all five terrestrial habitats includes avian species, reptiles, amphibians, and mammals.

a. Terrestrial Wildlife

The forest cover in the project area, based on the number and size of large, mature stands, as well as, the diversity of native species serves as important habitat for a diversity of wildlife species. The value of the terrestrial habitat and species likely to inhabit these areas, especially the forest cover, is improved by the proximity of adjacent habitats such as floodplains, wetlands, and streams. In addition, according to the DNR, the forests within the project area contain Forest Interior Dwelling Birds (FIDB) habitat, and the conservation of this habitat is strongly encouraged. Correspondence from DNR is included in **Section VI**.

Terrestrial wildlife known to associate with these types of habitats includes a diversity of songbirds including migratory songbirds, FIDB, raptors, amphibians and reptiles, and mammals. Wildlife or signs of wildlife that were observed as part of the field surveys are listed in a table in Appendix E. In general, species observed represent those types of wildlife that benefit from various forms of habitat including forest cover and open fields. Examples of these species include white-tailed deer (*Olocoileus virginianus*), Eastern chipmunk (*Tamias striatus*), red-shouldered hawk (*Buteo lineatus*), blue jay (*Cyanocitta cristata*), American kestrel (*Falco sparverius*), and Carolina chickadee (*Parus carolinensis*).

b. Aquatic Wildlife

A survey of the aquatic resources, limited to ponds, wetlands with standing water, and streams, especially Reddy Branch, was conducted in May and June 1997 as well as previous visits as part of the wetland delineation process conducted in 1995. No formal habitat evaluation methodology or sampling of fish species or other aquatic life was conducted for the ponds. In general, the ponds are located on private property, primarily farms. The ponds are typically surrounded by maintained grass with a narrow fringe of emergent and woody wetland vegetation along the edge of the pond. Fish species likely to be present in the ponds would include largemouth bass (*Micropterus salmoides*) and bluegills (*Lepomis macrochirus*).

Cursory fish sampling of Reddy Branch was conducted and revealed the presence of blacknose dace (*Rhinicthys atratulus*), rosyside dace (*Clintostomus funduloides*), common shiner (*Notropos cornutus*), and a mottled sculpin (*Cottus bairdi*). More detailed data regarding fish species within the project area was obtained from the DNR.

Table III-10 lists resident fish species identified within the Hawlings River in a survey conducted by the University of Maryland between 1966 and 1977.

Common Name	Scientific Name	Common Name	Scientific Name
Blacknose dace	Rhinichthys atratulus	River chub	Nocomis micropogon
Bluegill sunfish	Lepomis macrochirus	Rosyside dace	Clinostomus funduloides
Common shiner	Notropis cornutus	Satinfin shiner	Notropis analostanus
Cutlip minnow	Exoglossum maxillingua	Shield darter	Percina peltata
Fallfish	. Semotilus corporalis	Spottail shiner	Notropis hudsonius
Green sunfish	Lepomis cyanellus	Stripeback darter	Percina notogramma
Golden shiner	Notemigonus crysoleucas	Swallowtail shiner	Notropis procne
Longnose dace	Rhinichthys cataractae	Smallmouth bass	Micropterus dolomieu
Largemouth bass	Micropterus salmoides	Tessellated darter	Etheostoma olmstedi
Margined madtom	Noturus insignis	White catfish	Ictalurus catus
Northern hogsucker	Hypentelium nigricans	White sucker	Catostomus commersoni
Redbreast sunfish	Lepomis auritus		

Table III-10 – Haw	lings River	Fish Species	Likely to Reside	e and Spawn in	Reddy Branch

It is likely, based on recent DNR correspondence (Section VI) that many of the species listed in **Table III-10** reside and spawn in Reddy Branch. Anadromous fish are not present in the project area as Rocky Gorge Dam (located downstream of the project area) serves as a barrier to fish passage to further upstream. A listing of fish species that were collected in the larger Patuxent River basin between 1974 and 1984 is provided in Section VI.

A more detailed evaluation of the habitat conditions, primarily within Reddy Branch, focused on the presence of aquatic macroinvertebrates. These organisms vary in their tolerance to changes in water quality, such as sedimentation and pollutants, and the presence or absence of these organisms is a good indicator of water quality, as well as, potential habitat for a variety of aquatic life.

Macroinvertebrate sampling was conducted in 1997 at five sampling locations along Reddy Branch and other perennial streams within the project area where stream crossings are proposed for the different alternates (**Figure III-16**). Monitoring Station #1 is at Reddy Branch and is situated along stream riffles upstream and downstream of the bridge over Reddy Branch along Brookeville Road. Station #2 is along Reddy Branch on the north side of Brookeville Road approximately where Alternate 8A and Alternate 8B will cross the stream. Monitoring Station #3 is along the north side of Brighton Dam Road, downstream of a WSSC pumping station and Station #1 and #2, where Alternate 5C would cross Reddy Branch. As a control point for future monitoring efforts, Monitoring Station #4 is situated along an unnamed tributary to Reddy Branch north of Brighton Dam Road. Station #5 is located along Reddy Branch north of Brighton Dam Road, downstream of all other monitoring stations and the proposed crossings associated with Alternate 7, Alternate 8A, and Alternate 8B.

Macroinvertebrate sampling techniques followed the procedures described in the Maryland Save Our Streams (MD-SOS) Project Heartbeat Sampling Procedures (MD-SOS, 1994), which are a modification of the USEPA Rapid Bioassessment Protocol Level II (RBP II) (USEPA, 1989). The MD-SOS methodology utilizes systematic field collections of the benthic macroinvertebrate community of a stream, followed by the laboratory identification of major benthic taxa to the family taxonomic level. The results were then used to analyze the overall health and water quality of the streams.

Organisms in each sample were later quantified and identified to the family taxonomic level in the laboratory and classified according to functional feeding groups and tolerance to pollutants. Functional feeding group classifications and tolerance values were provided by the MD-SOS (1996) and Hilsenhoff (1998).

Data analysis of the macroinvertebrate samples aids in the evaluation of biotic integrity based on community, population, and functional parameters known as "metrics" (USEPA, 1989). Metrics are numerical values used to measure various components of benthic community structure, including pollution sensitivity. Although the USEPA has determined 23 distinct metrics relevant to pollution detection, the MD-SOS has further reduced the metrics to six core metrics, which appear to reveal the most significant information about stream quality in the Mid-Atlantic Piedmont and Coastal Plain region. These metrics include: 1) taxa richness (TOTTAX), 2) pollution sensitivity as measured by the modified family biotic index (FBI), 3) ratio of Ephemeroptera, Plecoptera, and Trichoptera and Chironomidae abundances (EPT:CHIRO), 4) percent contribution of the dominant family (DOMTOT), 5) number of EPT taxa present (EPTTAX), and 6) percent contribution of EPT individuals (EPTTOT).

After the organisms from the field samples were identified and quantified, the results were transformed into the series of six core metrics. Each metric was then compared to metric values calculated for reference stream conditions in order to determine the overall biological condition of each monitoring station. Reference streams are streams located in the same eco-region that have similar physical and biological characteristics to the study streams. For this study, data from the MDE's "Biological Reference for the Patuxent Piedmont" was utilized for comparison (MDE, 1996).

Bioassessment of the streams was completed by comparing the total biological condition score calculated for each monitoring station to the reference condition score. Each station was assessed as either "non-impaired", "moderately impaired", or "severely impaired", in comparison to the reference stream conditions. A "non-impaired" stream is one that is comparable to the best situation to be expected within the ecoregion, consisting of a balanced community of pollution intolerant and tolerant taxa, with optimum community structure (composition and dominance). A "non-impaired stream equates to a stream with an overall biological condition score that is greater than 79 percent comparable to the reference streams score. "Moderately impaired" streams range from 29 percent to 72 percent comparable to reference conditions and are characterized by fewer species due to the loss of most pollution intolerant (EPT) organisms. Streams considered "severely impaired" are less than 21 percent comparable to reference conditions, and typically have few species present, are dominated by one or two taxa, and the majority of the organisms consist of representative from pollution tolerant taxa.


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Based upon field evaluations of the quality and quantity of available aquatic habitat within Reddy Branch, including substrate and in-stream cover, channel morphology, and riparian zone/bank stability habitat components, Reddy Branch appears to be capable of partially supporting an acceptable level of biological health. In general, the results of the bioassessment indicate that the portion of Reddy Branch within the MD 97 project area is considered "moderately impaired" in comparison to reference stream conditions. Reaches of the stream and its tributaries that are near roads, yards, or other urban influences appear to be impaired to a greater degree than reaches further from the urban influence. The stream impairment is likely due to a combination of water quality problems caused by runoff from the roads, farms, and urban/suburban areas, as well as, less than optimal habitat in certain reaches of the stream. Qualitative and quantitative data sheets for benthic macroinvertebrates and MD-SOS Bioassessment Data Summary Sheets are in Appendix F.

3. **Rare, Threatened, and Endangered Species**

According to the USFWS, no federally listed or proposed endangered or threatened species are known to exist in the project area. In correspondence, DNR, Wildlife and Heritage Division reported no records for federal or state rare, threatened, or endangered plants or animals within the project area, however, there are several small American chestnut (Castanea dentata) trees within the western portion of the study area. This species is listed as a state rare or uncommon plant species by DNR. However, based on coordination with DNR, only large mature flowering chestnut trees are typically monitored. It is common to find small chestnut trees throughout portions of Montgomery County. The majority of these trees succumb to the chestnut blight before becoming mature and reaching a flowering stage.

Unique and Sensitive Areas 4.

The Maryland Natural Heritage Program of the DNR has identified a section of Reddy Branch Stream Valley Park west of Brookeville and south of Brookeville Road as a protection area for shingle oak (Figure III-15). According to a previous inventory conducted by the Maryland Natural Heritage Program, this species was observed scattered along Reddy Branch and adjacent uplands (Bartigis, et al., 1993). During field surveys conducted for the terrestrial habitat evaluation, shingle oaks were identified throughout the project area. The shingle oak is currently included in the DNR, Wildlife and Heritage Division's List of Rare, Threatened, and Endangered Plant Species as a state watchlist candidate. The watchlist status is not provided legal protection by the DNR and is defined as an uncommon species which is thought to be secure in the state, but that is being monitored in order to fully determine whether enough populations exist before the DNR removes the species from the list. Subsequently, the protection area for this species is more appropriately described as a Unique and Sensitive Area.

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K. AIR QUALITY

The project area is located in Montgomery County, Maryland. This county is designated as an attainment area for carbon monoxide (CO), Nitrogen Dioxide (NO₂), Sulfur Dioxide (SO₂), Lead (Pb) and particulate matter (PM_{10}), but is designated as a serious non-attainment area for ozone (O₃). Since the project area is designated non-attainment for ozone, the region is subject to transportation control measures such as the Vehicle Emissions Inspections Program.

A detailed microscale air quality analysis has been performed to determine the local CO impact of the proposed project. The location of air quality sensitive receptors in the project area is identified in **Table III-11**, and the receptors for each Build Alternate are located on **Figure III-17** (Page III-59). The results of the air quality analysis are summarized in **Table IV-12** and **Table IV-13** included in **Section IV** (Environmental Consequences).

Receptor	Location	Description
AQ-1	19544 Dubarry Drive	2-Story Brick Residence
AQ-2	318 Market Street (MD 97)	2-Story Stone Residence
AQ-3	19645 Islander Street	Yellow Split-Level Residence
AQ-4	20300 Georgia Avenue (MD 97)	1-Story Brick Residence
AQ-5	2821 Gold Mine Road	2-Story Brick Residence
AQ-6	28 High Street (MD 97)	1-1/2-Story Brick Residence
AQ-7	19500 Georgia Avenue (MD 97)	1-Story White Frame Residence
AQ-8	3 Church Street	Gray Ranch Residence
AQ-9	2705 Gold Mine Road	2-Story Brick Residence
AQ-10	19424 Brookeville Lake Court	2-Story Dutch Colonial Residence
AQ-11	200 Market Street	2-Story White Frame Residence
AQ-12	Sta. 62+00 Right Alternate 5C	Edge of ROW
AQ-13	307 Market Street (MD 97)	2-Story Brick Historic Residence
AQ-14	Sta. 59+80 Right Previous Alternate 3A	Edge of ROW
AQ-15	Sta. 59+60 Right Previous Alternate 4B	Edge of ROW
AQ-16	Sta. 82+50 Left Alternate 5C	Edge of ROW
AQ-17	Sta. 93+30 Left Alternate 5C	Edge of ROW ·

TABLE III-11 Location of Air Quality Sensitive Receptors

A copy of the MD 97 Project's Air Quality Technical Analysis Report is available at the State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202.

L. NOISE ANALYSIS

The FHWA has established procedures and criteria to determine and evaluate impacts associated with vehicular use of roadways. The primary problems associated with highway noise are activity interference and general annoyances. Therefore, it is the goal of abatement programs to minimize these impacts to exterior land uses.

The decibel is the basic unit of sound measurement. Decibels are units that represent relative acoustic energy intensities. Because the range of energy found throughout the spectrum of normal hearing is so wide, the numbers necessary to define these levels must represent huge variations in energy. To compensate for this wide range of numbers, a base 10 logarithmic scale is used to make the numbers more "normal."

Traffic noise is the sound generated by automobiles and trucks on streets and highways. The sound generated is composed of tire, engine, and exhaust noise. People respond differently to sound energy in varying acoustic frequency ranges. Sounds heard in the environment usually consist of a range of frequencies, each at a different level. The method of correlating human response to equivalent sound pressure levels at different frequencies is called "weighting." The weighting system used to correlate luman hearing to frequency response is the "A-weighting scale" and the resultant sound pressure level is called "A-weighted sound pressure level." This is generally abbreviated by the expression dB(A). The A-weighted decibel scale dB(A) is generally used in assessing community noise exposure because this scale closely approximates the frequency response of the human ear.

The A-weighted equivalent sound level (Leq) is the descriptor used most frequently in highway noise analyses. The Leq is the equivalent steady state sound level which represents the mean energy or sound intensity level for a given time period.

Noise sensitive areas were identified previously by the SHA and verified through field visits as part of the July 1997 Technical Noise Analysis Report prepared during the early stages of the project and updated for the March 2001 Technical Noise Analysis Report. A copy of this technical report is available at the State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202. The noise sensitive locations include single family and multi-family residences, a ball field and parklands. The Noise Sensitive Areas (NSAs) are displayed on **Figure III-17** and are described as follows:

NSA 1

NSA 1 represents the area west of Alternate 7 and Alternate 8, including subdivisions along Dubarry Lane, Dubarry Drive, Rena Court, and Islander Street, between Gold Mine Road and the PEPCO power line. There are approximately 39 single-family residences in the area.

NSA 2

NSA 2 represents the area east of Alternate 5C, including the subdivision along Brookeville Lakes Court, and two proposed subdivisions on both sides of the PEPCO power line. There are approximately 12 existing single-family residences and 17 proposed residential lots in the area.

NSA 3

NSA 3 represents the area between the proposed eastern and western Alternates and south of the Reddy Branch including most of the Brookeville Historic District. There are approximately 48 single-family residences in the area. Most of NSA 3 is within the historic district boundary.

NSA 4

NSA 4 represents the area between the proposed eastern and western Alternates and north of Reddy Branch, including a subdivision along Holiday Drive and a proposed subdivision. There are approximately 15 single-family residences and 5 planned lots in the area.

Using the FHWA's Traffic Noise Prediction Model (TNM), receptor sites within the study area were analyzed for all four NSAs in the study area. A total of 78 receptors were included in the study area for each alternate. These receptor locations are based on the locations analyzed during the April 1997 Technical Noise Analysis. The receptor locations provide a full representation of the study area and the NSAs. The existing noise levels varied from an Leq of 39 to 68 dBA. A summary of the existing noise levels for each receptor is shown in **Table III-12**.

M. MUNICIPAL, INDUSTRIAL, AND HAZARDOUS WASTE SITES

1. Background Research

An existing data search was conducted using the Environmental Risk Information and Imaging Services (ERIIS) and a report was completed in June of 1997. The following databases were used during the background research:

- National Priority List (NPL)
- Resource Conservation & Recovery Information System Corrective Action Sites (RCRIS CA)
- Resource Conservation & Recovery Information System Treatment, Storage and Disposal Facilities (RCRIS TS)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- No Further Remedial Action Planned Sites (NFRAP)
- Resource Conservation & Recovery Information System Large Quantity Generators (RCRIS LG)
- Resource Conservation & Recovery Information System Small Quantity Generators (RCRIS SG)
- Emergency Response Notification System (ERNS)
- Maryland Notice of Potential Hazardous Waste Sites (HWS)
- Maryland Active Recovery Sites List (LRST)
- Maryland Permitted Solid Waste Facilities (SWF)
- Maryland Underground Storage Tank Report (RST)

2. <u>Preliminary Results</u>

The ERIIS Report listed four recorded underground storage tank sites within the study area. These are shown on **Figure III-17** on Page III-59. Each of the five sites has a Brookeville address. Each of these contains either gasoline, oil, or diesel fuel. No other potentially contaminated sites were found within the project area.

TABLE III-12 Existing Noise Levels

Noise Sensitive	Receptor	Existing Noise	Noise Sensitive	Receptor	Existing Noise
Area (NSA)		Level	Area (NSA)		Level
	3	48		4	62
		45		5	64
	IB	46		<u>2A</u>	51
	<u>1BB</u>	44		2B	63
	10	39		<u>6A</u>	47
f	313	46		6B	47
	<u> 3C</u>	47		6C	67
	<u>4A</u>	63		6D	53
	413	62		<u>6E</u>	55
1	<u>4C</u>	68		6F	63
	510	59		6G	65
	<u>5E</u>	53	3	7A	61
	<u>5F</u>	52		7B	54
	<u>5G</u>	52		<u>7F</u>	63
	5H	63		8A	. 50
	5[59		8B	47
	7C	52		9E	50
	70	47		11A	54
	7E	59 .		11B	52
	1	41		13A	55
	2	63	Ī	13B	53
	5A	52		13C	· 51
	5B	45		13D	69
	5C	48		6	64
	9A	51	Ĩ	4D	53
	9B	48	ſ	4E	55
	9C	42		4F	45
	9D	40		11C	49
	10A	48	4	11D	48
	10B	48	4	11E	49
	10C	47	· · ·	11H	47
	10D	47		111	47
	10E	47	· [11J	48
2	10F	42	Γ	11K	47
	10G	42		11L	46
	11G	47			
	12A	48			
	12B	47			
	12C	46			
[12D	46			
	12E	47			
	12F	49			
	12G	44			
	12H	45			
	12I	46			
	12J	43			
	12K	43			
	12L	44			



Section IV. Environmental Consequences

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

IV. ENVIRONMENTAL CONSEQUENCES

This section of the FEIS presents the results of the detailed environmental impact studies conducted for the No-Build Alternate (Alternate 1), the four Build Alternates (Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B) that were recommended to be carried forward in the DEIS and Alternate 7 Modified, which is SHA's Selected Alternate for the MD 97 Brookeville Project, as described in **Section II**. The five Build Alternates addressed in the FEIS are located on **Figure II-2**.

SHA's Selected Alternate, Alternate 7 Modified, is similar to Alternate 7 except that Alternate 7 Modified is shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Stream Valley Park to minimize impacts to the Newlin/Downs Mill Complex archeological site. A retaining wall will be placed on the south side of Brookeville Road, east of the roundabout to further minimize impacts to the Newlin/Downs Mill Complex. Alternate 7 Modified has a design speed of 40 miles per hour and an open typical section, which consists of two 11-foot lanes and two 10-foot shoulders (five feet paved for bicycle compatibility and five feet graded). The SHA has selected the open section because existing MD 97 (Figure II-1). Access will be limited to two roundabouts (at Brookeville Road and the southern termini) (Figure II-2). Cost of the SHA Selected Alternate 7 Modified is estimated at \$12.5 million.

Potential impacts of the five Build Alternates including the SHA Selected Alternate 7 Modified to existing socio-economic, cultural, natural, and manmade features, as described in **Section III**, are discussed in the following sections. In addition, a comparison of the impacts between the two typical sections developed to minimize many of these impacts is included. A discussion of the No-Build Alternate is also included. Detailed impacts were assessed in accordance with applicable laws and regulations for each of the environmental resources evaluated. Where appropriate, avoidance, minimization, and mitigation strategies are described. The extent of potential project impacts as described in this section, as well as further opportunities to avoid and minimize impacts, will be refined during the project's design phase.

A. SOCIAL, ECONOMIC, AND LAND USE

1. Social Impacts

a. Residential Property Impacts/Displacements

The No-Build Alternate would not result in any residential, commercial, or farm displacements, nor would it require any ROW. SHA's Selected Alternate 7 Modified would not require any residential, commercial, or farm displacements, but would require 14.57 acres of ROW acquisition.

Alternate 5C would require five residential displacements, all associated with the Sunnymeade Community, which is comprised of five residences located east of the corporate boundaries of Brookeville and south of Brighton Dam Road (Figure II-3A). Three undeveloped lots planned for in the Brookeville Farms Subdivision off Lubar Drive south of Bordly Drive would also be impacted (Figure II-3B). Compared to the 14.57 acres of ROW needed for the SHA Selected Alternate, the Open Section for Alternate 5C requires a total of 42.40 acres of ROW for property acquisition. Alternate 7, Alternate 8A, and Alternate 8B (Figures II-4A to II-6B) would not require any residential displacements, but would require 11.70 acres, 15.30 acres, and 16.82 acres of ROW, respectively, for the open typical section.

In comparison to Alternate 5C, no residences or businesses would be displaced by SHA's Selected Alternate 7 Modified. SHA's Selected Alternate would require ROW from 11 properties, which are primarily, wooded lots and open fields. Alternate 8A and Alternate 8B would affect 14 properties, but would not require any displacements. Alternate 5C would affect 21 properties in addition to the five residential relocations (Figure II-3A).

Title VI Statement

It is the policy of the SHA to ensure compliance with the provisions of the Title VI of the Civil Rights Act of 1964 and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, sex, national origin, age, religion, physical or mental handicap, or sexual orientation in all SHA projects funded in whole or in part by the FHWA. SHA will not discriminate in highway planning, design, or construction; the acquisition of ROW; or the provision of relocation advisory assistance. This policy has been incorporated into all levels of the highway planning process to ensure that proper consideration may be given to the social, economic, and environmental effects of all highway projects. Alleged discriminatory actions should be addressed to the Equal Opportunity Section of the SHA for investigation.

b. Environmental Justice

Environmental Justice, as previously defined in Section III of this document, assesses the potential for a project to incur "disproportionately high and adverse impacts" on minority and low-income populations. It also affords the opportunity for these groups to become more involved in the public participation process. According to the 2000 US Census, two percent of the families in Census Tract 7013.04 were below the poverty level in 1999, and one percent was below the poverty level in Census Tract 7013.09 (US Census Bureau, 2001). Census Tract boundaries are shown on Figure III-4 and Figure III-5 in Section III of this FEIS.

In the Town of Brookeville there were two families and six individuals having poverty status in 1999. According to the 2000 US Census, 12 percent of the population in Census Tract 7013.04 are minorities and 20 percent of the population in Census Tract 7013.09 are minorities. In the Town of Brookeville, however, only 2.5 percent of the population are minorities. The SHA Selected Alternate would not require any residential or business displacements, therefore, no disproportionately high and adverse impacts would occur to minority and/or low-income populations as a result of the proposed project.

c. Effects on Community Facilities and Services

None of the Build Alternates, including SHA's Selected Alternate, would require ROW or impact any educational or health care related facilities in the project area as described in **Section III.B** and located on **Figure III-6**. The four religious facilities within the project area would not be affected by any of the alternates, including SHA's Selected Alternate, particularly since the main services are held at an off-peak time as it relates to traffic (i.e., Sunday morning). None of the proposed alternates, including the SHA's Selected Alternate, would require property from the Brookeville Community Center.

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The Build Alternates including SHA's Selected Alternate would allow for improved access for safe passage of emergency vehicles within and around the Town of Brookeville. This is mainly a result of the strategic placement of the proposed roundabouts at Brookeville Road and Georgia Avenue. Emergency response times outside of Town would also be reduced because the vehicles would have a more efficient and easier passage to reach their destination. All of the Build Alternates would have the potential to improve local school bus patterns and access to community facilities in the project area, by alleviating the traffic congestion and delays currently experienced by the residents of the Town of Brookeville.

Because the Build Alternates would require ROW from Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park, which are publicly owned public parks, a separate Section 4(f) Evaluation has been prepared to evaluate prudent and feasible alternates to the use of such property (Section V). All of the proposed Build Alternates, including the SHA's Selected Alternate, would require ROW from Reddy Branch Stream Valley Park, with Alternate 5C also requiring ROW from the Hawlings River Stream Valley Park.

Longwood Community Center

The No-Build Alternate would not require ROW from the Longwood Community Center. SHA's Selected Alternate, as well as Alternate 7, Alternate 8A, and Alternate 8B, share a common alignment which includes a roundabout that has been shifted away from the Longwood Community Center property owned by M-NCPPC. As a result, the western Build Alternates including SHA's Selected Alternate would require approximately 3.64 acres of M-NCPPC owned lands previously reserved for transportation use and currently used as recreational fields. By tying into existing MD 97 from the east, Alternate 5C would impact approximately 0.65 acre of the M-NCPPC property previously reserved for transportation use.

Reddy Branch Stream Valley Park

The No-Build Alternate would not require ROW acquisition from the Reddy Branch Stream Valley Park. All Build Alternates, including SHA's Selected Alternate, would require ROW from portions . of this public park property, as discussed in **Section V** (Section 4(f) Evaluation) of this document. SHA's Selected Alternate would require the use of approximately 5.62 acres (open section) of public park property that is a multi-jurisdictional regional conservation park, which is part of a larger system of regional stream valley parks through Montgomery County. The impacted area would include primarily wooded areas, portions of which are located within the Brookeville Historic District. The four other Build Alternates would require the use of public park property ranging from approximately 2.67 to 6.29 acres (open section) and 2.54 to 5.64 acres (closed section) (**Table V-1** in **Section V**). Impact minimization and mitigation opportunities for Reddy Branch Stream Valley Park are identified in **Section V.G** and **Section V.H** of the Section 4(f) Evaluation.

Hawlings River Stream Valley Park

The No-Build Alternate, SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B would avoid the Hawlings River Stream Valley Park. Only Alternate 5C would impact this park (1.88 acres open section/1.26 acres closed section) (**Table V-2** in Section V) where it would connect back into MD 97 at the northern project limit approximately 2,000 feet north of Bordly Drive (Figure II-2B and V-6B). The impacted acreage consists primarily of open fields and woodland fronting MD 97.

d. Disruption of Neighborhoods and Communities

The Brookeville Comprehensive Plan considers the proposed improvements to MD 97 as "critical to retaining the town's quality of life and historic character" (Brookeville Planning Commission, 1994). Existing and proposed commuter and truck traffic along MD 97 and the horizontal geometry of the road through Brookeville currently have a negative impact on the community and reduce the efficiency and safety of traffic flow on MD 97. Therefore, the No-Build Alternate would not address these quality of life issues for the Town of Brookeville and the community.

The western alignments of SHA's Selected Alternate 7 Modified, Alternate 7, Alternate 8A, and Alternate 8B would not disrupt any neighborhoods or communities. Figure II-2 depicts the location of each alternate in relation to the neighborhoods in the project area.

For the eastern alignment Alternate 5C, the entire small community of Sunnymeade located just south of Brighton Dam Road would be displaced including five residences (Figure II-3A). North of Brighton Dam Road and east of the corporate boundary of Brookeville, Alternate 5C would traverse through three lots of Brookeville Farms on the east side of the alignment and come within 200 feet of the back property boundaries of homes on the west side of the Alternate 5C alignment (Figure II-3B). Within the same subdivision, Alternate 5C would span Lubar Drive to allow the approximate eight residences bisected by the alignment to access the remainder of the subdivision. The proximity of Alternate 5C to Brookeville Farms would increase the ambient noise levels for these residents (Section IV-L) and would impact the visual environment of the subdivision.

e. Effects on Access to Services and Facilities

The No-Build Alternate would not directly impact existing access to services and facilities within the study area, as described in **Section III** and located on **Figure III-6**. Indirectly, because of the increase in traffic, residents may have to restrict their travel within the Town of Brookeville to certain times of the day when traffic is less congested in order to avoid long delays.

All of the Build Alternates, including SHA's Selected Alternate, would require an alteration to traffic patterns in the study area. As discussed in **Section II**, these alterations are due to the bypass nature of the alignments that would be mitigated by the addition of roundabouts at both ends of the project (**Figure II-2**). All of the Build Alternates would have the potential to improve local traffic patterns and access to services and facilities in the project area, by alleviating the traffic congestion and delays currently experienced by the residents of the Town of Brookeville.

2. <u>Economic Impacts</u>

a. Effects on Regional Business Activities

Access to adequate transportation facilities for the movement of goods and services is a very important factor to businesses. The No-Build Alternate may ultimately have a negative impact to regional business activities as traffic projections reveal a more congested MD 97 in the future. Regional business activities would benefit from any of the five Build Alternates, including SHA's Selected Alternate, because they are designed to improve the efficiency of through-traffic flow by improving the overall operational characteristics of the roadway.

This project would serve a localized need for congestion relief, and would cause minimal effects from a regional employment standpoint. However, because there is considerable regional through-traffic on MD 97, commuters would experience an improved travel time with any of the Build Alternates, including SHA's Selected Alternate, as compared to the No-Build Alternate.

b. Effects on Local Businesses

Neither the No-Build Alternate, SHA's Selected Alternate, Alternate 7, Alternate 8A, or Alternate 8B would adversely impact the existing businesses within the project area. Alternate 5C would require the acquisition of Billingsley Magnetics, which is located in the Sunnymeade Community east of the corporate boundaries of Brookeville and south of Brighton Dam Road (Figure II-3A). Billingsley Magnetics currently has nine employees. This business is also a private residence.

Brookeville has eight businesses along MD 97, and the only business that depends on "drive-by" patrons is the Brookeville Farms Nursery, which typically has ten or less employees. (Figure III-6). According to the supervisor of the nursery, this company receives 90 percent of their business from "drive-by" patrons (Interview with John Fritz, 1997). While separating local traffic from through-traffic would be beneficial to both local and regional drivers, businesses that depend on "drive-by" travelers for their patronage could be negatively affected by an off-line alignment. Of the Build Alternates, only Alternate 5C, would divert traffic away from the Brookeville Farms Nursery. The western Build Alternates including SHA's Selected Alternate tie back into existing MD 97 south of Brookeville Farms Nursery, and would not divert potential customers away from the business. It does not appear that the remaining businesses in Town would be adversely impacted by diverted through-traffic, given the nature of their business providing local services (Figure III-6).

Two farm operations may be affected by the Build Alternates. Alternate 5C would impact croplands associated with the Camp Bennett property. The cropland, currently in hay production, is leased to a local farmer. Alternate 5C would impact the cropland, however, based on coordination with the land owner, operations would continue to be viable. All three western alternates, including SHA's Selected Alternate, would result in minimal impacts to farmland operations. These impacts would be limited to the edge of the Nash Farm corn production immediately adjacent to MD 97. Farmland operations would remain viable in this area.

From a local perspective, none of the Build Alternates, including SHA's Selected Alternate, would cause a change in the employment conditions. However, all of the Build Alternates, including SHA's Selected Alternate, would provide a safer roadway along existing MD 97 for commuters to travel to their places of employment within the immediate project area as compared to the No-Build Alternate.

c. Effects on Tax Base

The No-Build Alternate would not have an adverse impact to the tax base of the project area. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B would not be expected to adversely impact the tax base of the project area. Alternate 5C would have the most potential to impact the tax base of the project area due to the number of associated relocations (5 residential and 1 business).

3. <u>Land Use</u>

a. Existing

The No-Build Alternate would not impact the existing land use in the project area (Figure III-8). Each of the Build Alternates, including SHA's Selected Alternate, would convert acreage from the existing farmland (Nash Farm or Camp Bennett), open space, recreational, and forested lands to transportation use (Figure III-7); however, no secondary changes to land use are planned or anticipated for the proposed project. Section O discusses the secondary and cumulative impacts that could be incurred to land use as a result of the MD 97 Brookeville Project. In addition, the MDP has commented that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project (Section VI, MDP July 3, 2003 letter).

b. Future

The No-Build Alternate is not compatible with the 1994 Brookeville Comprehensive Plan or the 1980 Olney Master Plan. All of the Build Alternates, except Alternate 5C, are considered compatible with the local comprehensive plans. No unplanned changes to future land use are anticipated because of any of the Build Alternates (Figure III-6), although Alternate 5C would impact the neighboring community of Sunnymeade.

SHA's Selected Alternate includes provisions to comply with the Maryland Planning Act of 1992 and Maryland's Smart Growth Areas Act. Under the Maryland Planning Act, local commissions are required to make recommendations for streamlining of development regulations in areas designated for growth. In addition, local commissions were required to enact a sensitive area element containing goals and standards to protect sensitive areas from the adverse impacts of development. Maryland's Smart Growth Areas Act requires the state to direct funding for growth-related projects to areas designated by local jurisdictions as PFAs. Since this project is located outside of a PFA, it may be subject to an exception, which must be approved by the Board of Public Works. This approval must occur before the project can be funded for subsequent phases of development such as design, ROW acquisition, or construction.

An agreement with local elected officials, MDOT, and the Governor's office, set four specific criteria, discussed in Section A.3.b, to be met for design and construction of the project. Following this agreement, the MD 97 Brookeville Project was included in the FY 2003-2008 Maryland Consolidated Transportation Program for Project Planning.

In response to these conditions, Montgomery County amended their Annual Growth Policy on April 6, 1999 to discourage sprawl development as well as additional capacity for new development beyond the boundary of the Town of Brookeville as it relates to proposed bypass. SHA's Selected Alternate would incorporate a permanent easement along the roadway corridor that would be held by a third party. Any third party easements would be within SHA's ROW, possibly between the hinge point and the ROW. Along Reddy Branch, an easement may not be required since it is already parkland. The MDP has commented that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project, and recommended that MDOT, SHA, and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works (See **Section VI**, MDP July 3, 2003 letter). In response, a Letter of Commitment, dated July 29, 2003, was submitted by SHA to MET for signature (**Section VI**).

4. Visual Quality

The No-Build Alternate would have no effect on the existing visual quality of the project area. The DEIS Build Alternates and SHA's Selected Alternate would alter the existing setting of Brookeville in varying degrees including adverse visual effects on the Brookeville Historic District. For this reason, the project's MOA in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, includes a stipulation that SHA will design a landscape plan to reduce the visual intrusion of Alternate 7 Modified on the historic district. The Longwood Community Center and Reddy Branch Stream Valley Park would also experience an altered visual setting with the Build Alternates. In the case of the Longwood Community Center, it is already located adjacent to existing MD 97 and thus, the corner of property required for the proposed alternates would be in closer proximity to the facility but would not be a notable change from the existing visual landscape (Figure III-6). Visual impacts are anticipated for a portion of Reddy Branch Stream Valley Park for each of the western alternates including SHA's Selected Alternate. The impacts associated with SHA's Selected Alternate will be minimal and are limited to the portion of the park to the west of Town. This is where the park includes a portion of the historic district and implementation of the Section 106 stipulated landscape plan would also benefit park users and residents in town. Impacts to the communities to the west of SHA's Selected Alternate will be minimized due to the existing steep topography associated with the stream valley including the extensive forest cover within this portion of Reddy Branch Stream Valley Park.

Construction activity and materials storage for the project could have a negative aesthetic effect in the area immediately surrounding the project; however, this would be temporary and should pose no notable long-term impact. Mitigation in the form of landscaping using vegetation that is compatible with existing forest conditions in the area would be used to reduce negative intrusions into the surrounding viewsheds.

B. CULTURAL RESOURCES

The requirements of the National Historic Preservation Act of 1966, as amended, are implemented in 36 CFR 800. The National Historic Preservation Act regulates the ACHP and establishes the procedures for compliance with Section 106 of the National Historic Preservation Act. If historic properties listed in, or determined eligible for, the National Register are identified (36 CFR 800.4), the sponsoring agency must assess how its project will affect them. Throughout this assessment, the agency should work with the SHPO and consider the views of others, such as representatives of local governments, property owners, members of the public, and the ACHP. The agency's assessment should use the criteria found in the ACHP's regulations and guidance (36 CFR 800.5).

According to the current guidance, "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative."

In addition, according to the current guidance, examples of adverse effects on historic properties include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- (v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

In considering the potential effects of the project on the identified resources, the agency may make one of the following three determinations:

- no historic properties affected,
- no historic properties adversely affected, or
- historic properties adversely affected.

In consultation with the SHPO, the FHWA has identified five cultural resources including two historic properties and three archeological sites within in the APE for the MD 97 Brookeville Project. FHWA consulted with the SHPO and others - Montgomery Preservation, Inc., Montgomery County Historic Preservation Commission - to determine the potential effects of the project on the historic properties. The SHPO determination of effects on cultural resources is documented in letters dated May 5, 1998, April 16, 2001, and May 24, 2001 (signed July 20, 2001). On November 6, 2002, the SHPO concurred with SHA's recommendation of adverse effect that would result from SHA's Selected Alternate (Section VI).

1. <u>Historic Sites</u>

Two historic properties/districts are currently within the APE for the No-Build, SHA's Selected Alternate, Alternate 7, Alternate 5C, Alternate 8A, and Alternate 8B. These include Bordley's Choice and Brookeville Historic District (Figure III-9).

a. Brookeville Historic District

The No-Build Alternate would have the potential for adverse impacts to the Brookeville Historic District due to commuter through traffic that would continue to deteriorate the quality of life in the historic Town of Brookeville. The continually increasing traffic volumes impair traffic operations and safety on existing MD 97 and degrades the historic character of the Town.

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Coordination with the SHPO indicated that each of the Build Alternates would have an adverse effect on the Brookeville Historic District. Because the project would traverse a small portion of the District, it is the opinion of the SHPO that impacts could not be reduced through the development of landscaping. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B, would adversely effect approximately 1.7, 2.2, 1.8, and 2 acres of ROW, respectively, within the District through the acquisition of property for construction of the project (**Table V-3** in Section 4(f) Evaluation). This includes the Oakley Cabin trail which paralleled an old millrace for the Newlin's Mill in Brookeville and was used by people who lived in the community and worked at Newlin's Mill, as described in Section III. A small portion of the trail within the project impact area in the vicinity of the four western alternate alignments (Alternate 7, Alternate 8A, Alternate 8B, and the SHA Selected Alternate 7 Modified) has recently been cleared by M-NCPPC and is considered to be man-made and not historic.

Although Alternate 5C would completely avoid ROW acquisition from the Brookeville Historic District (Figure III-9), it has an adverse impact to the viewshed of the District. An adverse effect determination was requested and concurred upon by the SHPO.

b. Bordley's Choice (M23:66)

This National Register eligible property is located north of Brookeville and just south of a new subdivision (Figure III-9). SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B, would tie into existing MD 97 on the west side of Brookeville, opposite from Bordley's Choice (Figures III-9). At this location, the structures are located to the rear of the extensive property and are well buffered from the roadway by heavy vegetation along the frontage with MD 97. The buildings would be isolated from the alignments by extensive vegetation and differing elevations and thus would be outside of the viewsheds of these alternates. Although SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B, would tie into MD 97 along the frontage of the property, Bordley's Choice would not be adversely impacted. The SHPO concurred that none of the Build Alternates, including SHA's Selected Alternate, would have an adverse effect on Bordley's Choice.

2. Archeological Sites

a. Site 18MO368 (Newlin/Downs Mill complex)

The core of Site 18MO368, which contains the remains of numerous features including a well, retaining wall, building foundations, mill wheel, and mill race, would be directly impacted by SHA's Selected Alternate, with or without a retaining wall, Alternate 7 and Alternate 8A. Alternate 8B would avoid the core of the mill complex, but would impact the site's mill race extending along Brookeville Road. No direct impacts to the site over 1,000 linear feet would occur under the No-Build or Alternate 5C (Table IV-1).

The SHPO concurred that Phase II evaluation of 18MO368 was warranted to conclusively determine its eligibility to the National Register. Phase II evaluation of the site was conducted in March and April 2002. These investigations determined that Site 18MO368 is significant both individually and as a contributing resource to the Brookeville Historic District. Under the SHA Selected Alternate, 7 Modified with retaining wall, approximately five percent of Site 18MO368 would be impacted. The mill race system would be affected, but not the identified features and significant archeological deposits of the site associated with the mill and miller's house.

Approximately 700 linear feet of the mill race system would be impacted by SHA's Selected Alternate. Phase III data recovery is recommended in the appended draft MOA if the site cannot be avoided during design of SHA's Selected Alternate.

Components of Site 18MO368	nponents of SiteAlternateAlternate 718MO3685C7Withoutconv60%67		SHA's Selected Alternate with Retaining Wall	Alternate 8A	Alternate 8B	
18MO368 Newlin/Downs Mill Complex	Site is Avoided	60% of Site's Core	20% of Site's Core	5% of Site's Core	25% of Site's Core	Core of Site is Avoided
Mill Worker's House including Stone Retaining Wall and Well	No	Yes	No	No	Yes	No
Mill Structure Including Cobble Roadway, Wheel Race/Pit, and Tail Race	No	Yes	Yes	No	No	No
C-Shaped Mound (Refuse Disposal Area)	No	Yes	No	No	Yes	No
Large Race (Western Race along Reddy Branch) (<i>linear feet</i>)	0	600	500	500	800	300
Small Race (Southern Race along Reddy Branch) (<i>linear feet</i>)	0	200	200	200	200	200
Total Mill Race Impacts (<i>linear feet</i>)	0	800	700	700	1,000	500
Project Costs (million)	34.2	12.2	13 million	12.5 million	13.7	18

Table IV-1 Impacts to Components of Newlin/Downs Mills Complex

On November 6, 2002 the SHPO concurred with SHA's eligibility evaluations for the archeological sites and confirmed the adverse effect determination on Site 18MO368. The SHPO also concurred that the site can be mitigated through data recovery. Section 4(f) does not apply as the SHPO's concurrence includes agreement that the site does not warrant preservation-in-place.

b. Site 18MO387 (Pleasant Hill Plantation and Cemetery)

The No-Build, SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B would have no direct impacts to Site 18MO387. The SHPO concurred that Alternate 5C would avoid Site 18MO387, however, protective fencing and archeological monitoring during construction would be warranted to ensure protection from inadvertent disturbance. The ruins of the dwelling and outbuildings are located approximately 453 feet from the edge of the proposed ROW of Alternate 5C. The cemetery is located approximately 33 feet from the edge of the proposed ROW.

c. Site 18MO460

Site 18MO460 is the remains of a 19th and 20th century domestic occupation associated with the historic village of Brookeville. No direct impacts would occur from the No-Build, SHA's Selected Alternate, Alternate 7, or Alternate 5C. Approximately 95 percent of the site would be impacted by Alternate 8A and Alternate 8B. Prior to the selection of Alternate 7 Modified, the SHPO concurred that Phase II evaluation of 18MO460 was warranted to conclusively determine its eligibility to the National Register.

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Phase II evaluation of the site was conducted in March and April 2002. These investigations determined that 18MO460 does not qualify for inclusion on the National Register. Concurrence on these findings by the SHPO was received on November 6, 2002.

3. <u>Conclusion</u>

Four historic properties (Brookeville Historic District, Bordley's Choice, 18MO368, and 18MO387) within the APE are listed on, or eligible for, the National Register, or are presumed eligible for Section 106 purposes pending further evaluation under National Register Criterion D. Based upon the SHPO's April 16, 2001 comments, the No-Build Alternate, Alternate 7, Alternate 5C, Alternate 8A, and Alternate 8B, would have adverse effects on cultural resources, including historic standing structures and archeological sites as concurred on by the SHPO April 16, 2001.

Pursuant to 36 CFR 800.6, further consultation with the SHPO to develop modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties was necessary. The ACHP was notified of the adverse effect finding by FHWA through the provision of documentation specified in 36 CFR 800.11(e).

Due to the adverse effects to historic properties, a Section 106 MOA between SHPO, FHWA, and SHA was drafted to address the effects of the SHA Selected Alternate 7 Modified (Appendix A in Section V). The draft MOA was circulated by FHWA to the ACHP in April 2003. On June 3, 2003, the FHWA was notified that the ACHP does not believe that their participation to resolve adverse effects is needed. FHWA agreed with the ACHP. Stipulations of the MOA are as follows:

- SHA will design a landscape plan to reduce the visual intrusion of the SHA Selected Alternate 7 Modified on the historic district.
- SHA will ensure the continuity of the Oakley Cabin Trail in the design of the SHA Selected Alternate 7 Modified.

FHWA will submit a copy of the final MOA, to be processed pursuant to 36CFR800.6(b)(iv) with the ACHP prior to approving the undertaking in order to meet the requirements of Section 106. The executed MOA shall govern the undertaking and all its parts, and FHWA shall ensure that the undertaking is carried out in accordance with the MOA.

C. TOPOGRAPHY, GEOLOGY, AND SOILS

1. <u>Topography and Geology</u>

The No-Build Alternate would not impact topography and geology within the project area. Topography would be moderately impacted by the implementation of the four Build Alternates, including SHA's Selected Alternate, since they all involve the construction of a roadway on a new alignment (Figure III-10). Topography would be altered by the cuts and fills required for the construction of the road and waterway crossings. The amount of disturbance for each alternate approximately correlates to the amount of ROW that would be required for the construction crossings of the road and waterways. Subsequently, due to the length of proposed Alternate 5C and the amount of ROW that would be required, this alternate would impact topography more than the other alternates. The length of each alternate is summarized in Table IV-2.

Category	Alternate 5C		Alternate 7		SHA's Selected Alternate	Altern	ate 8A	Alternate 8B	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Total Length (miles)	2.12	2.12	0.72	0.72	0.72	0.85	0.85	0.87	0.87
ROW to be Acquired (Acres)	42.40	. 38.98	11.70	10.97	14.57	15.30	14.19	16.82	15.24

TABLE IV-2 Total Length and ROW to be Acquired by Alternate

Note: Excludes areas with current road ROWs. Includes M-NCPPC land reserved for transportation use.

Impacts associated with sloping topography are unavoidable as the project area is characterized as having slight to moderate slopes (Figure III-10). Each alternate under consideration would make a crossing of Reddy Branch and its floodplain, which is flanked by slopes of varying degrees. Thus, it can be noted that impacts attributable to steeper slopes, would be generally confined to areas near stream crossings. For any alternate under consideration, impacts from moderate slopes would range from 2.51 to 4.28 acres, and impacts from slopes greater than 25 percent would range from 0.55 to 1.74 acres (Table IV-3).

Category	Altern (act	ate 5C res)	Alternate 7 (acres)		SHA's Selected Alternate (acres)	Alternate 8A (acres)		Alternate 8B (acres)	
Steep Slope Percentage	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
0-15%	40.50	38.05	10.84	10.38	11.62	13.86	13.41	15.18	13.97
15-25%	4.28	3.58	2.78	2.51	2.34	3.50	3.14	3.31	2.92
25% or greater	1.74	1.21	0.56	0.55	0.61	0.88	0.87	0.80	0.79
Total	46.52	42.84	14.18	13.44	14.57	18.24	17.42	19.29	17.68

TABLE IV-3 Steep Slopes Impacts

Note: Impacts based on ROW widths.

Erosion and sediment control techniques such as infiltration basins, sediment traps, and grass swales would be installed as part of the project. Silt fence would be used to control soil erosion. Areas of exposed soil would be stabilized, either vegetatively or structurally, following MDE sediment and erosion control guidelines. This project would also require a stormwater management plan approved by MDE.

2. <u>Soils</u>

The No-Build Alternate would have no effect on the soils of the project area. Each of the proposed Build Alternates, including SHA's Selected Alternate, would require earth disturbances for construction activities. Cut and fill requirements for each alternate would contribute to soil impacts. Approximate amounts of total soil disturbance correlate to the amount of ROW required for each alternate (Table IV-2).

It is anticipated that the Build Alternates would not substantially impact soils. According to the Montgomery County Soil Survey, the only soil type that is considered to have severe erosion potential is 116E. Alternate 8A would intersect this soil type through a very narrow area as part of the westernmost terminus with existing Brookeville Road (Figure III-11). The majority of soils through which SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B pass are defined as having only slight erosion potential. Three soils types (1C, 16D, 116D) are defined as having moderate erosion potential; however, none of these soil types are dominant within the project area. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B are proposed through a variety of soil types (Figure III-11). All three of these alternates are proposed through portions of soil type 16D, which are soils typically found on steeper slopes. Other soil features identified for soils intersecting these alternates should not significantly affect highway construction. With careful planning and design, soil features such as wetness, frost action, and steep slopes could be overcome so as not to pose major highway construction problems.

Alternate 5C is also proposed through several soil types, none of which is identified as having severe erosion potential. This alternate would pass through soil types 1C and 16D, soils typically found on steep slopes (Figure III-11). Other soil features such as wetness, frost action, slopes, and shrink-swell potential should be carefully considered in the design phase of the project to avoid construction problems.

Because soil erosion and sedimentation may result from construction activities, implementation of erosion control techniques, including infiltration, sediment basins and traps, and silt fencing would assist in controlling run-off to sensitive features such as streams and wetlands. To minimize impacts in wet areas, a mud mat may be used to serve as a platform for construction activities in these areas. All areas of exposed soil would be stabilized as early as possible. MDE would require an approved stormwater management plan for this project, detailing minimization measures such as slope protection structures, stream channel stabilization measures, and establishment of temporary or permanent vegetative cover and mulch on exposed soils. The stormwater management plan would also include water quality considerations for stormwater runoff.

D. CLIMATE

The climate of the Town of Brookeville and the project area would not be affected by the No-Build Alternate, or the construction of any of the Build Alternates, including SHA's Selected Alternate, associated with the MD 97 Brookeville Project.

E. FARMLANDS

A farmland assessment was conducted to identify the potential impacts to farmland and Prime and Statewide Important Soils by the proposed Build Alternates. To comply with the Farmland Protection Policy Act of 1981, as amended in 1984, a Farmland Conversion Impact Rating Form (USDA Form AD-1006) has been completed and submitted to the USDA Natural Resources Conservation Service office in Derwood, Maryland for evaluation. A copy of this form along with the rationale for site assessment criteria is included in **Appendix A**.

The No-Build Alternate would not impact farmland. Productive farmland parcels, Prime Farmland Soils and Soils of Statewide Importance would be impacted by all of the proposed Build Alternates (Figure III-12). Table IV-4 is a summary of the farmland impacts by alternate.

Category	Alternate 5C		Alternate 7		SHA's Selected Alternate	Alternate 8A		Alternate 8B	
(acres)	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Active Productive Farmland	9.60	10.69	0.01	<0.01	0.01	0.59	0.53	1.24	0.99
Prime Farmland Soils	24.19	23.21	4.84	4.25	4.53	4.90	4.75	4.64	4.33
Soils of Statewide Importance	5.63	4.74	1.79	1.24	1.63	3.96	3.72	5.28	4.73
Total	39.42	38.64	6.64	5.50	6.17	9.45	9.00	11.16	10.05

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Note: Impacts are based on ROW widths.

The USDA Form AD-1006 provides an evaluation of farmland within the project area and determines if farmland is suitable for protection. The relative value of farmland within each alternate is based solely on the soils found within the area and is expressed on a scale of 0 to 100. The rating indicates if the parcel of farmland can provide sustained productivity compared to other farmland within the jurisdiction. This rating is then combined with the Site Assessment Criteria, based on a scale of 0 to 160, and found in Part VI of the USDA Form AD-1006. The combined score of the relative value and the site assessment criteria must be less than 160 for farmland to be given a minimal level of consideration for protection. All of the alternates fall below 160 and are not regarded as the most suitable farmlands for protection.

SHA's Selected Alternate and Alternate 7 would impact the least amount of active farmland, with 0.01 acre of impact to one farmland parcel - the Nash Farm. Active farmland impacts for SHA's Selected Alternate and Alternate 7 to the Nash Farm are limited to impacts along the farmland edge, and would not impact active farm operations. Farming operations during 2003 in this parcel include corn production.

Alternate 5C would impact the most acres of active farmland, with impacts ranging from 9.60 to 10.69 acres to one farmland parcel-Camp Bennett. Alternate 5C would traverse approximately through the middle of active farmland associated with Camp Bennett (Figure III-12). Farming operations for this parcel are limited to agricultural crops, principally wheat and hay. Alternate 5C would not prevent the continuance of farm operations on this parcel, which is leased by Camp Bennett to a local farmer.

Alternate 8A and Alternate 8B would impact lesser amounts of active farmland, ranging from 0.53 to 1.24 acres to one farmland parcel - the Nash Farm. Active farmland impacts for Alternate 8A and Alternate 8B to the Nash Farm are limited to impacts along the farmland edge, and would not impact active farm operations (Figure III-12). Farming operations for this parcel include corn and hay production.

13)

SHA's Selected Alternate would impact the fewest acres of Prime Farmland Soils and Soils of Statewide Importance, with impacts of 4.53 acres and 1.63 acres, respectively.

Alternate 5C would impact the most acres of Prime Farmland Soils and Soils of Statewide Importance (23.21 to 24.19 acres and 4.74 to 5.63 acres, respectively). Alternate 7, Alternate 8A, and Alternate 8B would have impacts to Prime Farmland Soils and Soils of Statewide Importance ranging from 4.64 to 4.90 acres and 1.79 to 5.28 acres, respectively (Figure III-12).

F. GROUNDWATER RESOURCES

No impacts to groundwater resources would occur with the No-Build Alternate. The soil type in the project area is primarily silt loam, very deep to moderately deep, well drained to moderately drained, and has average moderate permeability. The runoff potential is varying from moderately low to moderately high with infiltration and transmission rates of moderate to slow. The closest aquifer to the project area is the Lower Peltic Schist of the western Wissahickon Formation, located east of the project area.

Due to the types and characteristics of the soils and the aquifer, it is unlikely that highway development will have major short-term potential impacts to groundwater resources. As discussed in **Section III-F**, the WSSC determined that approximately only one-third of the project area is served by private wells. Private households utilize a small portion of groundwater. Additionally, there are no major users of groundwater within the project area.

The long-term impacts may include reduction in groundwater recharge due to increased impervious surface and alternations of local surface drainage patterns because of construction. In addition, potential long-term impacts include the contamination of groundwater through the infiltration of pollutants in surface runoff. Earthwork activities associated with roadway construction present the potential for long-term impacts to the groundwater system within the project area. All practicable measures would be taken to minimize any potential impacts to the groundwater and surrounding water wells during the construction.

Impacts to groundwater quality during construction would be mitigated through strict adherence to MDE's erosion and sediment control procedures. The risk of groundwater contamination by spills would be reduced with stormwater management ponds. Runoff would be directed to inlets along the roadway shoulder, and drainage would convey this runoff to stormwater management ponds, where it could be collected and treated.

G. SURFACE WATER RESOURCES

The No-Build Alternate would have no effect on the surface water resources in the project area. During construction of the Build Alternates, surface water quality may be temporarily impacted by increased erosion, sedimentation, and streambank destruction from grading operations. Temporary impacts would result from temporary stream crossings, dikes and cofferdams, temporary channel relocations, and suspended solids from increased erosion and sedimentation. Runoff from disturbed areas may contain high sediment loads, which could reduce both the diversity and numbers of organisms in the aquatic environment. Physical impacts such as temporary stream crossings and cofferdams disrupt the stream substrate and could affect fish migrations through these areas. This would negatively effect benthic macroinvertebrate populations in this portion of the stream during the construction period, and for a short period after construction until migration and drift allow for the re-colonization of the area. Changes to the channel widths resulting from cofferdam construction may generate excessive scouring of the substrate and generate sediment impacts immediately downstream of the construction area.

Surface water resources within the project area are in watersheds associated with two major stream systems (Reddy Branch and Hawlings River), as well as their associated perennial and intermittent tributaries (Figure III-13). Reddy Branch flows through the center of the project area, and most of the direct surface water impacts would occur to this stream system and to Meadow Branch, a tributary to Reddy Branch. The unnamed tributary to the Hawlings River, located on the northern project area boundary, would incur no direct stream impacts as no stream crossings to this stream system are proposed for any of the Build Alternates.

SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B, are proposed entirely within the Reddy Branch subwatershed. Temporary surface water impacts would result from SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B, as the construction of each of these alignments would require the crossing of Reddy Branch and Meadow Branch. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B all cross Meadow Branch at a location west of MD 97 and south of Brookeville Road (Figure III-13) where a box culvert is proposed. The proposed culvert design will meet MDE standards and has been coordinated with the regulatory resource agencies and no objections have been received. Coordination will continue as part of project design.

Although the northern section of Alternate 5C is within the Hawlings River drainage area, the majority of this alternate falls within the Reddy Branch subwatershed. Alternate 5C has only one stream crossing along Reddy Branch (Figure III-13).

The first order tributary to Meadow Branch, crossed in the southern portion of the project area where SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B share the same leg, is an intermittent watercourse presumably fed by groundwater discharge. The type of structure used to cross Meadow Branch will be determined during the project design phase.

Total area of proposed ROW within each watershed (or subwatershed) and the linear footage of stream crossing impacts are presented in **Table IV-5** for each alternate. SHA's Selected Alternate would have total linear stream impacts that are comparable to the western Build Alternates. Impacts for these western alternates range from 1,067.32 linear feet to 1,191.72 linear feet. Alternate 5C impacts would be **Figures II-11A** to **II-15B** show detailed impact locations.

The Code of Maryland Regulations (COMAR 26.08.02.11B) requires compliance with time of year restrictions for instream work, which helps to protect important aquatic species. Time of year restrictions for Class IV-P waters is from March 1 through May 31, inclusive.

The stream systems throughout the project area are part of the Patuxent River Watershed, a State Scenic and Wild River, and are therefore subject to review by DNR. DNR determined that the Scenic and Wild Rivers Program would not have any additional compliance requirements beyond the necessary permits (nontidal wetlands, forest conservation, etc.) on this project (Section VI).

Category	Alternate 5C		Alter	nate 7	SHA's Selected Alternate	Altern	ate 8A	Alternate 8B	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Reddy Branch Perennial Stream Impacts (feet)	314.82	303.61	191.7	187.6	206.0	152.68	153.46	235.39	228.91
Meadow Branch Perennial Stream Impacts (feet)	0	0	377.8	376.5	368.3	315.54	313.61	333.13	328.42
Total Perennial Stream Impacts (feet)	314.82	303.61	569.5	564.1	574.3	468.22	467.07	568.52	557.33
Intermittent Stream Impacts – Unnamed Tributary to Meadow Branch (feet)	167.3	165.3	599.7	606.2	637.5	599.1	606.2	623.2	601.5
Total Linear Stream Impacts (feet)	482.12	468.91	1,169.2	1,170.3	1,211.8	1,067.3 2	1,073.2 7	1,191.7 2	1,158.8 3
Reddy Branch Watershed ROW Impacts (acres)	30.86	27.04	14.18	13.44	14.18	18.24	17.42	19.29	17.68
Hawlings River Watershed ROW Impacts (acres)	15.66	15.80	0	0	0	0	0	0	0

TADLE IV-5 Stream Crossing and Watersnea Impa	TABLE IV-5 S	Stream Crossing	and Watersh	ed Impact
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Note: Impacts based on ROW widths.

Surface runoff will also be addressed for each Build Alternate including SHA's Selected Alternate. The design of the MD 97 Brookeville Project would result in an increase in impervious surface and discharge volumes within the various subwatersheds. Stormwater management facilities would be required and would be located adjacent to the alignments to control runoff and provide quantity control. The stormwater management facilities would add very little additional ROW to the project.

Grass channels would be provided in areas where the runoff could not readily be treated with a pond facility. These grass channels, along with the roadside ditches within the project, could be utilized to enhance water quality and provide some ground water recharge. Though these channels and ditches could enhance water quality, they would not provide the quantity control that the project will also require. This would need to be controlled through the placement of the stormwater management ponds.

H. FLOODPLAINS

The No-Build Alternate would not negatively affect the floodplains in the project area. The five proposed Build Alternates would traverse the 100-year floodplains associated with Reddy Branch, Meadow Branch or both. **Table IV-6** is a summary of the area of impact to the 100-year floodplains by each Build Alternate. All four DEIS Build Alternates have comparable floodplain impacts, ranging from 2.44 to 3.29 acres, with SHA's Selected Alternate impacting 3.2 acres. **Figure III-13** shows the location of the 100-year floodplains, and **Figures II-3A** to **II-7B** highlight the floodplain impact areas. These impact estimates are based on ROW boundaries.

Final determination of structure and sizes made during the design phase of this project may modify these preliminary estimates. Design of culverts or bridge structures would ensure that the 100-year flood flow would pass without causing flooding of the roadway. Crossing structures that will be considered will include box culverts with flood relief structures and short span bridges that allow for flood relief. In addition, each structure would be designed to provide for sufficient wildlife passage. Project design and construction would comply with state and local floodplain regulations.

Category	Alternate 5C		Alternate 7		SHA's Selected Alternate	Alternate 8A		Alternate 8B	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Floodplain Impacts (acres)	2.80	2.44	3.34	3.27	3.22	2.98	2.93	3.29	3.17

TABLE IV-6 Floodplain Impacts

Note: Impacts are based on ROW widths.

I. WETLANDS

1. <u>Impacts</u>

Wetland identification was conducted in accordance with the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987). A functional assessment of the wetlands has been conducted using The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach (USACOE, 1993). The findings of this assessment are presented in Section III-I and are included in the Wetland Summary Table, Table III-9.

The No-Build Alternate would not impact wetlands in the project area. SHA's Selected Alternate would impact four wetlands: two palustrine forested wetlands, one palustrine emergent wetland, and one palustrine scrub-shrub wetland. Potential impacts to WUS and jurisdictional vegetated wetlands were determined based on ROW limits for each of the Build Alternates. Linear stream impacts as well as nontidal freshwater wetland impacts would result from all Build Alternates, including SHA's Selected Alternate. Impacts to both streams and wetlands would result from cut and fill activities and stream crossings, which may impair one or more of the wetland functions. For most wetlands, existing functions would continue to be provided by the remaining portions of the wetlands, although the magnitude of these functions may be reduced depending on the amount of wetland impacted and the size of the remaining wetland. Indirect wetland impacts may also occur to

some of the wetlands during construction as water quality may be diminished due to erosion and sedimentation into adjacent streams or wetlands.

Wetland locations were considered during the selection of alternates retained for detailed study phase of this project. When possible, alternates were located to avoid wetlands. Initially, wetlands were delineated in the field throughout the study area. Both agency personnel and SHA Project Planning staff attended a jurisdictional determination of the delineated wetlands to review the accuracy of the delineation. As part of the determination, agency personnel, including representatives from the USACOE and MDE provided SHA staff with recommendations on preferred areas for proposed alternate layouts. The recommendations included areas where wetlands were either absent or minimal as well as optimal areas for stream crossings. The Reddy Branch stream crossing for all the Build Alternates was unavoidable as this stream system flows in an eastwest direction through the center of the project area.

Figure III-14 shows the wetland locations, and **Figures II-3A** to **II-7B** highlight the limits of cut and fill and ROW for each Build Alternate. **Table IV-7** is a summary of wetland impacts for each Build Alternate based on ROW limits. Total impacts for all five Build Alternates would vary from 0.10 acre to 0.21 acre. SHA's Selected Alternate would impact four wetlands including two palustrine forested wetlands, impacted for a total of 0.03 acres, one palustrine emergent wetland, impacted for 0.06 acre, and one palustrine scrub-shrub wetland, impacted for 0.03 acres. Alternate 5C and Alternate 8B would have the potential for the greatest impacts (between 0.15 to 0.21 acre). Palustrine forested wetland impacts would account for approximately half of Alternate 5C impacts. Palustrine emergent impacts would be the same (0.06 acre) for Alternate 7, Alternate 8A, and Alternate 8B. Alternate 8B would have at least twice as many palustrine scrub-shrub impacts compared to the other Build Alternates.

2. Avoidance and Minimization

Wetland avoidance and minimization measures were considered throughout the planning phase. Wetlands were avoided for each Build Alternate whenever possible. Further efforts to reduce or avoid wetland impacts would occur during the final design phases. In general, minimization and avoidance measures may include maximizing slopes to reduce the amount of fill required, constructing culverts and bridges at perpendicular locations to streams to maintain existing stream channels and hydrologic connections, shifting roadways, and decreasing the degree of curvature.

Wetland impacts associated with SHA's Selected Alternate would be limited to between 0.10 and 0.16 acre. Minimization measures would include shifting the alignment east along Wetland 1C as well as maximizing slopes. Avoidance and minimization of impacts along Wetlands 12 and 13 would include shifting the alignments west as well as maximizing slopes. The cost associated with each minimization effort is considered negligible, particularly the ability to maximize slopes adjacent to each wetland.

Efforts have been made to minimize WUS impacts, primarily to the crossing of Reddy Branch and Meadow Branch. Upon coordination with USFWS, DNR, USACOE, and M-NCPPC, it was decided to incorporate a structure over Reddy Branch Stream near the roundabout located on Brookeville Road that will be designed to accommodate wildlife passage. This bridge alignment will meet the minimum requirements preferred by the review agencies that consisted initially of a

minimum of an 8-foot vertical clearance with a 25-foot embankment on the same side. The draft SACM Package dated February 2003 recommended the south side of Reddy Branch for wildlife passage based on non-surveyed contour mapping. In response to USACOE and USFWS comments for a north side passage, additional evaluations were made by SHA. It was concluded that the north side might be possible however a final decision will need to await accurate ground surveys as part of project design. The design goal will be the agreed to eight-foot vertical and 25-foot horizontal clearance on one side, preferably along the north side of Reddy Branch. Should topographic conditions not allow for adequate clearance along the north side, the south side passage will be pursued by SHA as part of final project design. The existing structure over Reddy Branch Stream would be removed in conjunction with the closing of this portion of MD 97. A box culvert has been proposed for the crossing of Meadow Branch.

							SHA's				
Watland	W/+41-m-1	Total	Altern	iate SC	Alte	rnate 7	Selected	Alterr	nate 8A	Altern	ate 8B
No	Classification	A mag ¹	(ac	resj	(a	cresj	Alternate	(ac	res)	ac (ac	res)
110.	Classification	Arca (acros)	0.000	Closed	Onen	Closed	(acres)	0	Cloud		
		(acres)	Section	Section	Section	Section	Section	Section	Closed	Open	Closed
	WITA		Section	Section	Section	See Stream	Section	Section	Section	Section	Section
1-4	PEM	0.13	0.02	0.01		See Stream	T	1 able 1 v - 5	, 		
1-A	DCC	0.13	0.02	0.01							·
1-A	DEM	0.14	0.02	0.01							
1-0	PEO	0.17			0.01		0.01	0.01	0.02		
1-0	PEO	0,32			0.01	0.02	0.01	0.01	0.02	0.02	
1-D	DEM	0,14									
1.12	PEN	0,13									
1-E	PFO	0.12									
<u>1-F</u>	Pro	2.30	0.10	0.09							
1-0	PrO WILC	0.19				<u> </u>					
2	WUS		0.07	0.04		See Stream	mpact Table (T	able IV-5)			
2A	PEM	0.46	0.07	0.04							
2A	PFO	0.01									
2B	PFO	0.13									
<u>2C</u>	PFO	0.13									
3	PFO	0.17									
4	PEM	0.05									
4	PSS	0.05					***				
7	PEM	0.38									
7	PFO	0.13									
8	PFO	0.05									
10	PFO	0.17									•
11	PFO	0.05									
12	PFO	0.38			0.02	0.02	0.02	<0.01	< 0.01	0.01	0.01
13	PEM	0.14			0.06	0.06	0.06	0.06	0.06	0.06	0.06
13	PSS	0.11			0.03	0.03	0.03	0.03	0.03	0.07	0.07
18	PEM	0.01									
18	PSS	0.05						< 0.01	< 0.01		
19	PFO	0.02									
	Total Impacts		0.21	0.15	0.12	0.13	0.12	0.10	0.11	0.16	0.14
Total Impa	ets per Classifica	ition									
	Total PFO		0.10	0.09	0.03	0.04	0.03	0.01	0.02	0.03	0.01
	Total PEM		0.09	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	Total PSS		0.02	0.01	0.03	0.03	0.03	0.03	0.03	0.07	0.07
Notes:	Impacts are ba	sed on RO	W widths		· · · · · · · · · · · · · · · · · · ·				l		

TABLE IV-7 Summary of Wetlands Impacts

Total Wetland Area considers only that portion within the limits of the project area.

No wetland impact

3. <u>Mitigation</u>

Mitigation planning for unavoidable wetland impacts would follow the sequencing guidelines of the *Maryland Compensatory Mitigation Guidance* (1994). After avoidance and minimization alternates have been fully designed, the characteristics of the impacted wetlands (functions/values and areas) would be considered in the development of the goals of the mitigation plan. The functions/values and vegetative classification of the impacted wetlands would determine mitigation ratios. General guidelines for wetland replacement mitigation ratios are listed below. Compensation for stream impacts is currently determined on a case-by-case basis but typically follows a 1:1 ratio per linear foot of impact.

- Palustrine forested wetlands (PFO): 2:1
- Palustrine scrub/shrub (PSS): 2:1
- Palustrine emergent wetlands (PEM): 1:1

During the Summer of 2002, SHA met with M-NCPPC officials to discuss stream restoration as well as wetland and parkland mitigation. Potential areas for stream restoration and wetland mitigation within the parkland were evaluated by representatives of the resource agencies and M-NCPPC and written approval was received by SHA on May 1, 2003. Approved stream restoration locations include upstream and downstream of where SHA's Selected Alternate crosses Meadow Branch and along a section of Reddy Branch adjacent to Brighton Dam Road. Stream restoration techniques are likely to include riparian buffer plantings as well as in stream stabilization measures such as grading and stabilization of eroded stream banks.

This section of Reddy Branch is also adjacent to an open field that has been investigated and agreed to by M-NCPPC for use as a wetland creation mitigation site in their May 1, 2003 approval letter. SHA will continue to work closely with the agencies and M-NCPPC in the development of more detailed stream restoration and wetland mitigation design within the parkland. Coordination will also continue with M-NCPPC staff in identifying potential parkland replacement sites, storm water management ponds, archeology, and reforestation opportunities within Reddy Branch Stream Valley Park. Proposed mitigation is outlined in SHA's letter to M-NCPPC dated August 13, 2003, included in **Section V** and **Section VI**.

Replacement mitigation is proposed at a 2:1 ratio for 0.03 acre of palustrine forested and 0.03 acre of palustrine scrub shrub wetlands, and at a 1:1 ratio for 0.06 acre of palustrine emergent wetlands. Therefore, the wetland mitigation needed for this project totals approximately 0.18 acre. In addition, approximately 1,000 to 1,400 linear feet of stream restoration will be conducted.

J. VEGETATION AND WILDLIFE

1. <u>Vegetation</u>

Impacts to the terrestrial habitat were calculated for each vegetative cover type identified throughout the project area. The No-Build Alternate would not negatively impact the vegetation in the project area. The impacts for each Build Alternate relevant to the existing terrestrial habitat are likely to affect all four primary components of habitat including foraging, breeding, nesting, and resting opportunities, especially for forest cover. The construction of each Build Alternate would result in the loss of all forest cover types as well as cropland and grassland (Figure III-15). The forest cover is the primary terrestrial habitat identified within the project area that would provide for the greatest diversity of wildlife species. Subsequently, loss of forest cover is given special consideration. Furthermore, due to several large contiguous forest stands throughout the project area, each Build Alternate would not only reduce forest cover but would fragment many of the large stands into two or more smaller stands. The effect of this form of impact is to create more forest edge along the new roadway that previously would have been considered forest interior. The DNR has described the project area, because of the large stands, as having FIDB habitat. Forested areas likely to serve as FIDB habitat include the riparian corridor along Reddy Branch, the large unfragmented upland forests east of MD 97, both north and south of Brighton Dam Road, and the forest cover evident along the northern portion of the project area. Subsequently, Alternate 5C, which continues much farther north than any other alternate, would impact more forested areas likely to serve as FIDB habitat. Indirect impacts from the Build Alternates include the loss of vegetation that may serve as a buffer to limit soil erosion and runoff into adjacent waterways and wetlands.

Impacts to the terrestrial habitat, including FIDB habitat, can be reduced by considering several forest protection guidelines as part of the planning and construction phases. These include maintaining forest habitat up to the edges of roads and minimizing use of mowed grassy berms. If possible, FIDB habitat should not be disturbed between May and August. Finally, any reforestation efforts should target riparian areas that lack woody vegetation, riparian areas less than 300 feet wide, and non-forested areas adjacent to FIDB habitat.

Impacts to specimen trees vary from one to three, depending on the alternate. SHA's Selected Alternate, Alternate 7, and Alternate 8B would impact one specimen tree each. Both Alternate 5C and Alternate 8A would have the greatest number of specimen tree impacts, estimated at three each.

Direct impacts calculated for each terrestrial habitat per alternate are shown in **Figure III-15** and listed in **Table IV-8**. SHA's Selected Alternate would disturb the least amount of terrestrial habitat with a total impact of 9.27 acres (open section). Alternate 5C would result in the greatest terrestrial habitat impacts, estimated at approximately 32.58 acres. Alternate 5C would have greater impacts to Tulip Poplar Association, cropland, and grasslands habitat cover types than the other alternates. Alternate 8A and Alternate 8B would result in a comparable amount of impacts for all habitat cover types of between 11.73 and 13.93 acres.

Mitigation for loss of vegetation would be addressed in compliance with reforestation requirements. The SHA complies with the Maryland Reforestation Law, which requires a one for one replacement. The SHA would coordinate with the M-NCPPC to identify viable areas for reforestation including areas within Reddy Branch Stream Valley Park. Approximately nine acres of tree plantings would be required.

Habitat Cover Type	Alternate 5C (acres)		Alternate 7 (acres)		SHA's Selected Alternate (acres)	Alternate 8A (acres)		Alternate 8B (acres)	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Tulip Poplar Association	11.12	9.08	6.84	6.37	6.84	7.05	6.58	7.90	7.10
Sycamore-Green Ash-Box Elder- Silver Maple Association	0.59	0.48	1.78	1.67	1.78	3.36	3.31	3.83	3.70
Oak-Hickory Forest Type	0	0	0	0	0	0.54	0.44	0.06	0.05
Total Forest Cover Impacts	11.71	9.56	8.62	8.04	9.02	10.95	10.33	11.79	10.85
Croplands	9.60	10.69	0	0	0.01	0.59	0.53	1.24	0.99
Grasslands	11.27	9.55	0.64	0.58	0.64	0.94	0.87	0.90	0.77
Habitat Cover Type Total	32:58	29.80	9.27	8.62	9.27	12.48	11.73	13.93	12.61
Specimen Trees Impacted (numbers)	3	3	1	1	I	3	3	1	1

Note: Impacts are based on ROW widths.

2. <u>Wildlife</u>

a. Terrestrial Wildlife

It is anticipated that all the alternates, with the exception of the No-Build, would reduce populations of those wildlife species sensitive to new roadways including certain avian species, reptiles, amphibians, and mammals. Primary impacts would involve loss of habitat, habitat fragmentation, and potential collisions with traffic. Other impacts would likely include changes to breeding and migratory patterns, change in plant community structure along the ROW, and isolation of wildlife populations. The No-Build Alternate would not impact wildlife in the project area.

The loss and alteration of existing wildlife habitat, primarily forest cover, would likely occur for all five Build Alternates. The forest throughout the project area serves as habitat for a diversity of herpetofauna, avian species, and mammals. Direct impacts to forest cover would be the elimination of habitat within the proposed ROW and the alteration of the adjacent forest edge. The loss of habitat would negatively affect the breeding and foraging success of a variety of wildlife species. Of particular concern is the loss of FIDBS and their habitat. These species are generally dependent on large mature stands in which to successfully breed. DNR and other conservation organizations are concerned about the rapid decline in FIDB habitat. Most FIDBS are area-sensitive species and include migratory songbirds such as scarlet tanagers, warblers, and gnatcatchers as well as various woodpeckers. These species require large, contiguous, undisturbed forest stands of approximately 100 acres (Robbins, 1989). Furthermore, these avian species typically only nest in portions of the forest that are 150 to 300 feet from the forest edge known as the forest interior. Each Build Alternate would likely eliminate forest interior habitat by fragmenting the larger forest into smaller stands with minimal interior or width from the forest edge.

Mortality for various biota would likely occur for each Build Alternate. Dead or injured species such as birds, rabbits, squirrels, turtles, snakes, and white-tailed deer (*Odocoileus virginianus*) are common sights along roadways with adjacent forest cover or farmland. Many edge dwelling species, such as white-tailed deer, are attracted to these areas and subject to the greater possibility of vehicular collisions. White-tailed deer are of concern due to their rapidly growing population in suburban areas and the danger associated with collisions between vehicles and this animal.

Each Build Alternate may negatively alter the adjacent forest immediately outside of the ROW by changing the forest structure and diversity. These changes to the existing plant community could result from the establishment and subsequent competition associated with exotic and invasive species. Furthermore, an increase in sunlight along the ROW would favor more pioneer (early colonizers) species. The change in plant species would include a change in the wildlife species that prefer the new habitat, in particular, edge dwelling species. Many of the wildlife species associated with forest edge habitat are considered generalists in their habitat needs. These species are commonly found in urban areas where there is an abundance of forest edge habitat. Wildlife species associated with forest interior habitat are more specific in their habitat requirements and are therefore more sensitive to disturbance and/or the loss of habitat than edge dwelling species.

The new roadway may also create a barrier separating one population from another thus reducing the opportunity for gene pool exchange. With the gene pool and exchange opportunities reduced, local extinctions (i.e., loss of local populations) may not be replaced by new colonizers. Species isolated from other populations are also vulnerable to inbreeding. Isolated populations are a particular concern for species with limited mobility such as amphibians and reptiles.

The loss of cropland and grassland habitat may also occur because of this project. The reasons for potential cropland/grassland habitat loss are similar to those described above, including fragmented wildlife habitat and corridors. DNR is concerned with the decline of grassland habitat throughout the state. The grasslands, especially along the eastern portion of the project area, are potential grassland breeding habitat for avian species including the savannah sparrow (*Passerculus sandwichensis*) and the Lincoln's sparrow (*Melospiza lincolnii*).

In summary, Alternate 5C has the potential to cause the most severe impacts to wildlife and wildlife habitat. The principal reason is that the stream valley and the park system are widest along the eastern portion of the project area. Impacts could be extensive in this area, including the permanent loss of FIDB habitat as well as permanent disturbances to plant and animal populations currently benefiting from large undisturbed forest cover. The eastern and northern portions of the project area maintain relatively large stands of mature forest cover and grassland habitat. The balance of the alternates, with the exception of the No-Build, would also result in the loss of mature forest.

The selection of an alternate that has the least habitat loss for mammals would result in avoidance or minimization of adverse impacts. Minor alignment shifts to avoid or minimize impacts to sensitive habitats would be considered during final design. Stormwater management designed to direct water to the median for bio-retention and infiltration would minimize the potential for environmental contamination or sedimentation of sensitive habitats. Bridging wetlands and stream valleys, or designing environmentally sensitive culverts can minimize the effects of habitat fragmentation.

It is anticipated that all five Build Alternates would be of sufficient height to allow large mammals to pass beneath each structure proposed over Reddy Branch. A minimum of eight feet would be

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maintained between the top of the stream bank and the bottom of the bridge. For SHA's Selected Alternate, close coordination with USACOE and USFWS has occurred to ensure that sufficient clearance is provided for wildlife under Reddy Branch and proposed MD 97. Bridge design efforts include allowing for a minimum of eight feet vertical and 25 feet horizontal clearance preferably on the north side of Reddy Branch. The Meadow Branch crossing currently proposed is a two-cell culvert. One cell culvert during low base flows will be designated for wildlife passage.

The incidence of wildlife collisions with vehicles could be reduced by restricting or inhibiting wildlife access to the highway, or by enabling motorists to avoid collisions. These measures could include combinations of fencing, one-way gates, passageways, reflectors, lighting, etc. The associated loss of wildlife caused by alternates may be mitigated by the enhancement of the wildlife habitat through reforestation including vegetation with high wildlife food value (mast producing trees, seed, or berry producing shrubs, etc.), and plants which will provide cover for wildlife.

b. Aquatic Wildlife

The No-Build Alternate would not impact aquatic wildlife populations. All of the Build Alternates, including SHA's Selected Alternate, could potentially impact aquatic wildlife populations, including fish (Table III-10) and macroinvertebrates (Appendix F). The impacts could include uncontrolled runoff, which increases the potential for excessive sedimentation and pollutants to enter a waterway. Excessive sediment entering the stream may impact spawning areas as well as reduce the overall aquatic habitat diversity. This is especially true along riffles where sediment, typically silt, fills in the voids between gravel and cobble, limiting opportunities for fish to successfully deposit eggs. Other impacts affecting overall water quality and habitat could include loss of vegetation along streambanks.

The likelihood of temporary and especially permanent impacts could be reduced by incorporating best management practices (BMPs), which are commonly used as part of construction activities adjacent to waterways and wetlands. The long-term impacts to water resources and the aquatic communities resulting from the proposed project would be negligible, given that proper BMPs would be incorporated. In addition, construction activities should be restricted, if possible, during the spawning seasons (generally between March and June).

All five Build Alternates would result in the crossing of Reddy Branch. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B would require a stream crossing over Meadow Branch immediately south of Brookeville Road and west of MD 97. A box culvert design has been coordinated with the resource agencies for the SHA Selected Alternate's crossing of Meadow Branch. Differences in the impacts to the stream between each alternate are negligible, however, floodplain impacts vary as described in Section IV-H.

3. <u>Rare, Threatened, and Endangered Species</u>

Neither the No-Build, nor any of the Build Alternates, would impact any endangered or threatened plant or animal species. The USFWS confirmed that no federally-listed or proposed for listing endangered or threatened species are in the project area. In correspondence, DNR, Wildlife and Heritage Division reported no records for federal or state rare, threatened, or endangered plants or animals in the project area, however, several small American Chestnut trees and saplings are evident particularly along the western portion of the study area, as described in Section III.J.3. The western alternates are anticipated to impact a small number of individual trees. Even though this species is listed as a state rare or uncommon plant species, only large mature flowering chestnut trees are commonly monitored by DNR.

4. <u>Unique and Sensitive Areas</u>

The portion of Reddy Branch Stream Valley Park designated as a protection area for DNR's watchlist species, shingle oak (*Quercus imbricaria*), would be impacted by SHA's Selected Alternate, Alternate 7 Alternate 8A, and Alternate 8B (Figure III-15). The protection area impacts for these alternates are comparable and range between 4.39 and 5.98 acres. Shingle oaks are not found through the protection area as large stands but are instead evident as small-scattered groupings or only as individual trees.

In November 2002, 26 shingle oaks were identified within the ROW of SHA's Selected Alternate. The trees were found both individually and in clusters. The majority of the shingle oaks with diameters under one foot appeared to be stressed. Five larger species, with diameters of approximately one foot, appeared to be in satisfactory condition.

Alternate 5C and the No-Build Alternate would not impact the shingle oak protection area. Agency correspondence is included in **Section VI**. **Table IV-9** summarizes the proposed impacts to the shingle oak protection area. Since the shingle oak is not listed as either threatened or endangered, any protection measures are voluntarily. Unless a species is listed by DNR as either threatened or endangered, there are no legal or regulatory measures in which to protect the species. Subsequently, no mitigation is required for the shingle oak impacts. However, the SHA would include shingle oak plantings as part of the reforestation efforts as described under **Section J** (Vegetation and Wildlife).

Category	Alternate 5C (acres)		Alternate 7 (acres)		SHA's Selected Alternate (acres)	Altern (ac	ate 8A res)	Alternate 8B (acres)	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Shingle Oak Area Impacts	0.00	0.00	4.83	4.39	4.83	5.65	5.10	5.98	5.29

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Note: Impacts are based on ROW widths.

K. AIR QUALITY

1. **Objectives and Type of Analysis**

This analysis will serve as support documentation for the project and has been prepared in accordance with the USEPA, FHWA, and SHA guidelines. CO impacts are analyzed as the accepted indicator of vehicle-generated air pollution.

USEPA's CAL3QHC dispersion model was used to predict CO concentrations for air quality sensitive receptors for the design year (2020). The detailed analyses predict air quality impacts from

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CO vehicular emissions for both the No-Build Alternate and the Build Alternates at each receptor location. Modeled 1-hour and 8-hour average CO concentrations are added to background CO concentrations for comparison to the State and National Ambient Air Quality Standards (S/NAAQS).

2. <u>Receptor Site Locations</u>

Seventeen air quality receptors were selected to represent air quality sensitive locations within the study area. The receptor sites chosen for these receptors are single-family residences. In few cases, the edge of ROW was used if no receptor site was nearby. The locations of the air quality receptors are described in Section III.K and are identified in Table IV-10 and Table IV-11 and on Figure III-17.

3. Conformity with Regional Air Quality Planning

The MD 97 Brookeville Project is located in Montgomery County, Maryland. This county is not designated as non-attainment for CO, NO₂, SO₂, Pb, or PM_{10} , but is designated as a serious non-attainment area for ozone O₃. Since the project is located in an ozone non-attainment area, conformity to the State Implementation Plans (SIPs) is determined through a regional air quality analysis performed on the Transportation Improvement Plan (TIP) and transportation plan. This project conforms to the SIP as it originates from a conforming TIP and transportation plan. The 2003 Constrained Long Range Transportation Plan was approved by USEPA, FTA and FHWA. Also, the TIP was approved on February 23, 2004.

4. <u>Analysis Input</u>

a. Traffic Data

The traffic data used for this air quality analysis included ADTs, hourly AM and PM peak hour volumes, and percent daily distributions (diurnal traffic curves) for both the Build and No-Build Alternates. Traffic data and traffic speeds were provided by SHA for the years 2000 and 2020. Vehicle speeds were assumed the posted speed limits. This data was compiled for each alternate and each year of study.

One signalized intersection at Gold Mine Road and existing MD 97 was included in the analysis of all of the alternates. The signal timing was assumed to be optimized based on current and future traffic volumes.

The traffic flow on the roundabouts was assumed as free-flow and the posted speed was reduced to 10 mph. The traffic volumes circulating on a specific roundabout were determined by combining the traffic volume of those roads converging at the roundabout.

b. Vehicular Emissions

Mobile source emission factors were obtained for use in the CO prediction models using the latest version of the USEPA Mobile Source Emission Factors Model, MOBILE5b (September 14, 1996). The emission rates of individual vehicles are influenced by factors such as ambient air temperature,

engine temperature, operating mode, average speed, and maintenance. The average emission rate for a fleet of vehicles operating on a highway is further influenced by the composition of the fleet, vehicle type, and vehicle age.

Vehicle CO emissions rates increase with decreasing ambient temperature. An ambient temperature of 20°F was used to determine peak hour impacts, while an average temperature of 35°F was selected to represent the composite hours that together make up the eight-hour average impact. Engine operating temperature is included in the emission rate calculation as the fraction of vehicles operating in the cold or hot modes. The Federal Test Procedure (FTP) operating mode (20.6 percent non-catalytic cold start vehicles, 27.3 percent catalytic hot start vehicles, and 20.6 percent catalytic cold start vehicles) was used to represent emissions from vehicles for MD 97. Vehicle maintenance is factored into the emissions rate calculation as the rate of compliance with the Maryland Vehicle Emissions Inspection Program (VEIP). The vehicle fleet mix and age also influence the average fleet emission rates. The vehicle mix for MD 97 was provided by SHA. The vehicle mix for other roads was assumed the same as MD 97. Regional average vehicle ages were assumed.

c. Meteorological Factors

For direct comparison to the S/NAAQS, CO concentrations were estimated for worst-case 1-hour and 8-hour periods. The meteorological conditions that would result in the maximum one-hour concentrations are (1) conditions of very light wind speeds (1.0 m/sec) and (2) very stable atmospheric conditions (Stability F). The wind direction that results in the maximum receptor concentration is dependent upon roadway/receptor geometry. In general, for receptors near free flow links, wind angles nearly parallel to the roadway yield the highest CO concentrations.

The worst case 1-hour average analyses conducted for this study were performed using the highest one-hour traffic volumes, Stability Class F, and a 1.0 m/sec. wind speed. Both AM and PM peaks were analyzed. The maximum one-hour CO impact was obtained for each air quality sensitive receptor by adding the background concentration to the 1-hour CO receptor-specific concentration.

To estimate the maximum 8-hour average CO concentration, daily traffic distributions (diurnal curves) were used to breakdown the ADTs into hourly traffic volumes. Hourly time segments were analyzed to determine the receptor-specific CO concentrations. The worst consecutive eight hours were averaged and added to the background CO concentration to obtain the 8-hour average CO concentration.

d. CAL3QHC Analysis

The mathematical model used to estimate future air quality concentrations was the current version of USEPA's CAL3QHC dispersion model (June 1993). The CAL3QHC dispersion model is a microcomputer-based modeling methodology developed to predict the level of CO or other inert pollutant concentrations from motor vehicles traveling near roadway intersections. The CAL3QHC model is a consolidation of the CALINE3 line source dispersion model and an algorithm that internally estimates the length of the queues formed by idling vehicles at signalized intersections. Based on the assumption that vehicles at an intersection are either in motion or in an idling state, the program is designed to predict air pollution concentrations by combining the emissions from both moving and idling vehicles. By including emissions from idling vehicles, CAL3QHC represents a more reliable tool then CALINE3 alone for predicting CO concentrations near signalized
intersections where idling vehicles interact with moving vehicles in complex configurations. Predictions of free flow traffic volumes using either CALINE3 or CAL3QHC would yield equivalent results.

The CAL3QHC program requires the roadways to be broken down into segments known as links. Links can be either free flow links (for vehicles moving at a constant velocity) or queue links (for idling vehicles). Since no signalized intersections were modeled in this air quality analysis, all the links used are free flow links. Each of these can be one of four types based on the roadway geometry (at-grade, fill, bridge, or depressed). The required inputs for each link are the end points, traffic volume (vehicles/hour), and the emission factor (g/veh* mile for free flow links or g/veh* hour for queue links).

A free flow link is defined as a straight segment of roadway having a constant width, height, traffic volume and speed, and vehicle emission factor. A change in any of these factors requires a new link to be coded. The width of a free flow link is the roadway width plus ten feet on each side of the roadway, to account for the dispersion of the plume generated by the wake of moving vehicles.

CAL3QHC also requires the input of meteorological factors. These factors are averaging time (minutes), surface roughness coefficient (cm), settling velocity (cm/s), deposition velocity (cm/s), wind speed (m/s), and mixing height (m). The values used for these factors were held constant throughout the analysis and are presented in **Table IV-10**.

CAL3QHC calculates the CO concentration at each receptor for a given wind direction. The wind direction was varied through a full 360 degrees in 5 degree increments in this study. The results for all wind directions for each receptor are placed in a matrix, and CAL3QHC determines the wind direction that caused the worst CO concentration at each receptor.

Variable	Value
Averaging Time	60 minutes
Surface Roughness Coefficient	108 cm (Suburban Area)
Settling Velocity	0.0 cm/second
Deposition Velocity	0.0 cm/second
Mix Height	1,000 meters
Scale Factor	0.3048 meters/foot
Source Height	0.0 meters (at grade Links) 5.0 meters (bridge Links)

TABLE IV-10 Air Quality Parameters

e. Background Levels

In order to calculate the total concentration of CO that occurs at a particular receptor site during worstcase meteorological conditions; the background levels are considered in addition to the levels directly attributable to the facility under construction. The background levels shown in **Table IV-11** were derived from the application of rollback methodology to on-site monitoring conducted by the Maryland Air Management Administration at their Rockpike Air Monitoring Station in Montgomery County during the period of 1995.

TABLE IV-11 Background Carbon Monoxide

Year	1-Hour (ppm)	8-Hour (ppm)
2000	4.4	2.6
2020	4.4	2.6

ppm= parts per million

Data obtained from Maryland Air Quality Data Report 1995

MDE, Air Management Administration, 2500 Broening Highway Baltimore, MD 21224

5. <u>Results of Microscale Analysis</u>

A summary of the CO concentrations is shown in **Table IV-12** and **Table IV-13**. The receptor's concentrations at all alternates are below the S/NAAQS in the 1-hour and 8-hour analyses.

Receptor	No- Alte	Build rnate	Alteri	nate 5C	Alter	nate 7	SH Sele Alte	IA's ected rnate	Alteri	ate 8A	Alterr	ate 8B
	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr
AQ-1	4.8	2.7	4.7	2.7	5.1	2.8	5.1	2.8	5.1	2.8	5.1	2.8
AQ-2	5.3	3.0	4.7	2.7	4.8	2.7	4.8	2.7	4.9	2.7	4.7	2.7
AQ-3	4.8	2.7	4.5	2.6	5.2	2.7	5.2	2.7	5.3	2.7	5.0	2.8
AQ-4	6.3	3.5	5.0	2.8	6.4	3.4	6.4	3.4	6.4	3.4	6.4	3.4
AQ-5	7.9	4.6	7.7	4.3	7.7	4.3	7.7	4.3	7.7	4.2	7.7	4.3
AQ-6	5.2	2.9	5.2	2.8	6.2	3.0	6.2	3.0	6.2	3.0	6.2	3.0
AQ-7	5.5	3.0	5.3	2.8	7.2	3.4	7.2	3.4	7.2	3.4	7.2	3.4
AQ-8	4.9	2.8	4.6	2.7	5.0	2.8	5.0	2.8	5.0	2.8	5.0	2.8
AQ-9	4.8	2.8	5.0	2.8	4.9	2.7	4.9	2.7	4.9	2.7	4.9	2.7
AQ-10	4.6	2.7	4.9	2.7	4.5	2.7	4.5	2.7	4.5	2.7	4.5	2.7
AQ-11	4.8	2.7	4.8	2.7	4.7	2.7	4.7	2.7	4.6	2.7	4.6	2.7
AQ-12	4.6	2.7	4.9	2.8	4.5	2.6	4.5	2.6	4.5	2.6	4.5	2.6
AQ-13	6.4	3.5	5.1	2.9	5.1	2.9	5.1	2.9	5.1	2.9	5.2	2.9
AQ-14	4.5	2.6	4.4	2.6	4.6	2.6	4.6	2.6	4.8	2.7	4.6	2.6
AQ-15	4.8	2.8	4.5	2.6	4.7	2.7	4.7	2.7	4.9	2.7	4.9	2.8
AQ-16	4.5	2.6	5.4	2.9	4.5	2.6	4.5	2.6	4.5	2.6	4.5	2.6
AQ-17	4.6	2.7	5.3	2.9	4.6	2.7	4.6	2.7	4.6	2.7	4.6	2.7

 TABLE IV-12
 Carbon Monoxide Concentrations - Year 2000

Notes: 1-hour CO concentrations include a 4.4-ppm background concentration. Worst-case (am or pm) shown. 8-hour CO concentrations include a 2.6-ppm background concentration.

S/NAAQS for 1-hour average is 35.0 ppm.

S/NAAQS for 8-hour average is 9.0 ppm.

IV. Environmental Consequences

Receptor	No-] Alte	Build rnate	Alterr	ate 5C	Alter	nate 7	SH Sele Alte	lA's ected rnate	Alteri	nate 8A	Alter	nate 8B
	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr
AQ-1	5.0	2.8	4.9	2.8	5.5	3.0	5.5	3.0	5.5	3.0	5.5	3.0
AQ-2	5.6	3.2	4.8	2.7	5.1	2.8	5.1	2.8	5.1	2.8	5.1	2.8
AQ-3	4.9	2.8	4.7	2.7	5.3	2.9	5.3	2.9	5.3	2.9	5.4	2.9
AQ-4	7.1	3.8	5.3	2.9	7.0	3.7	7.0	3.7	7.0	3.7	7.1	4.9
AQ-5	8.7	4.9	9.1	5.1	9.2	5.2	9.2	5.2	9.2	5.2	9.2	5.2
AQ-6	5.9	3.1	5.7	3.0	6.7	3.3	6.7	3.3	6.7	3.3	6.7	3.3
AQ-7	6.1	3.2	6.0	3.1	7.9	3.9	7.9	3.9	7.9	3.9	7.9	3.9
AQ-8	5.1	2.9	4.9	2.7	5.7	2.9	5.7	2.9	5.7	2.9	5.7	2.9
AQ-9	5.3	2.9	5.4	3.0	5.2	3.0	5.2	3.0	5.2	3.0	5.2	3.0
AQ-10	5.0	2.7	5.3	2.9	4.9	2.7	4.9	2.7	4.9	2.7	4.9	2.7
AQ-11	5.1	2.8	4.9	2.7	4.8	2.7	4.8	2.7	4.8	2.7	4.8	2.7
AQ-12	4.9	2.7	5.3	2.9	4.6	2.7	4.6	2.7	4.6	2.7	4.6	2.7
AQ-13	7.0	3.9	5.4	3.0	5.3	3.0	5.3	3.0	5.3	3.0	5.6	3.0
AQ-14	4.7	2.7	4.6	2.7	4.8	2.7	4.8	2.7	5.2	2.8	5.0	2.7
AQ-15	5.0	2.8	4.7	2.7	4.9	2.8	4.9	2.8	5.4	2.9	5.8	2.9
AQ-16	4.7	2.7	5.6	3.0	4.6	2.7	4.6	2.7	4.6	2.7	4.6	2.7
AQ-17	4.7	2.7	5.4	2.9	4.6	2.7	4.6	2.7	4.6	2.7	4.6	2.7

TABLE IV-13 Carbon Monoxide Concentrations - Year 2020

Notes: 1-hour CO concentrations include a 4.4-ppm background concentration. Worst-case (am or pm) shown. 8-hour CO concentrations include a 2.6-ppm background concentration.

S/NAAQS for 1-hour average is 35.0 ppm.

S/NAAQS for 8-hour average is 9.0 ppm.

A relative comparison of the No-Build Alternate versus the Build Alternates shows a decrease in CO concentrations for receptors located in the Town of Brookeville for both years 2000 and 2020. These decreases can be attributed to the reduction of traffic volumes along the existing downtown area of MD 97. There is an increase in the CO values at receptors located along the bypass alignment for both years 2000 and 2020. These increases can be attributed to the construction of the roadway closer to these receptors. An increase in CO concentrations was also obtained at receptors located near the proposed roundabouts.

The maximum 1-hour increase is 1.7 ppm in 2000 and 1.8 ppm in 2020. The maximum 8-hour increase is 0.4 ppm in 2000 and 0.9 ppm in 2020. The maximum 1-hour decrease is 1.3 ppm in 2000 and 1.8 ppm in 2020. The maximum 8-hour decrease is 0.7 ppm in 2000 and 0.9 ppm in 2020.

6. <u>Construction Impacts</u>

The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. SHA has addressed this possibility by establishing "Standard Specifications for Construction and Materials," which specify procedures to be followed by contractors involved in site work.

The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the "Specifications" in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland." The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03 D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area.

L. NOISE IMPACT ASSESSMENT

1. <u>Impact Analysis</u>

An impact analysis was performed in compliance with recommended FHWA and SHA methodologies. Noise abatement criteria for various land uses have been established by FHWA in 23 CFR, Part 772. The noise abatement criteria for land uses occurring in the study area, (Category B: picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals) is 67 dB(A) Leq. Future year 2020 noise levels for the project area were predicted using the FHWA Noise Prediction Model (TNM).

According to the procedures described in 23 CFR, Part 772, Table I, noise impacts occur when predicted traffic noise levels for the design year approach or exceed the noise abatement criterion prescribed for a particular land use category, or when the predicted noise levels are substantially higher than the existing ambient noise levels. SHA and FHWA define an approach as 66 dBA for Category B, and use a 10 dBA increase to define a substantial increase. This analysis was completed in accordance with federal procedures and evaluated in accordance with SHA's Sound Barrier Policy.

The SHA Noise Policy provides for the evaluation of sound barriers for communities adversely impacted by noise from state highways. Sound barriers are evaluated in two separate categories. The first category is for the construction of new highways or capacity additions to existing highways (Type I). The second category is for existing highways not being expanded (Type II). The proposed improvements developed for MD 97 would be considered a Type I project.

An impact analysis was performed for each of the Alternatives Retained for Detailed Study dated October 2000. The impacts identified for each alternate are listed in **Table IV-14** and described as follows:

TABLE IV-14 Noise Analysis Summary

Noise		T -:			SHA's		
Area	Receptor	Modeled	SC Alternate	Alternate	Selected	Alternate 8A	Alternate 8B
(NSA)		inoucleu			Alternate	0/1	0.0
	3	48	46	53	53	53	55
	1A	45	44	56	56	56	55
	1B	46	44	56	56	57	57
	1BB	44	45	56	56	56	56
	1C	39	38	46	46	47	47
	3B	46	46	52	52	52	53
	3C	47	47	52	52	54	55
	4A	63	60	66	66	66	66
	4B	62	60	66	66	66	66
1	4C	68	65	72	72	72	72
	5D	59	62	62	62	62	62
	5E	53	56	56	56	56	56
	5F	52	55	56	56	56	56
	5G	52	54	57	57	57	56
	5H	63	66	66	66	66	66
	51	59	61	62	62	62	62
	<u>7C</u>	52	53	58	58	59	58
	7D	47	51	53	53	53	53
	/E	59	58	65	65	64	64
	1	41	55	42	42	42	43
	R-02	63	6 7	66	66	66	66
	5A	52	56	56	56	56	56
	<u>5B</u>	45	48	50	50	49	48
	<u> </u>	48	52	52	52	51	51
	9A 0D	51	<u>09</u>	52		55	54
	<u>9B</u>	48	53	53	33	52	52
	90	42		40	40	43	43
	<u>9D</u>	40	40 55	43	43	43	43
	10A	40	54	43	43	42	43
	100	40	52	43	43	42	43
	100	47	52	43	45	42	42
	10D	47	51	4	44	42	42
2	10E	42	43	37	37	37	37
_	10G	42	46	37	37	37	37
	11G	47	51	42	42	42	42
ĺ	12A	48	61	44	44	44	43
	12B	47	59	43	43	42	43
ĺ	12C	46	53	41	41	41	42
ľ	12D	46	49	41	41	41	41
ſ	12E	47	49	41	41	41	41
Ĩ	12F	49	52	43	43	43	43
	12G	44	51	41	41	40	40
ľ	12H	45	49	41	41	42	42
ſ	12I	46	58	42	.42	42	43
[12J	43	48	40	40	40	40
ľ	12K	43	47	39	39	39	39
	12L	44	50	40	40	40	40

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Noise Sensitive Area (NSA)	Receptor	Existing Modeled	Alternate 5C	Alternate 7	.SHA's Selected Alternate	Alternate 8A	Alternate 8B
	4	62	59	59	59	59	60
	5	64	61	61	61	61	61
	2A	51	48	57	57	56	56
	2B	63	59	60	60	60	60
	6A	47	46	59	59	60	59
	6B	47	46	56	56	56	56
	6C	67	65	64	64	64	65
	ഩ	53	51	52	52	53	53
	6E	55	54	52	52	52	52
	6F	63	60	59	59	59	60
	6G	65	62	62	62	62	62
3	7A	61	58	60	60	60	60
	7B	54	54	55	55	54	55
	7F	63	61	65	65	63	62
	8A	50	48	57	57	57	56
	8B*	47	46	63	63	63	63
	9E	50	58	49	49	48	49
	11A	54	56	46	46	46	46
	11B	52	56	47	47	47	47
	13A	55	52	54	54	54	54
	13B	53	51	54	54	54	54
	13C	51	51	51 ·	51	51	52
	13D	69	66	65	65 ·	66	66
	R-06	64	61	67	67	67	67
	4D	53	50	56	56	56	57
	4E	55	53	58	58	58	58
	4F	45	47	48	48	48	48
	11C	49	56	45	45	46	46
4	11D	48	54	45	45	44	45
4	11E	49	50	46	46	45	46
	11H	47	55	43	43	44	44
	11I	47	58	43	43	43	43
	11J	48	50	45	45	44	45
	11K	47	54	43	43	43	43
ŀ	11L	46	59	43	43	42	42

 TABLE IV-14 Noise Analysis Summary (Continued)

Note: Bold Italic values meet or exceed 66 dBA impact threshold.

* = Data collection location, no noise sensitive receptors nearby.

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a. SHA's Selected Alternate and Alternate 7

During the impact analysis for SHA's Selected Alternate and Alternate 7, six of the modeled receptors identified noise levels greater than 66 dBA. Two of the receptors, 5H and R-02 (NSA-1 and NSA-2, respectively), were located in the southern end of the study area along existing MD 97 just north of the intersection with Gold Mine Road (Figure III-18). The other four receptors (R-06, 4A, 4B, and 4C) with noise levels at or greater than 66 dBA were located in the northern end of the study area along existing MD 97. Receptor R-06 represents one residence located in NSA-4, while Receptors 4A, 4B, and 4C represent three residences located in NSA-1. Each of the impacted receptors at or exceeding 66 dBA were located along MD 97 and were influenced by the 2020 nobuild traffic volumes on MD 97 and not as a result of SHA's Selected Alternate and Alternate 7.

In addition to the receptors at or exceeding 66 dBA, four receptors (1A, 1B, 1BB, and 6A), while below 66 dBA, were impacted resulting from a substantial increase of 10 dBA or more. Receptors 1A, 1B, and 1BB were located in NSA 1, while Receptor 6A was located in NSA-3. These receptors represent five residences located along Dubarry Drive and Rena Court in NSA-1 and one residence located along existing MD 97 in NSA-3, respectively (Figure III-17).

b. Alternate 5C

The TNM analysis for Alternate 5C identified four of the modeled receptors with noise levels equal to or greater than 66 dBA (5H, R-02, 9A, 13D). Two of the receptors, 5H and R-02 (NSA-1 and NSA-2, respectively), were located in the southern end of the study area along existing MD 97 just north of the intersection with Gold Mine Road (Figure III-18). Receptor 9A was located along Alternate 5C and represents two residences located at a common drive off of Gold Mine Road in NSA-2. Receptor 13D, was located off of Market Street close to the intersection of Market and High Streets in NSA 3.

In addition to the receptors approaching or exceeding 66 dBA, four receptors (Receptors 12A and 12B in NSA-2, and Receptors 11I and 11L in NSA-4), while below 66 dBA, were impacted resulting from a substantial increase of 10 dBA or more. These receptors were located in the proposed residential subdivision located off the proposed Bordly Drive (Figure III-17).

c. Alternate 8A

As with SHA's Selected Alternate and Alternate 7, the TNM analysis for Alternate 8A identified seven receptors with noise levels at or greater than 66 dBA in the study area. Two of the receptors (R-02 and 5H) were located in the southern end of the study area along existing MD 97 just north of the intersection with Gold Mine Road. One (13D) was located off of Market Street close to the intersection of Market and High Streets in NSA 3. The other four receptors (R-06, 4A, 4B, and 4C) with noise levels at or greater than 66 dBA were located in the northern end of the study area along existing MD 97 (Figure III-17). Receptor R-06 represents one residence located in NSA 4, while Receptors 4A, 4B, and 4C represent three residences located in NSA-1. All six of the impacted receptors at or exceeding 66 dBA were located along MD 97 and were influenced by the 2020 nobuild traffic volumes on existing MD 97 and not as a result of Alternate 8A.

In addition to the receptors approaching or exceeding 66 dBA, four receptors (1A, 1B, 1BB, and 6A), while below 66 dBA, were impacted resulting from a substantial increase of 10 dBA or more. Receptors 1A, 1B, and 1BB were located in NSA 1, while Receptor 6A was located in NSA-3. These receptors represent five residences located along Dubarry Drive and Rena Court and one residence located along existing MD 97 (Figure III-17). These receptors are impacted resulting from the location of Alternate 8A.

d. Alternate 8B

As with SHA's Selected Alternate, Alternate 7, and Alternate 8A, seven of the modeled receptors for Alternate 8B had noise levels at or greater than 66 dBA for the project area. Two of the receptors (R-02 and 5H) were located in the southern end of the project area along existing MD 97 just north of the intersection with Gold Mine Road. One (13D) was located off of Market Street close to the intersection of Market and High Streets in NSA 3. The other four receptors (R-06, 4A, 4B, and 4C) with noise levels at or greater than 66 dBA were located in the northern end of the project area along existing MD 97 (Figure III-17). Each of the impacted receptors at or exceeding 66 dBA were located along MD 97 and were influenced by the 2020 no-build traffic volumes on MD 97 and not as a result of Alternate 8B.

In addition to the receptors approaching or exceeding 66 dBA, four receptors (1A, 1B, 1BB, and 6A), while below 66 dBA, were impacted resulting from a substantial increase of 10 dBA or more. Receptors 1A, 1B, and 1BB were located in NSA-1, while Receptor 6A was located in NSA-3. These receptors represent five residences located along Dubarry Drive and Rena Court and one residence along existing MD 97 (Figure III-17). These receptors are impacted from the location of Alternate 8B.

2. Impact Assessment and Abatement Consideration

The need for consideration of mitigation measures was identified based upon the FHWA Noise Abatement Criteria (NAC) and the current SHA Noise Policy. Noise control for minimizing noise impacts may be warranted in those areas where noise levels from the roadway exceed the NAC, or where noise levels would substantially increase over existing ambient noise levels.

Where warranted as a result of the impact analysis, a detailed analysis of mitigation measures was conducted. Existing natural terrain and designed mitigation features, such as cut sections and/or retaining walls, were incorporated into the analysis of abatement and mitigation measures.

Decisions on the implementation of noise abatement measures were considered only after careful and thorough consideration of the feasibility and reasonableness of proposed noise abatement measures. Under the current SHA Noise Policy, several factors are evaluated to determine whether noise abatement is feasible and reasonable.

3. <u>Sound Barrier Feasibility and Reasonableness</u>

The determination of feasibility and reasonableness of providing sound barriers will consider the following for both the Type I and Type II elements of the sound barrier program.

a. Feasibility

Sound barrier feasibility is defined as the engineering and acoustical ability to provide effective noise reduction. Sound barrier feasibility will be based upon the following.

- If noise levels cannot be reduced by at least 3 dBA at impacted receptors, a noise barrier will not be considered feasible. The noise reduction goal for receptors with the highest noise levels (first row receivers) is 7-10 dBA. If a noise reduction of 7-10 dBA cannot be achieved, the barrier will be considered not to be feasible.
- If the placement of a sound barrier will restrict pedestrian or vehicular access or would cause a safety problem, such as limiting sight distance or reduction of a vehicle recovery area, the barrier will not be considered feasible.
- If the construction of a sound barrier will result in significant utility impacts, the barrier will not be considered feasible. Significant utility adjustments can have a major impact on barrier design options and construction costs.
- If construction of a sound barrier will have an impact upon existing drainage, it could be considered not to be feasible. Drainage is an important element in the locations and design of a sound barrier. The potential for impact to drainage patterns and system and flooding will be considered in the overall decision on whether construction is feasible and reasonable.

b. Reasonableness

Each individual impact area will also be evaluated to determine if construction of a sound barrier is reasonable. Reasonableness will be based upon the following:

- If 75 percent of the impacted residents do not approve the proposed sound barrier, the barrier could be considered not to be reasonable.
- For Type I projects, if existing noise levels are expected to increase by 10 dBA or more, but will be less than 57 dBA, a sound barrier will be considered not to be reasonable.
- For Type I projects, if a change over no-build levels of less than 3 dBA would result from a build condition, a sound barrier could be considered not to be reasonable. In the assessment of the no-build to build noise level change, consideration will be given to the cumulative effects of highway improvements made after the original highway construction. If the cumulative increase in design year build noise levels at noise sensitive receivers that existed when prior improvements were made is equal to or greater than 3 dBA, noise abatement could be considered reasonable.
- If noise levels equal or exceeded 72 dBA at impacted noise sensitive receivers, SHA will consider a sound barrier reasonable for any proposed highway expansion that will increase noise levels provided that other feasibility and reasonableness criteria are met.

- If the cost of a sound barrier will exceed \$50,000 per benefited residence, the barrier will be considered not to be reasonable. The cost per residence is determined by the dividing the cost of a sound barrier by the total number of benefited residences. The total number of benefited residences will be the sum of the following:
 - (1) The number of impacted residences that would receive a 3 dBA or greater noise reduction.
 - (2) The number of non-impacted residences (noise levels below 66 dBA Leq) that would receive a 5 dBA or greater noise reduction.
 - (3) The number of impacted and non-impacted non-residential noise sensitive receivers (schools, churches, etc.) that would benefit from a sound barrier.

For Type I projects, SIIA will look at both the cost/residence for individual noise sensitive areas and the average cost/residence for the entire project in determining reasonableness. Noise sensitive areas with a cost/residence of less than \$100,000 would be included in the project cost averaging. If the average cost/residence for the project is less than \$50,000, sound barriers will be considered reasonable. A total cost of \$16.54 per square foot is assumed to estimate total barrier cost. This cost figure is based upon current costs experienced by SHA and includes the costs of panels, footings, drainage, landscaping, and overhead.

- If a very tall sound barrier would have to be located close to the impacted receptors, and would have a negative visual impact, construction of the barrier could be considered not to be feasible. The relationship of the location of a sound to the receptors to be protected will be considered in making a reasonableness determination.
- If the construction of a sound barrier will result in an impact to a Section 4(f) resource, it could be determined not to be reasonable. Section 4(f) resources include publicly owned recreation areas and parks, wildlife areas, conservation areas, and historic sites that either are on or considered eligible for the National Register.

Reasonableness will consider the significance of impact and the feasibility of avoidance. A Section 4(f) Evaluation (Section V) has been prepared as required by federal regulations and consultation and coordination with those responsible for the resource will be carried out and documented.

• The control of new development adjacent to state highways in high noise zones at the local level is critical to the overall abatement of highway noise. Sound barrier reasonableness will consider the local priority on approving new development adjacent to state highways in the determination of providing noise abatement for highway construction or reconstruction projects.

4. Detailed Analysis of Impacted Areas and Feasibility and Reasonableness

The following is a detailed analysis of the impacted areas identified and the feasibility of noise control for each alternate:

a. SHA Selected Alternate, Alternate 7M

As identified in the impact analysis section, the residences impacted are the same for SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B. While there are minor differences

with respect to the vertical and horizontal alignment for these alternates, there are no significant differences between the sound level predicted for the alternates at the impacted receptors. Therefore, the mitigation measures analyzed for SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B are the same.

Receptor 5H represents one residence located along the western side of MD 97 at the Gold Mine Road intersection. A noise abatement wall 400 feet long and 20 feet high would be required at a cost of approximately \$132,000 per residence. This cost is well above the SHA reasonableness criteria of \$50,000 per benefited residence. In addition, construction of a noise abatement wall would not be effective because of the noise contribution from Gold Mine Road.

Receptor R-02 represents one residence located along the east side of MD 97 at the Gold Mine Road intersection. Similar to the analysis for receptor 5H, a noise abatement wall 400 feet long, and 20 feet high would be necessary at a cost of approximately \$132,000 per residence. This cost is well above the SHA reasonableness criteria of \$50,000 per benefited residence.

Receptors 1A, 1B, and 1BB represent five residences located along Dubarry Drive and Rena Court in NSA-1. Construction of a noise abatement wall along the top of the slope of the proposed alignment would not be reasonable according to the SHA Noise Policy. The noise impact at these residence, while increasing by 10 dBA or more, does not exceed 57 dBAs. This area, while not qualifying for a noise barrier, was close enough to the SHA criteria that it will be reassessed in final design.

Receptor 6A is located within the historic boundary of Brookeville in NSA-3. Receptor 6A was placed in the back yard area of one residence, which has access to existing MD 97. As with receptors R-02 and 5H, a noise abatement wall 400 feet long and 20 feet high would be necessary for Receptor 6A. Sound mitigation is not reasonable based on a cost per residence of \$132,000, which exceeds SHA's Noise Policy criteria of at or below \$50,000 per residence.

5. <u>Construction Noise</u>

Land uses that would be sensitive to vehicular noise would also be sensitive to construction noise. Although highway construction is a short-term phenomenon, it can cause significant noise impacts. Additionally, it is likely that some construction may occur at night to avoid severe traffic impacts. The extent and severity of the noise impact would depend upon the phase of construction and the noise characteristics of the construction equipment in use. Construction would have direct impact on receptors located close to the construction site and would have an indirect impact on receptors located near roadways whose traffic flow characteristics are altered due to rerouting from the construction site.

As with any major construction project, areas around the construction site are likely to experience varied periods and degrees of noise impact. This type of project would probably employ the following pieces of construction equipment that would likely be sources of construction noise:

- Bulldozers and earthmovers
- Graders
- Front End Loaders

- Dump Trucks and other diesel trucks
- Compressors

Maintenance of construction equipment will be regular and thorough to minimize noise emissions because of inefficiently tuned engines, poorly lubricated moving parts, poor to ineffective muffling/exhaust systems, etc.

M. MUNICIPAL, INDUSTRIAL, AND HAZARDOUS WASTE SITES

The No-Build Alternate would not impact waste sites in the project area.

There is potential for each Build Alternate to impact one of the underground storage tanks (UST) listed in the ERIIS report. These sites are shown on Figure III-17. SHA's Selected Alternate, Alternate 7, Alternate 8A, and Alternate 8B could impact a currently active UST containing gasoline north of the proposed roundabout along MD 97. If impacted, formal Phase I and probably Phase II studies would be warranted to investigate potential liability issues. Alternate 5C would not impact a currently active UST containing gasoline along MD 97 at the northern end of the project area, near a pond on Camp Bennett property.

It is recommended that subsurface soil and groundwater samples be collected and analyzed as a part of a Phase II-Preliminary Site Investigation (PSI) prior to acquisition of property involving any of these sites. The purpose of the PSI would be to chemically characterize the sites in question and determine if hazardous materials would be encountered during construction of the roadway.

As part of final design, the area of contact with each of these sites would be thoroughly investigated and necessary site-specific measures to minimize impacts would be identified. This would most likely involve the removal and disposal of the waste at an authorized and permitted disposal facility.

N. ENERGY

There would be no notable differences in energy usage requirements between the alternates. Initially, the No-Build Alternate would require the least amount of expended energy as compared to the construction of a Build Alternate. However, in the long term, the energy expended due to projected traffic congestion in the design year as a result of selecting the No-Build Alternate is likely to exceed the initial energy expenditure for construction of one of the Build Alternates.

O. SECONDARY AND CUMULATIVE EFFECTS ANALYSIS

1. <u>Introduction</u>

Secondary impacts are defined by the Council on Environmental Quality (CEQ) as those that are "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR 1508.8). The objective of the secondary impact evaluation is to identify potential areas that are likely to develop, or be induced to develop, because of the proposed alternates and to identify/assess the resultant secondary impacts.

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Cumulative effects are defined by the CEQ as those, which result from "the incremental impact of the action when added to other past and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). The objective of the cumulative impact evaluation is to identify additional major infrastructure improvement projects that are either planned or have been recently completed in the project area and region within the secondary and cumulative effects analysis (SCEA) time frame; identify potential future land uses; and to identify/assess the resultant cumulative impacts to environmental resources.

a. Boundary Development

The geographic boundary for conducting a SCEA is shown on **Figure IV-1**. The determination of the SCEA boundary is based on an overlay of census tract and planning area boundaries, the Area of Traffic Influence, sub-watershed boundaries, sewer and water service locations, and various environmental resources. Portions of the Rocky Gorge sub-watershed boundary were also considered in establishing the SCEA boundary.

All of the Build Alternates retained for detailed study would be located entirely within the Rocky Gorge sub-watershed (a sub-watershed of the Patuxent River). Rocky Gorge Dam is on the Patuxent River southeast of Brookeville. The dam is an effective sediment trap and is well downstream of the Brookeville area. Therefore, the dam is the downstream extent as well as the southeast limit of the SCEA boundary.

The Patuxent River State Park generally parallels the Patuxent River on both sides. Additionally, the Patuxent River is the boundary between Montgomery and Howard Counties. Western Howard County is zoned Rural Conservation and Rural Residential, and does not have the sewer and water infrastructure planned to accommodate large-scale residential development. Based on communication with the Howard County Department of Planning and Zoning, improvements to MD 97 in Brookeville would not have an effect on zoning in Howard County (Rutter, J., 1997). A review of MDP agricultural lands mapping for western Howard County reveals an abundance of properties already protected through various state and county easements. For these reasons, Howard County (other than the Howard County portion of the Patuxent River State Park) was not included in the SCEA boundary. The northern and eastern SCEA boundaries are coincident with Patuxent River State Park within Howard County from MD 108 to the Rocky Gorge Dam, 12 miles downstream of Brookeville.

In Montgomery County, north of the Brighton Dam, the limits of Patuxent River State Park are not within the Rocky Gorge sub-watershed. However, this section of the park is included within the SCEA boundary in order to address potential secondary and cumulative effects of the planned replacement of the MD 97 Bridge over the Patuxent River. Therefore, a large section of the park west of the MD 97 Bridge to MD 108 is included. At the request of resource agencies, the boundary was extended to include a section of the Patuxent River State Park in Montgomery County. The boundary connects to the Rocky Gorge sub-watershed near the intersection of MD 108 and MD 650, and generally follows the divide of the Rocky Gorge sub-watershed. The western boundary coincides with this divide extending to the southeast extending from MD 650 to the Patuxent River State Park. As in Howard County, the park limits are used as the SCEA boundary from MD 108 south to Rocky Gorge Dam.

b. Secondary and Cumulative Effects Time Frame

The time frame for the SCEA takes into account past, present, and reasonably foreseeable future actions. As the traffic forecasting models incorporate future land use assumptions, 2020 is the future time frame for the SCEA.

Land use data was a key element in determining the time frame for the Brookeville SCEA. Readily available land use data included mapping from 1973, 1990, and 1997. Prior to 1970, land use data was limited. In addition, several events that affected Brookeville occurred in the early 1970's including accelerated urbanization in Olney and the construction of a sewer pumping station in Brookeville, which supported the development of larger subdivisions. Therefore, 1970 was selected as the starting point for the SCEA.

c. Secondary and Cumulative Effects Methodology Overview

The assessment methodology incorporated past and present land use and socio-economic changes. In addition, future land use patterns that are foreseeable and may influence the project were considered. A series of trends analysis based on overlays of each resource were conducted. The trends analysis consisted of reviewing analytical and mapped data to identify past, present, and future effects.

Various overlay exercises, using a combination of paper maps and GIS technology, were conducted to identify relationships between resources. The boundary development and population analysis used census tracts, planning area boundaries, Washington Council of Government's Transportation Analysis Zones, zoning classification within the Olney Master Plan boundaries, and Rocky Gorge sub-watershed boundaries. Census Tracts 7001.03, 7013.04, 7013.09, 7013.10, and 7014.08 were overlaid with Montgomery County Planning Area 23. Figure IV-2 illustrates the census tracts, the Transportation Analysis zones, and the Rocky Gorge sub-watershed boundaries. Planning Area 23 is shown on Figure IV-3.

2. <u>Trends Analysis Overview</u>

a. Development and Infrastructure Trends

The land use along MD 97 in Montgomery County is primarily residential with little or no industrial or business development. Most of the recent residential development near the MD 97 Brookeville Project occurred in Olney from 1970 through 1995. During this time, northeast Olney changed from primarily agricultural land to residential land. North of the Town of Brookeville, zoning is primarily low density residential. According to M-NCPPC Development Review Division minimal development is planned north of the Town of Brookeville. Record plats and preliminary development plans were obtained. In general, there are few proposed developments with the majority typically being one to four lots per plat. Development is generally piecemeal, by individual owners selling parcels of land that are limited to low density development. Few major subdivisions were identified. Those that were evident, either recently built or proposed, were almost all south of the Town of Brookeville. One exception to this is the Abrams subdivision, recently constructed immediately northeast of the Town of Brookeville. This subdivision is part of the Brookeville Farms community. Part of the Abrams subdivision project includes the extension of Bordly Drive



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to existing MD 97. Montgomery County is extending Bordly Drive from MD 97 to a point where the developer responsible for the Abrams subdivision has completed its portion of Bordly Drive. The extension is expected to be completed in Fall 2003. The extension of the road is limited east of MD 97 and will not add additional through lanes along MD 97. Water for the Abrams subdivision has been provided by WSSC. There is no sewer capacity throughout the subdivision nor are there any long term sewer plans by WSSC for this area. Dellabrooke, a 44-lot subdivision is near completion along Gold Mine Road, just outside of Olney. It is in a rural neighborhood cluster zone, with and overall density of one unit per 2.2 acres, and is served by sewer. An overall density of one unit per five acres is permitted in this area. Development may be clustered into lots smaller than five acres and the remaining acreage may be used as open space.

Development in the northern portion of Planning Area 23 is fairly restricted because it is in a rural policy area and densities are limited to one unit per five acres or one unit per 25 acres. The Olney Policy Area, different than Planning Area 23, is under a development moratorium because traffic capacity cannot meet the demands of new development. It will take two to three years to increase road capacity that would allow new development.

Sandy Spring/Ashton area is outside of the Olney Policy Area, east along Olney-Sandy Spring Road toward the reservoir. This area is a rural policy area, restricting density to one unit per five acres.

Sewer pumping stations and associated sewer lines were constructed in the Brookeville area in 1969. Sewer extensions have been limited to those areas south of Brookeville. Several metro stations are located in the vicinity of Brookeville including Glenmont (7.5 miles south of Brookeville), opened in 1998; Wheaton (11 miles south of Brookeville), opened in 1990; and Shady Grove (7.5 miles southwest of Brookeville), opened in 1984. Historic traffic volumes along MD 97 have not shown significant increases, growing at an average growth rate of two percent annually over the past 20 year period. No large employers are known to be present within the SCEA boundary. Commercial operations are limited to working farms and small businesses located within rural villages and within private homes.

b. Zoning Trends

As discussed in **Section III.A.3.b**, the Town of Brookeville is using Montgomery County zoning categories to guide future residential development, and land use controls are in place. Current zoning limits the amount of development within the secondary and cumulative effects boundary. Areas north and west of Brookeville are primarily zoned RDT, which requires a minimum of 25 acre lots for residential use. The area east of Brookeville is zoned Rural Cluster, which allows one home per five acres with provisions for open space.

The construction of new roadways can often be the catalyst for challenging existing zoning, typically to an increase in density. However, the Build Alternates are not expected to spur development or additional public works projects that would alter the landscape outside of the proposed ROW lines. As discussed earlier in **Section IV**, there would be limited access along any of the proposed bypasses. To ensure this, permanent easements would be held along the entire roadway preventing future access, widening, or connections to the bypass. A large part of the SCEA boundary is also already protected as either state and county parkland or private lands protected through a variety of agricultural and conservation easements. These protected lands are exempt from any future changes to existing zoning.

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Final Environmental Impact Statement PLANNING AREA 23 BOUNDARY ι-Patuxent River 97 State Park Damascus Road 32 650 Tridelphia Watershed 108 SCEA - 21 BOUNDARY Georgia Ave. 108 Sunshine Laytonsville Rachel Carson Sundown Road Conservation Tridelphia Park Reservoir Hawlings River Stream Valley PROJECT AREA New Hampshire Ave. Park Brighto Dam Road Claysville ζ. Brighto Dam Brookville Road ÷. Brookeville 650 Reddy Branch Park 5 ~~~ Olney Binklow 108 216 108 Olney Sandy Spring Shton . Howard Duckett (Rocky Gorge) Reservoir Williamsburg Village 2 182 115 Rocky Gorge Dam 97 1× 32 13.22 K \mathcal{V}



Olney and Olney Mill are the only two large residential growth areas within the SCEA boundaries. Olney is centered around the intersection of MD 97 and MD 108 and consists of both commercial development and residential subdivisions. Olney Mill consists entirely of several residential subdivisions and is located west of MD 97, north of MD 108, and south of Reddy Branch Stream Valley Park along Brookeville Road. The recently constructed Abrams subdivision, which is located east of Brookeville, required converting existing open space to alternative land uses within the SCEA boundaries. This could result in the loss of regulated and unregulated natural and cultural resources, which are characterized and discussed in Subsections 5 and 6. Any future land use changes would likely follow existing roadway corridors in or near areas that have already been developed, thereby minimizing potential impacts to the social or natural environment.

c. Transportation Trends

The following traffic improvements have occurred, or are planned, within the SCEA boundary:

- The dualization of MD 97 from MD 28 to MD 108 was completed in 1988. The northern terminus of this project is two miles south of Brookeville immediately outside of the secondary and cumulative analysis area.
- The MD 97 Bridge over the Patuxent River, located four miles north of Brookeville, was replaced in 1999 in order to raise it above the floodplain level. This two-lane bridge replacement does not add capacity to MD 97.
- The Montgomery County Department of Public Works, in cooperation with M-NCPPC, initiated a study of Bordly Drive from Georgia Avenue to connect with the Brookeville Farm development located east of Holiday Drive. The county is currently extending the road to where the developer of the Abrams subdivision has completed its portion of Bordly Drive. The typical roadway section includes a pavement width of 24 feet with eight feet of shoulders on each side, and a bike path on the south side. The connecting road is expected to be completed in Fall 2003.
- Howard Chapel Road Bridge was replaced in 2001. The bridge, located over the Patuxent River on the Montgomery and Howard County line, has been reconstructed without additional lane widening.
- The SHA is in the process of preparing a draft environmental impact statement for the Intercounty Connector Project. This project is proposing to link existing and proposed development areas between the I-270 and I-95/US 1 corridors within central and eastern Montgomery County and northwestern Prince George's County with a multi-modal, east-west highway. The study area is roughly bounded by I-495 to the south, I-270 to the west, I-95 to the east, and the Patuxent River to the northeast.

d. Upper Patuxent Watershed Rural Legacy Area

Montgomery County's Upper Patuxent River Reservoir Watershed (UPRRW) Rural Legacy Areas Program is a land conservation measure that ensures limited sprawl within the SCEA boundary. In 1999, the state approved the UPRRW as one of Maryland's designated Rural Legacy Areas. In addition, the county received \$850,000 in funding to purchase and preserve properties within the watershed, primarily along Patuxent River State Park and Hawlings River Stream Valley Park (Figure IV-4). Howard County also has an approved Upper Patuxent River Rural Legacy Area which is adjacent to portions of Montgomery County's Rural Legacy Area. Approximately 70 percent of the SCEA boundary is covered by the UPRRW. As a designated Rural Legacy Area, development and infrastructure opportunities are substantially limited (Rural Legacy is discussed further in Section IV.O.4.c-Agricultural Lands), especially in the northern and western portions of the SCEA boundary.

3. <u>Social Environment</u>

a. Population

Montgomery County has experienced substantial growth over the last two decades and has been the state's most populous jurisdiction since 1989. The total household population for 2000 was estimated at 873,341, a 15.4 percent increase over 1990's total population of 757,027. The county's population is expected to increase over the next two decades, although the rate of increase is estimated to decline compared to the two previous decades.

Within the SCEA boundary, three population profiles were considered. All three population and household profiles reflect similar trends, namely that north of Brookeville both population and household increases since 1990 have been low. Estimates for population and household numbers south of Brookeville are more characteristic of urbanized areas within the county.

The majority of the SCEA boundary within Planning Area 23 experienced marginal growth. Planning Area 23 included major growth sections, especially to the south, that reflected greater increases than the more rural portions of the planning area.

The second population profile included population and household numbers associated with SHA's Area of Traffic Influence study (Figure IV-2). Transportation Analysis Zones 584 and 593, located north of Brookeville and outside the PFA, showed minimal population change since 1990 (discussed further under Smart Growth and Neighborhood Conservation Act Compliance Section). Projected population for both zones is lower than 2,000 people and 1,000 households.

Transportation analysis zones 585 and 591 are located south of Brookeville, within the PFA. Zone 585 populations from 1990 to 2000 increased slightly from 5,430 to 5,554, yet are expected to decline to 5,282 by year 2020. Household numbers are generally the same from 1990 to 2000 and are expected to remain below 2,100 households through 2020. Transportation analysis zone 591, which includes Olney, experienced dramatic population growth from 1990 to 2000. During this timeframe, the numbers for households and population almost tripled. The current growth rate through 2020 anticipates an increase of approximately 1,300 people. Additional household increases will be slightly over half of the population, or 675 new households by 2020.

The construction of any of the Build Alternates is not anticipated to encourage secondary and cumulative growth because the proposed roadway would limit access to two locations north and south of Brookeville and the local land use controls preclude major development from occurring. In addition, based on the population projections, the need for housing is not anticipated throughout the majority of the SCEA boundary other than immediately surrounding Olney. The project is in response to a localized need and is not expected to induce regional population growth or interfere

with existing community facilities and services. The project is intended to improve the quality of life of the citizens and patrons of Brookeville by reducing the volumes of through traffic.

b. Economic Profile

There are no major employment centers within the SCEA boundary and no major commercial developments or infrastructure improvements are planned. MD 97 is used by commuters who travel to Washington, D.C. and the surrounding area. Residential and commercial development is not anticipated to significantly increase because of the proposed Build Alternates due to its limited access and local land use controls. Employment opportunities and the local and regional tax base are not expected to notably change with or without the improvements to MD 97. No new commercial/business development is planned in the reasonably near future that would be dependent on MD 97 or its proposed improvements. In conjunction with the projects planned within the SCEA boundary, the Build Alternates are not anticipated to have an influence on the local or regional economy.

4. <u>Natural Environment</u>

Secondary Effects

Secondary development resulting from the improvements to MD 97 is not anticipated. Development along the proposed roadway is unlikely because the Build Alternates would be limited-access facilities, and because land use controls are in place. Furthermore, Montgomery County has amended their Annual Growth Policy to discourage sprawl around Brookeville. According to the amendment no capacity for new development will be counted beyond the boundary of Brookeville because of relocating MD 97 around the Town. Current zoning favoring rural to low-density development further reduces development pressures associated with the Build Alternates. The majority of development that has occurred throughout the SCEA boundary over the last 20 years has been primarily located south of the Town of Brookeville, in areas such as Olney, which are zoned for high density residential and commercial. As a result, each of the proposed Build Alternates would result in more localized or direct natural resource effects associated with the physical location of the alternates.

Cumulative Effects

Key environmental resources were evaluated to determine if cumulative impacts would occur because of the MD 97 Brookeville Project. More detailed cumulative effects analysis has been conducted on the following resources:

- Water Resources (includes surface water, groundwater, wetlands, and floodplains)
- Forest Habitat
- Agricultural Lands
- Endangered Species
- Historic and Archeological Sites

a. Water Resources

(1) Surface Water

Current and historical surface water data for streams and reservoirs within the SCEA boundary were analyzed. Water quality data included physical parameters as pH, temperature, dissolved oxygen, and chemical parameters such as nutrient loading and toxics. Complementary data was also used to assess biological health of the streams including benthic macroinvertebrates and fish, habitat assessments, and watershed conditions. The time period from approximately 1970 to the present was researched; however; the most readily available and complete data was from 1990 to the present. Sources included the United States Geological Survey (USGS), USEPA, MDE, DNR, Howard County Government, and Montgomery County Government.

(1a) Laws and Regulations

Water quality regulations are stipulated and enforced by MDE in the Code of Maryland Annotated Regulations (COMAR) Title 26 Department of the Environment, Subtitle 08 Water Pollution, Chapter 02 Water Quality. To protect surface water quality the state has adopted water quality standards that protect public health and welfare, enhance the quality of water, and protect aquatic resources. Specific designated uses with applicable water quality criteria have been established for Maryland's tidal and non-tidal waters (COMAR 26.08.02.01-A).

According to COMAR, Use I-P, III-P and IV-P streams exist within the SCEA boundary. Specific designated uses for Use I-P streams include water contact recreation, protection of aquatic life, and public water supply. More specifically, they include water contact sports, fishing, growth and propagation of fish (other than trout), other aquatic life, wildlife and agricultural, and industrial water supply. Use I-P waters include the Patuxent River and all its tributaries from Rocky Gorge Dam to the upstream limit of Rocky Gorge Reservoir. Use III-P are natural trout waters and public water supply with waters suitable for the growth and propagation of trout and capable of supporting self-sustaining trout populations and their associated food organisms. The Patuxent River and its tributaries above Triadelphia Reservoir are considered Use III-P waters. Use IV-P streams are recreational trout waters and public water supply that include cold or warm waters which are capable of holding or supporting adult trout for put-and-take fishing or are managed as a special fishery by stocking. The Patuxent River and its tributaries between Rocky Gorge Reservoir and Triadelphia Reservoir, including Triadelphia Reservoir are considered Use IV-P.

The SCEA boundary is completely within the Patuxent River sub-basin. The Patuxent River flows generally in a southeasterly direction from its headwaters beyond the northwestern portion of the study area to its mouth at the Chesapeake Bay in southern Maryland. The Patuxent drains portions of seven Maryland counties including Montgomery, Howard, and Prince George's, which are partially included in the SCEA boundary. Land use in the Patuxent River basin is dominated by agriculture (44%) and forest (34%), with urban (16%) and wetland (6%) uses making up the remainder (MOP, 1997).



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The SCEA boundary is in the upper portion of the Patuxent sub-basin and includes two Maryland eight digit watersheds, the Brighton Dam Watershed (02131108) and the Rocky Gorge Dam Watershed (02131107) (DNR, 2000). The Brighton Dam Watershed drains the northern portion of the SCEA study area and includes the Triadelphia Reservoir. Major tributaries to the Patuxent in this watershed include Cabin Branch and Cattail Creek in Howard County and Haights Branch in Montgomery County. The Rocky Gorge Dam Watershed drains the southern portion of the study area and includes the T. Howard Duckett Reservoir. Major tributaries to the Patuxent River in this watershed include Hawlings River, Reddy Branch, and James Creek, all in Montgomery County.

The Triadelphia and T. Howard Duckett Reservoirs are maintained and operated by the WSSC. Water from these reservoirs is pumped to the Patuxent Water Filtration Plant for processing and is a major water source for the Washington Metropolitan Area. Because of its importance in water supply, the Patuxent Reservoir Protection Group issued a Patuxent Reservoir Protection Strategy in 1995. By 1996, an agreement between Howard, Montgomery, and Prince George's Counties, M-NCPPC, WSSC, and the Howard and Montgomery Soil Conservation Districts committed to develop and implement initiatives for long term protection of the watershed.

Much of the SCEA study area is within the Patuxent Primary Management Area (PMA). According to the Montgomery County Department of Environmental Protection (MC-DEP), the PMA is a stream buffer within which land use and development is monitored to reduce nonpoint source pollution, and improve and protect stream conditions. Goals of the PMA are to maintain low-density, low intensity land uses within 1/4 mile of the Hawlings and Patuxent Rivers' mainstem, and within 1/8 mile of associated tributaries, and to actively establish a minimum 50 foot forested buffer strip immediately adjacent to all streams. The PMA guidelines are applied to development projects submitted to M-NCPPC for subdivision and/or site plan review, and are otherwise voluntarily implemented and strongly encouraged on remaining parcels throughout the watersheds (MC-DEP, 1998). Montgomery County also developed a Strategic Plan for Water Quality Protection in 1996 to identify water quality goals and objectives including proactive measures such as best management practices, watershed project inventories, and feasibility planning studies.

Historically, nutrient loading has not been regularly observed in most Montgomery County streams. This is due in large part to the high gradient and flow observed in most County streams. Recent concerns have arisen about nutrient loading in the impounded waters at the Triadelphia and T. Howard Duckett Reservoirs. This has led to an interjurisdictional Patuxent Reservoirs Agreement in October 1996 to address nitrogen and phosphorous loadings from contributory watersheds. National Pollutant Discharge Elimination System (NPDES) permits in both Montgomery and Howard Counties are also addressing these concerns. In addition, Maryland's Total Maximum Daily Load (TMDL) Program has established maximum allowable pollutant loading for specific water bodies to meet water quality standards (Smith, 2001). Surface waters on Maryland's 303(d) list for TMDL's were approved by USEPA Region III. They include the Patuxent River, immediately downstream of the Rocky Gorge Dam to MD Route 214, for nutrients and suspended sediments due to nonpoint sources and natural sources. Additions to Maryland's 303(d) list in 1998 include the Triadelphia Reservoir Impoundment for both nutrients and sedimentation due to non-point sources. The Rocky Gorge Reservoir Impoundment was also listed for nutrients due to non-point sources. There is currently no draft TMDLs in the study area.

The MC-DEP developed its Countywide Stream Protection Strategy (CSPS) in 1998 based on an intensive multi-agency and volunteer evaluation of aquatic life, stream channel habitat, and water chemistry data from over 200 monitoring stations. Results from this study indicate that nearly all

(1b) Trends Analysis

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Montgomery County streams meet, and historically have met, Maryland water quality standards for dissolved oxygen, temperature, and pH (MC-DEP, 1998). Biological assessment revealed more variance and classifications of county stream miles fell into the following categories: 8 percent in excellent condition, 46 percent in good condition, 26 percent in fair condition and 9 percent in poor condition. Stream erosion and sedimentation due to inadequately controlled stormwater were the dominant impacts to habitat condition. The impairment appears to be a factor of the transition from natural land cover to impervious surfaces (MC-DEP, 1998).

Due to the complexity of the watersheds within the SCEA boundary, the study area and results have been divided into three watersheds, the Upper Patuxent River Watershed, the Lower Patuxent River Watershed, and the Hawlings River Watershed. This approach was utilized by the MC-DEP in its CSPS. The following sections rely heavily on the CSPS results.

Upper Patuxent Watershed

The Upper Patuxent River Watershed includes the drainage area for the Patuxent River upstream of the Triadelphia Reservoir, in addition to large forested areas with agricultural cropland and large-lot residential development. The reservoir itself is a Use IV-P waterbody while the Haights Branch and Cattail Creek tributaries are Use III-P. The Upper Patuxent has a naturally reproducing brown trout population and cold water fish community. Much of the watershed is in the Patuxent River State Park, containing mature floodplains, upland forests, and many of the highest quality streams in the County. **Table IV-15** lists sub-watershed ratings based on Montgomery County CSPS research.

Sub-watershed	Stream Condition	Habitat Condition
Upper Middle Tributaries	Good	Good
Lower Middle Tributaries	Excellent	Excellent
Upper Hipsley Mill Run	Fair	Fair
Lower Hipsley Mill Run	Excellent	Excellent
Haights Branch	Fair	Fair
Mt. Carmel Branch	Excellent	no data available
Greenstone Branch	Excellent	Good

TABLE IV-15 Upper Patuxent Watershed Stream Condition Summary

Note: All tributaries are within the SCEA boundary.

Additional data was also compiled from the DNR Monitoring and Non-Tidal Assessment Division (MANTA) in their Maryland Biological Stream Survey (MBSS). Spring and summer sampling results from 1997 indicate three sampling stations in Montgomery County and 12 stations in Howard County in the Upper Patuxent River Watershed. The results indicate water quality within COMAR parameters for temperature, pH, and dissolved oxygen. The Physical Habitat Index (PHI), which uses a scale of 0-100, showed much variation and ranged from 24.4 to 93.5. The Benthic Index of Biotic Integrity (BIBI) rated streams as generally fair with a few stations in the good range. The Fish Index of Biotic Integrity (FIBI) is also good to fair with a few poor stations.

Hawlings River Watershed

The Hawlings River Watershed flows into the Patuxent River between the Triadelphia and T. Howard Duckett Reservoirs. According to MC-DEP, much of the watershed is agricultural land, parkland and newer large lot residential areas. All of the streams in the watershed, including

Hawlings River, Reddy Branch, and James Creek, are classified in COMAR as Use IV-P. The Hawlings River upper tributaries, located in the Rachel Carson Conservation Park and adjacent agricultural lands, have very good stream conditions. The southern tributaries, including James Creek and Olney Mill tributary in Reddy Branch are in higher density development and deliver uncontrolled storm flows to the system. Much of the watershed supports a cold-water fishery. **Table IV-16** lists sub-watershed ratings based on Montgomery County CSPS research, M-NCPPC data, land use characteristics, and DNR monitoring in 1993.

Sub-watershed	Stream Condition	Habitat Condition
Upper Hawlings	Good	Good
Middle Hawlings	Good	Excellent
Lower Hawlings	Good	Fair
Upper Mt. Zion Tributary	Poor	Poor
Middle Mt. Zion Tributary	Fair	Fair
Lower Mt. Zion Tributary	Good	Excellent
Reddy Branch	Fair	Fair
Upper Olney Mill Tributary	Poor	Poor
Lower Olney Mill Tributary	Fair	Fair
Upper James Creek	Poor	Poor
Lower James Creek	Fair	Fair

 TABLE IV-16 Hawlings River Watershed Stream Condition Summary

Note: All tributaries are within the SCEA boundary.

Additional data was collected by the MBSS in Spring/Summer 1997 at four sampling stations in Montgomery County on the Hawlings River. The results indicate water quality within COMAR parameters for temperature, pH, and dissolved oxygen. The PHI ranged from 35.9 to 90.3 but averaged 72.7. The BIBI and FIBI rated streams as generally fair with one station in the good range for both indices.

Lower Patuxent Watershed

The Lower Patuxent watershed consists of the mainstem of the Patuxent River and many small tributary systems that drain agricultural and large-lot residential areas in both Montgomery and Howard Counties. The mainstem and lower reaches are largely protected by state parks and the WSSC reservoir buffer. Streams in this watershed are all Use I-P waters and tend to show higher levels of impairment than in the Upper Patuxent and Hawlings due to forest cover loss in upstream reaches (MC-DEP, 1998). Table IV-17 lists sub-watershed ratings based on Montgomery County CSPS research.

Additional data was collected by the MBSS in Spring/Summer 1997 at two sampling stations in the Lower Patuxent Watershed. The results indicate water quality within COMAR parameters for temperature, pH, and dissolved oxygen. The PHI results were 36.4 for the Montgomery station and 69.7 for the Howard station. The BIBI was fair to good while the FIBI rated streams fair in Howard with the Montgomery station in the poor range.

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Sub-watershed	Stream Condition	Habitat Condition
Quail Hill Tributary	No data	no data
Ashland Tributary *	Fair	Fair
Patuxent Drive Tributary*	Excellent	Excellent
North Ednor Tributary*	Fair	Fair
Ednor Tributary *	Fair	Good
Foxes Branch *	Good	Good
Kruhm Tributary *	Fair	Fair
Dustin Road Tributary *	Good	Excellent
Ousler Road Tributary	Fair	Good
Lower Patuxent Mainstem*	No data	no data

TABLE IV-17	Lower Patuxent	Watershed Stream	Condition Summary

Note: *Those tributaries or streams partially within the SCEA boundary.

All other tributaries are entirely within the SCEA boundary.

(1c) Potential Cumulative Effects - Surface Water

The MD 97 Brookeville Project is anticipated to result in direct impacts to surface waters. These impacts are likely to include culvert extensions, forest clearing for placement of bridges, floodplain loss, and sedimentation associated with roadway construction. Erosion and sediment control measures would minimize short and long term water quality degradation. SHA's Selected Alternate, Alternate 8A, and Alternate 8B would result in two stream crossings (Reddy Branch and Meadow Branch), whereas Alternate 5C would require one crossing (Reddy Branch).

There is little historical data available as far back as 1970. However, a review of land use maps provided some perspective on the relationship between land use and the effect on adjacent surface waters. Based on a comparison of 1973 and 1997 land use maps, the general character of the SCEA boundary remains the same, with agricultural and forest cover serving as the dominant land cover. Urban uses are more common along the southern portion of the boundary, especially development radiating from the Olney area. More degraded streams, such as Upper and Lower Jones Creeks located in the surrounding Olney area, are examples of streams within more urban areas.

Based on past and present trends, the cumulative effects to surface water from proposed development would be more likely to occur along the southern portion of the SCEA boundary. Development around Olney includes high density residential, whereas development within the rest of the SCEA boundary is limited to small lots, due largely to zoning control.

Cumulative effects are projected to be minimal as a result of watershed level protection measures including the Patuxent Reservoir Protection, the Patuxent Primary Management Area, and Montgomery County's Strategic Plan for Water Quality Protection. Other protection measures related to surface water include the County's strong agricultural lands preservation goals. Montgomery County has taken steps to protect and preserve the agricultural community that exists within the SCEA boundary (see Agricultural Lands Section). Restrictive zoning throughout the boundary supports this goal, as does the county's commitment to preserve rural lands through a variety of easement protection programs.

(2) Groundwater

General groundwater information was obtained through communication with WSSC.

(2a) Laws and Regulations

Groundwater withdrawals and discharges are regulated by WSSC, Montgomery County, and MDE. COMAR regulations, in particular Title 26 Department of the Environment, Subtitle 08 Water Pollution, Section 02 Water Quality, contains "Ground Water Quality Standards" that identify and define types of aquifers, regulated activities, and requirements for activities including discharge of effluent, underground injection, discharge to ground waters, and discharge quality criteria.

Montgomery County exercises protection of groundwater resources as well. Although all state regulations are in effect for activities relating to groundwater resources, Montgomery County increases the standard for some of them. Specifically, all construction of new wells within the County must receive a County Well Location permit, in which the purpose is to protect the public health and ground water by assuring that wells are properly sited with respect to the improvements and the sewage disposal system on a property (Montgomery County Department of Permitting Services website (www.co.mo.md.us/services/permitting).

(2b) Trends Analysis

A review of WSSC records revealed that most of the SCEA area is served by private wells for water and septic systems for sewage disposal. WSSC provides public sewer and water service south of Brookeville. Water supply comes from the Potomac and Patuxent Rivers via WSSC's Patuxent Water Infiltration Plants. Wastewater is treated at the Blue Plains Wastewater Treatment Plant in the District of Columbia. The estimated water consumption for the Brookeville area served by WSSC is approximately 600,000 gallons per day. No significant expansion of either system is currently planned in the Brookeville area (Fricke, 2001).

The MDE Water/Wastewater Permits Division was also contacted to determine the occurrence of wells within the study area (Smith, 2001). The well records obtained from this division confirmed that most of the study area is served by private wells. The dominant water use from extraction of the wells is for domestic use. A small number of wells within or nearby the SCEA boundary extract water for farming or test, observation, and monitoring purposes. Groundwater quality data were requested from Montgomery County Department of Permitting Services; however, a response from this department revealed no groundwater monitoring information (Stephens, 2001).

(2c) Potential Cumulative Effects - Groundwater

Based on the land use patterns from 1973 to 1997, groundwater quality and quantity within the SCEA boundary do not appear to have been substantially affected. Low-density residential land use throughout the SCEA boundary suggests that pressure from groundwater withdrawals is not a concern. Key land protection measures are in place, such as agricultural zoning, to ensure groundwater resources are not threatened.

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Implementation of any of the proposed Build Alternates is not anticipated to cause future groundwater-related impacts. The SCEA boundary is within the county's Agricultural Wedge, where development and infrastructure necessary for large-scale development are not proposed. Agriculture is the intended primary land use within the Agricultural Wedge. No sewer or water extensions are proposed beyond the current limits. Additional protection is provided through other land conservation measures such as the area's designation as a state approved Rural Legacy Area. Limited population and therefore limited groundwater withdraws are anticipated since the area is to remain primarily an agricultural community. Further ensuring the protection of groundwater resources, are the regulatory steps required by WSSC, MDE, and the county as it relates to groundwater withdrawal and discharges permits.

(3) Wetlands

As part of the wetlands trends analysis, quantitative and qualitative sources of information were identified. From a historic perspective, the only available data was 1981 National Wetland Inventory (NWI) Maps. Prior data is limited to generalized wetlands on historical land use maps. For the SCEA, available wetland data was obtained from the DNR Technology Toolbox, which provided both 1981 NWI data (USFWS, 1981) and DNR wetlands data (DNR, 1993).

Ideally, a trends analysis comparing changes in a resource from one period to another should utilize the same data collection methodology. The USFWS and DNR determination of wetlands utilized different scales; $1^{"} = 2000^{"}$ and $1^{"} = 1000^{"}$ respectively.

However, the comparisons between both data sets are still useful for the purposes of determining a trend, and for approximating estimates of wetland loss over time, if any. Another reason that the comparison is useful is because of the rolling topography within the SCEA boundary. It is notable that the majority of the wetlands are associated with stream valleys and floodplains, including those areas within parkland.

(3a) Laws and Regulations

Wetlands delineated as part of proposed development activities are subject to review, approval, and comment by various federal and state agencies in accordance with Section 404 of the US Clean Water Act. These agencies include, but are not limited to, the USACOE, MDE, USFWS, and DNR. The federal/state wetland and waterway permit process in Maryland is a combination of different permit authorization categories, and depending upon the type and category of the proposed activity, may include and necessitate review by different federal and/or state agencies. In Maryland, the permit process is a joint process between the USACOE and MDE, and is known as the Maryland State Programmatic General Permit (MSPGP).

State wetland and waterway permits are typically included in the MSPGP authorization. A MDE Water Quality Certification (WQC), governed under Section 401 of the US Clean Water Act, may be required, particularly if a Section 404 permit is necessary. MDE permits, for non-tidal or tidal wetland impacts and/or waterway construction activities, may be required depending upon the extent of impacts, either independently or as part of the overall MSPGP process.

Wetlands within the project area were identified and field delineated in October 1995. A Jurisdictional Determination of the wetland boundaries was conducted with USACOE and USFWS

agency representatives on December 5, 1995. The wetland identification/delineation and the jurisdictional field review determined a total of 20 nontidal wetland areas, two large unvegetated WUS systems, and several open water ponds within the project area. Proposed direct impacts from all the Build Alternates were based upon ROW limits for both open and closed typical sections.

Impacts for the five Build Alternates are shown below in **Table IV-18** and are discussed in **Section O.4.a.3c** – Potential Cumulative Effects - Wetlands.

	Alternate 5C (acrcs)		Alter (ac	Alternate 7 (acres)		Altern (ac	ate 8A res)	Alternate 8B (acres)	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Open Section	Closed Section	Open Section	Closed Section
Total Wetland Impacts ¹	0.21	0.15	0.12	0.13	0.12	0.10	0.11	0.16	0.14
Total Impacts per (Classificatio	n		·					
Total PFO	0.10	0.09	0.03	0.04	0.03	0.01	0.02	0.03	0.01
Total PEM	0.09	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Total PSS	0.02	0.01	0.03	0.03	0.03	0.03	0.03	0.07	0.07

TABL	E IV-1	8 Summarv	of Wetlands	Impacts
		o Summer y	0 11 01141143	Antipacto.

Notes: Impacts are based on ROW widths.

Total Wetland Area considers only that portion within the limits of the project area.

(3b) Trends Analysis

GIS Analysis of Wetlands Trends in the SCEA Boundary – 1981 to 1993

Wetlands within the SCEA boundary include palustrine, lacustrine, and riverine wetlands systems. Palustrine wetlands are evident primarily along the streams valleys and broad floodplains. The lacustrine wetlands are associated with the section of Triadelphia Reservoir, and the riverine systems are the streams throughout the SCEA boundary. Relevant to palustrine wetlands, forested wetlands are dominant for both 1981 and 1993. A smaller percentage of palustrine open water wetlands were also identified throughout the SCEA and are typically associated with open water ponds. Figure IV-5 illustrates the approximate distribution of wetlands throughout the SCEA boundary as of 1993 based on DNR's Technology Toolbox Data.

The results of the trends analysis suggest little change in wetland loss. As **Table IV-19** shows, over the 24-year period there are both gains and losses depending on the wetland classification. Several factors need to be considered as part of the results of the analysis. The loss of PSS wetlands may be due to a change to PFO wetlands over time. Within the SCEA boundary, the majority of the wetlands are associated with stream valleys and broad floodplains. These are areas where development is typically limited or discouraged. Furthermore, differences may be attributed to the differences in data interpretation and scale between the two data sources. Nevertheless, the data suggests that there has been minimal wetland loss throughout the SCEA boundary between 1981 and 1993. Final Environmental Impact Statement



Wetland Classification	Data Year 1981 (acres)	Data Year 1993 (acres)	Net Difference
Lacustrine	1,386.3	1,444.9	+ 58.6
Palustrine Forested	636.5	836.2	+ 199.7
Palustrine Scrub-shrub	235.6	76.4	- 159.2
Palustrine Emergent	195.6	156.9	- 38.7
Palustrine Open Water	90.7	122.2	+ 31.5
Totals	2,544.7	2,635.9	+ 91.9

TABLE IV-19	Wetland Changes within	SCEA Boundary	[,] from 1981 to 1993
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(3c) Potential Cumulative Effects - Wetlands

Total impacts for all five Build Alternates would vary from 0.10 acre to 0.21 acre. SHA's Selected Alternate would impact four wetlands including two palustrine forested wetlands, impacted for a total of 0.03 acres, one palustrine emergent wetland, impacted for 0.06 acre, and one palustrine scrub-shrub wetland, impacted for 0.03 acres. Alternate 5C and Alternate 8B would have the potential for the greatest impacts (between 0.15 to 0.21 acre). Palustrine forested wetland impacts would account for approximately half of Alternate 5C impacts. Palustrine emergent impacts would be the same (0.06 acre) for Alternate 7, Alternate 8A, and Alternate 8B. Alternate 8B would have at least twice as many palustrine scrub-shrub impacts compared to the other Build Alternates.

Based on the trends analysis of the 1973 and 1997 land use/land cover mapping, wetland losses are predominantly associated with PSS and PEM within the SCEA boundary. Reasons for these losses could be attributed to several causes. An undetermined percentage is assumed to be from development activities. Other factors may include a conversion of emergent and scrub-shrub wetlands to forested wetland or upland system. The trends for SCEA reflect a smaller change in wetland resources over time when compared to the statewide trends. Smaller changes, at least since the early 1970s, are primarily a result of limited land use changes (e.g., rural to urban) and location of wetlands in relation to topography.

The majority of the forested wetland systems are located in places where development has been limited for various regulatory and non-regulatory reasons, such as broad floodplains or stream valleys. Emergent wetlands are common along portions of low-lying fields and have traditionally either been drained, farmed or built upon. With the implementation of many wetland protection regulations and the associated permitting process, wetland impacts have been minimized and minimal impacts are expected in the future.

Major federal and state wetland protection programs are provided below: The most substantial regulatory programs at the federal level are the following:

- "Section 10" program (authorized by Section 10 of the Rivers and Harbors Act of 1899) administered by USACOE.
- "Section 404" program (authorized by Section 404 of the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977 and later amendments) administered jointly by USACOE and USEPA.



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The most substantial regulatory programs at the state level include:

- Tidal wetlands licensing and permitting program (authorized by the 1970 Tidal Wetlands Act) administered by the MDE.
- Nontidal wetlands management and permitting program (authorized by the 1989 Nontidal Wetlands Protection Act, effective January 1991) administered by MDE.
- "Section 401" Water Quality Certification program (authorized under Section 401 of the Clean Water Act) administered by MDE.
- "Section 307" Coastal Zone Consistency determination (authorized in Section 307 of the Coastal Zone Management Act of 1972, pursuant to Maryland's federally approved Coastal Zone Management Plan) administered by MDE.

(4) Floodplains

The Montgomery County Division of Permitting Services was contacted to determine if specific and quantitative floodplain impacts were available. Present floodplain data was derived from FEMA. Any future (2020) floodplain impacts were predicted based on the assumption of ongoing land protection from both existing regulatory controls and to some extent the presence of significant parkland throughout the SCEA boundary. Part of the functions provided by Reddy Branch Stream Valley Park, Hawlings River Stream Valley Park, and Patuxent River State Park include extensive forested floodplains.

(4a) Laws and Regulations

At the federal and state level, floodplains are protected through the wetland permitting process. Proposed development within the 100-year floodplain requires that the joint federal and state wetland permit application be submitted to the MDE. Before a permit is granted, specific information is required documenting that no other options that do not result in impacts to the 100year floodplain are available to meet the purpose of the project.

Floodplains are also protected under Montgomery County floodplain regulations 108-92, Bill No. 18-89, 33-92. Under these regulations, Montgomery County has the authority under the Flood Control and Watershed Management Act, Section 8-9A-01 et seq., Natural Resources Article of Annotated Code of Maryland, to control floodplain development in order to protect persons and property from damage and destruction as well as to preserve the biological values and the environmental quality of watersheds or portions thereof under its jurisdiction.

The establishment of a floodplain district determines the extent of the 100-year floodplain. The district includes all areas subject to inundation by the waters of the 100-year flood. This also includes all waterways for drainage areas as small as necessary to produce actual inundation limits. For Montgomery County, the drainage areas meeting this criteria are typically 30 acres or greater. Regulations prohibit any new residential development within a 100-year floodplain. Other development proposals must meet a series of very stringent requirements. Development, when approved, must have the elevation of the lowest floor, as defined in codes, of new structures at/above one foot above elevation of 100-year floodplain.

Current 100-year floodplain zones were identified using the Flood Insurance Rate Maps (FIRM). Montgomery County FIRM Panel 150 of 200 was consulted. Within the SCEA boundary, 100-year floodplains are present along Reddy Branch, Meadow Branch, and Hawlings River and most tributaries (Figure IV-5).

(4b) Potential Cumulative Effects - Floodplains

Direct floodplain impacts associated with the MD 97 Brookeville Project range from 2.44 to 3.29 acres. Project-related floodplain impacts are unavoidable since each Build Alternate must either cross Reddy Branch and/or Meadow Branch. Future secondary and cumulative floodplain impacts are anticipated to be negligible based on both protection measures and land ownership. Protection measures include both strong county floodplain regulations preventing floodplain encroachment from development, and to a lesser extent, restrictive zoning.

Development is discouraged on steep slopes adjacent to waterways and floodplains throughout the SCEA. Furthermore, approximately 70 percent of the FIRM floodplain boundaries throughout the SCEA boundary are within county or state parkland boundaries (either Reddy Branch Stream Valley Park or Patuxent State Park). Subsequently, no future development is anticipated within parkland boundaries including floodplains.

b. Forest Habitat

Readily available data used for the SCEA boundary relevant to forested areas consisted of historic (1973 and 1990) and present (1997) MDP land use maps. All three maps were overlaid to develop approximate forest cover acreage lost over a 24-year period. Potential future impacts were developed by considering proposed land uses, zoning, and environmental regulations.

The 1973 land use maps were not available in digital format and therefore, required forest cover estimates to be determined manually. Estimates are more approximate than the acreages determined for 1997. Potential future impacts were estimated by considering proposed land uses, increased population projections, zoning, and environmental regulations. Forest fragmentation trends from 1973 to 1990 were determined by estimating the contiguity of forest cover and the number of isolated forest blocks. Forest fragmentation estimates between 1990 and 1997 were compared digitally.

Between 1950 and 1985, land use for commercial and residential development within the Chesapeake Bay watershed increased by 180 percent. Between 1955 and 1989, a half million acres of forest throughout the state were converted to other uses such as urban and agricultural use. In addition to actual losses, the quality of remaining forest has been diminished by fragmentation of large forested properties.

(1) Laws and Regulations

In 1999, forested lands within Montgomery County were estimated at 86,000 acres or only 27 percent of the county. During the last 25 years, Montgomery County has experienced one of the highest rates of forest loss in the Washington, D.C. Region. In response to the statewide loss of forest, the state Forest Conservation Act of 1991 (Annotated Code of Maryland, Natural Resources

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Article, Sections 5-1601 through 5-1613) was enacted to protect Maryland's forest resources. The goal of the Act is to protect existing forest resources and reduce the loss of forests from unplanned growth. Compliance with the regulations involves delineating existing forest resources within a proposed project. From the delineation, high value forests or "priority areas" are to be preserved with development directed towards low value forest areas. Value includes the functions provided by the forest including, but not limited to, wildlife habitat, timber, stream buffer, and aesthetics. A conservation plan, which includes reforestation measures, is required depending on the amount of forest proposed for clearing. The state law is regulated by DNR but administered by each county or municipality.

In 1991, Montgomery County implemented a program for conserving forest and tree resources. The County Forest Conservation Program applies to applications for development activities, and sediment and erosion control permits. Under the law, a forest conservation plan must be developed, which includes a delineation of the forest resources throughout the proposed project area. The County Planning Board reviews and approves forest conservation plans for development projects that require Planning Board approval. The Planning Director reviews all projects not requiring Planning Board approval.

(2) Trends Analysis

Comparisons between the 1973, 1990, and 1997 land use/land cover maps identified several changes in forest cover (losses and/or gains). Forest cover throughout the SCEA boundary is predominantly deciduous forest, with mixed forest (deciduous and evergreen) to a smaller extent. Larger forest blocks are evident along the parklands and within the western portion of the SCEA boundary. More fragmented parcels are evident along roadways, along more urbanized sections, and the southeastern portion of the SCEA boundary.

Forest cover within the SCEA boundary accounts for approximately 16,500 acres, based on the 1973 land use/land cover map (approximately 45% of the SCEA boundary). In 1990, 13,836 acres of forest cover were evident. In 1997, however, forest cover increased to 15,604 acres (an increase of 1,768 acres). State and county parks within the SCEA boundary represent slightly more than 50 percent of the total forest cover (**Figure IV-6**, based on DNR's Technology Toolbox Data). Reddy Branch Stream Valley Park, Hawlings River Stream Valley Park, and Patuxent River State Park are almost entirely forested.

In total, from 1973 to 1997, approximately 900 acres of forest cover were estimated to have been converted to urban or agricultural use (Figure IV-7, Maryland Office of Planning Land Use/Land Cover Data for 1997). Differences in the development of digital files between both years may also be a contributing factor. The majority of the forest loss over the 24-year time frame has occurred along the southern portion of the SCEA boundary. Along the southern section of the boundary, forest was primarily converted to urban use. Forest conversion to cropland was more dominant in the western end of the boundary. Large forest blocks within the western and northern boundary are almost identical from 1973 to the present. Table IV-20 provides a comparison between the three time frames.

Forest Cover within SCEA Boundary	Forest Cover (acres)
1973	16,500
1990	13,836
1997	15,604

TABLE IV-20 Forest Cov	er Changes	within SCEA Bou	undary - Years	1973, 1990 and 1997
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Another trends analysis conducted was the degree of forest fragmentation that has occurred over time. The fragmenting of forest reduces the interior of larger forest block. Forest interior species require the safety of large undivided forest habitat for critical life cycle aspects including breeding. Many are in decline because of both forest cover loss and fragmentation.

The forest fragmentation for 1973 was estimated by overlaying available mapping to 1990 and 1997. In general, there has been some fragmentation, especially along the southern portion of the SCEA boundary, from 1973 to 1990. Large privately owned contiguous forest blocks are evident throughout the SCEA boundary as well as the forested parkland areas. From 1990 to 1997, digital computation of the data was conducted. In general, land uses greater than ten acres in size were identified through the land use maps. For the comparison, forest blocks of certain sizes were grouped. Over the seven-year period, there was a decline, especially in forest blocks between 101 and 200 acres (Table IV-21). The numbers for 200 acres or greater, however, actually increased. Some of the difference may be a result of initial data collection and processing.

Acre Range	1990 Forest Cover (number of parcels)	1997 Forest Cover (number of parcels)
0-50	114	102
51-100	25	20
101-200	16	6
200+	14	17

 TABLE IV-21
 Forest Size Comparison from 1990 to 1997

(3) Potential Cumulative Effects – Forest Habitat

Direct forest impacts for all five Build Alternates including SHA's Selected Alternate are similar, ranging from 8.62 acres to 10.69 acres. Forest impacts are unavoidable with each Build Alternate crossing one or more forested stream sections. Cumulative effects associated with forest habitat, because of MD 97, are projected to be negligible through the year 2020. Current proposed developments are limited. Some isolated forest loss will occur but will be limited to individual lots or small developments.

Forest fragmentation is anticipated to be limited mostly to sections along the southern SCEA boundary (adjacent to other development). Private timber harvests throughout the SCEA boundary are likely. Timber harvests require coordination with Montgomery County and DNR as well as the preparation of a timber harvest management plan. Each plan incorporates restrictions to protect surrounding resources such as wetlands and streams.


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There are several land protection measures in place throughout the SCEA boundary. Current zoning restricts most development to one lot per 25 acres. Rural Cluster zoning, limited to areas east of MD 97, allows one house per five acres but requires 60 percent open space as part of a development plan. Forest loss is also minimized by the county's commitment to protect environmental resources within the Agricultural Wedge as described in the county Master Plan. The SCEA boundary is part of the agricultural wedge, which is a preferential agricultural zone geared towards the protection of agriculture and sensitive resources, such as forest habitat. A transferable development rights system and other county and state easement purchase programs provides further protection within the wedge.

Another protection measure that directly or indirectly protects forest habitat is the county's Upper Patuxent Rural Legacy Area Program. As mentioned, the majority of the SCEA boundary falls within the Rural Legacy Area. Through the Legacy program, landowners have the ability to either place conservation easements on their property or transfer their development rights. These two easement measures protect the properties in perpetuity from development activities. Additionally, the county is targeting acquisition of properties through the Legacy Area that border along existing parkland. Forest fragmentation may be reduced through increasing the contiguity of forest cover along the parks. The SCEA boundary includes areas outside of the PFA where sewer and water expansion are not planned. Lastly, other federal, state and county regulations protecting forests add additional protection.

c. Agricultural Lands

Available data used for the SCEA boundary relevant to active farmland considered both historic (1973 and 1990) and present (1997) MDP land use maps. Both maps were overlaid to develop approximate active farmland acreage lost over a 24-year period. Potential future impacts were predicted by considering proposed land uses, zoning, and environmental regulations.

The farmland type and total acreage are based on Anderson Level I classification. Two digit codes that were included are cropland (21), pasture (22), and orchards/vineyards/horticulture (23). Other data sources consulted included the DNR GIS Rural Legacy Area Maps and Montgomery County's Land Preservation Map and database.

(1) Laws and Regulations

Agricultural lands are protected in Montgomery County through five different programs including the Montgomery County Agricultural Easement Program (AEP), Maryland Agricultural Land Preservation Foundation (MALPF), MET, and other private trust organizations, Montgomery County Transfer of Development Rights (TDR) Program, and the Montgomery County Rural Legacy Program (RLP).

The Montgomery County AEP gives Montgomery County the ability to purchase agricultural land preservation easements to preserve land for agricultural production. This is contingent upon the land being zoned Rural, Rural Cluster, or Rural Density Transfer, or subject to the land being designated as an approved state or county Agricultural Preservation District.



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The MALPF was established in 1977 by the state legislature because of concern over decreasing farmland acreage caused by development. The MALPF purchases agricultural land preservation easements directly from the landowner for cash. Following sale of the easement, agricultural uses of the property are still permitted and are encouraged.

The MET was established by the state legislature in 1967 to encourage landowners to donate an easement on their property to protect scenic open areas, including farm and forest land, wildlife habitat, waterfront, unique or rare areas, and historic sites. These donations are accepted by the MET. In return, the landowners are eligible for certain income, estate, gift, and property tax benefits. Other private land trusts may also offer farmland preservation options that are flexible and advantageous to landowners. In 1981, Montgomery County established the TDR Program as part of the functional Master Plan for Preservation of Agricultural and Rural Open Space. Approximately 93,000 acres of County land are designated as the Agricultural Reserve and have Rural Density Transfer zoning. The Rural Density Transfer Zone gives strong preferences to agriculture, forestry, and other open space uses, as well as allowing a variety of agriculturally related commercial and industrial uses. Housing density in the Agricultural Reserve limits development to one house per 25 acres with a minimum one acre lot size. Furthermore, the properties in the Agricultural Reserve have TDR at the rate of one TDR per five acres. These TDRs can be sold to developers who want to use them to construct houses in designated county TDR receiving areas.

In 1997, the RLP was enacted as part of the Governor's Smart Growth and Neighborhood Conservation initiative to protect natural resources. The RLP is aimed to protect areas that are rich in multiple agricultural, forestry, natural and cultural resources, which if protected, will promote resource-based economics, protect greenbelts and greenways, and maintain the fabric of rural life. The majority of the SCEA boundary falls within the county's Upper Patuxent Watershed Rural Legacy Area.

Trends Analysis (2)

Agricultural land acreage for 1973 was determined by placing a 1990 overlay onto the 1973 land use map. Cursory estimates were then determined by identifying key parcels that have been converted from agricultural to urban use. This exercise revealed that of the approximate 15,600 acres identified in 1973, an estimated 800 to 900 acres has been lost from 1973 to 1990 (14,867 acres) within the SCEA boundary (Table IV-22).

Land Use Year	Active Farmland within SCEA Boundary	Change in Total Acreage (% loss or gain)
1973	15,600 to 16,000	-
1990	14,867	- 5 to 8 %
1997	13,326	- 11 %

From 1990 to 1997, an estimated 1,631 acres of farmland was lost. Based on the 1997 land use MDP maps, there are approximately 13,326 acres of active farmland within the SCEA boundary. The loss of agricultural lands from 1990 to 1997 coincided with a comparable gain in forest cover within the SCEA boundary. The small difference may be explained by some loss due to development and by natural conversion of fallow fields to forest.

TABLE IV-22 Agricultural Loss within the SCEA Boundary from 1973 to 1997

Cropland throughout the 24-year period has been the dominant agricultural resource (for 1997 cropland totaled over 10,000 acres). The majority of the cropland is located along the northern portions of MD 97 and to the west (Figure IV-7). Much of the cropland consists of large, contiguous farmland parcels. Pasture lands are scattered throughout the SCEA boundary and account for approximately 25 percent or 3,200 acres.

(3) Potential Cumulative Effects – Agricultural Lands

All five Build Alternates would directly impact active farmland. As mentioned earlier in Section III, SHA's Selected Alternate, Alternate 8A, and Alternate 8B impacts would be limited to the edge of a farm field along MD 97. Farmland impacts from SHA's Selected Alternate are negligible and estimated to be less than 0.01 acre. Active farmland impacts for Alternate 8A and Alternate 8B range from 0.53 and 1.24 acres. Farms could still be operational from either alternate. These impacts are minimal and not a threat to the farmland resources within the SCEA boundary. Alternate 5C would result in greater farmland impacts, which range from 9.6 to 10.69 acres. Alternate 5C would bisect a working farm into two sections; both sections would be of viable size for future farming operations.

Future impacts are likely, especially within areas designated as Rural Cluster Zones (RCZ), where lot size can be as small as five acres. Based on current proposed development over the last several years, projected future impacts are estimated at a minimum of 100 to 200 acres annually. This figure is based on a review of available development information and past development trends.

d. Rare, Threatened, and Endangered Species

Information on rare, threatened, and endangered species (RTEs) was obtained through coordination with DNR and USFWS. Both agencies provided data on federal and/or state RTEs within the SCEA boundary. Past records describing the location of RTEs in the SCEA boundary were not available. Projected or future impacts to RTEs can be assumed by likely development activities within and adjacent to sensitive areas serving as habitat for RTEs.

The loss of RTEs can occur because of both direct and indirect impacts. Direct impacts include loss of habitat from land conversion activities (forest clearing as part of development), poaching, and mortality from development pressures or human activity (vehicular collisions). More indirect stresses can include human disturbance, especially during sensitive life cycle periods such as breeding, changes in drainage or hydrology in general, forest or habitat fragmentation, and noise pollution.

(1) Laws and Regulations

Several federal, state and local regulations protect RTEs. At the federal and state level, RTEs are regulated pursuant to the Endangered Species Act of 1973 (State. 884), and the state of Maryland pursuant to the Maryland Endangered Species Act of 1973 (Annotated Code of Maryland, Natural Resources Article, Section 10-210).

Other state protection laws, such as the Maryland Nongame and Endangered Species Conservation Act of 1975 (Annotated Code of Maryland, Natural Resources Article, Section 10-2A01 et. Seq.), require that the state identify, manage, and protect both nongame wildlife, as well as RTEs. The DNR Wildlife and Heritage Division is responsible for overseeing the requirements of this law. Land development projects with federal and state funding that require wetland permit approval and hazardous waste discharge permits are reviewed by federal, state and local environmental agencies. Private development activities are typically not reviewed for the presence of RTEs.

(2) Trends Analysis

Data obtained from DNR indicated that 13 different species of concern exist within the SCEA boundary. For the protection of the species and any suitable RTE habitat, DNR only provides a species name and general location. Therefore, a map illustrating specific locations of each species was not available. Based on the description, however, the majority of the species appear to be identified along stream valleys within parkland. Three species appear to be within more urban areas, namely Olney and Brinklow. Table IV-23 provides the name and general location for each species.

(3) Potential Cumulative Effects - Rare, Threatened, and Endangered Species

Minor cumulative impacts to RTEs are anticipated, primarily in more developed areas. More specific analysis is difficult due to the lack of exact locations and the date of the most recent sightings, on each species. Most of the species, if still present, are associated with riparian or stream valley habitat and were identified in areas protected as either state or county parklands. Three species, wood sedge, big shellbark hickory, and regal fritillary, were identified in areas currently experiencing developmental pressure and are unrelated to the proposed MD 97 Brookeville Project.

5. <u>Cultural Resources</u>

Preliminary information on cultural resources was obtained from the Montgomery County Master Plan, 1993. The Master Plan included a map showing historic sites considered important by the county. Maryland Historic Trust (MHT) digital data, the National Register of Historic Places and the Maryland Inventory of Historic Properties, was used to identify the resources shown on the master plan map. Feature locations and feature attributes in the MHT data layers were used to determine the potential for secondary and cumulative effects within the SCEA boundary.

Cultural resources within the APE for the MD 97 Brookeville Project were also identified as part of the historic resources survey and Section 106 Determination of Eligibility Report. Historic districts and individually designated sites in the MD 97 project area are located on **Figure IV-8** and listed in **Table IV-24**. Only the Brookeville Historic District would be impacted by the project alternates and the impact acreage varies according to alternate.

TABLE IV-23 Maryland Department of the Environment Record of Rare, Threatened, and Endangered Species within the SCEA Boundary

	Zindinger en spee		Sellix Boundary			
Common Name	Scientific Name	Type of Species	Status	Comments		
Bald eagle	Haliaeetus leucocephalus	Animal	Federal and State Threatened	Sandy Spring Quad - Along the Howard County portion of Tridelphia Reservoir		
Small flowered hemicarpha	Lipocarpha Micrantha	Herbaceous Plant	State Endangered	Clarksville Quad -Within T. Howard Reservoir		
Wood's sedge	Carex woodii	Herbaceous Plant	State Rare	Sandy Spring Quad - Olney area		
Big shellbark hickory	Carya laciniosa	Tree	State Endangered	Sandy Spring Quad - Brinklow area		
Regal Fritillary	Speyeria idalia	Butterfly	State Endangered	Sandy Spring Quad - Brinklow area		
Gray birch	Betula populifolia	Tree	Uncertain State Status	Sandy Springs Quad - Banks of Triadelphia Reservoir		
Yellow lance	Elliptio lanceolata	Freshwater mussel	Uncertain State Status	Sandy Spring Quad - Patuxent River near confluence with Hawlings River		
Squawfoot	Strophitus undulatus	Freshwater mussel	State Rare/Watchlist	Sandy Spring Quad- Hawlings River, west of Brighton		
Atlantic spike	Elliptio producta	Freshwater mussel	State Rare/Watchlist	Sandy Spring Quad - Hawlings River, west of Brighton		
American chestnut	Castanea dentata	Tree	State Rare/Watchlist	Sandy Spring Quad - Banks of Hawlings River, north of Gregg Road		
Featherbells	Stenanthium gramineum	Herbaceous plant	State Threatened	Sandy Spring Quad - Known from the area near MD 97 and Patuxent River; Woodbine Quad - Tributary to Patuxent River across from Cabin Branch		
Blunt- leaved Gerardia	Agalinus obtusifolia	Herbaceous plant	State Endangered	Sandy Spring Quad - Known from the area near MD 97 and Patuxent River		
Trailing Stitchwort	Stellaria alsine	Herbaceous plant	State Endangered	Woodbine Quad -Known from the Hipsley's Mill area along Cabin Branch		

Attempts to retrieve data on those resources lost since 1970 were unsuccessful. Communication with MHT revealed that there are no readily available files on the loss of resources dating back to 1970.

Cumulative impacts to historic structures within the SCEA boundary were determined by overlaying the approximate locations of National Register and Maryland Inventory of Historic Places with approved preliminary development plans. The exact locations of archeological sites are known by MHT but by law are confidential and protected from being released to the public. Instead of the exact location, an archeological site is shown as part of a grid or cell measuring approximately 121 acres.

TABLE	E IV-24	Historic .	Districts	and In	dividually	Designate	d Sites
Mastar							

Plan	MINP No			
Site No.		Name	Address	Town
1	M: 23-033	Dr. Dwyer House (Bleakwood)	3730 Damascus Road (MD 650)	Laytonsville
2	M: 23-031	Pleasant Fields (Sundown Hills, Henry Chew Gaither House)	4615 Sundown Road	Laytonsville
3	M: 23-029	Fair Hill II (Bowman's Store and House)	5929 Sundown Road	Laytonsville
4	M: 14-37 [NR]	. Laytonsville Historic District		Laytonsville
5	M: 23-045	Greenwood Mills Site (Greenwood Millers Cottage & Mill Site)	Georgia Avenue (MD 97)	Brookeville
6	M: 23-046	Greenwood and Cemetery	21315 Georgia Avenue (MD 97)	Brookeville
7	M: 23-071	Far View	21450 New Hampshire Avenue (MD 650)	Brookeville
8	M: 23-073	Gittings Ha-Ha and Cemetery	21030 New Hampshire Avenue (MD 650)	Brookeville
9	M: 23-047	Pleasant View	21000 Georgia Avenue (MD 97)	Brookeville
10	M: 23-069 [NR]	Brookeville Woolen Mill & House	Shipe Road	Brookeville
11	M: 23-026 [NIR]	(Riggs House)	6010 Riggs Road	Lautonsville
12	M: 23-079	Roslyn (Henry Stabler House, Roslyn Bank Barn)	20401 New Hampshire Avenue (MD 650)	Brinklow
13	M: 23-066 [NRE]	Bordley's Choice (Merrywood, Brookeville Academy)	20015 Georgia Avenue (MD 97)	Brookeville
14	M: 23-059	Locust Hill	4415 Brookeville Road	Brookeville
15	M: 23-065 [NR]	Brookeville Historic District		Brookeville
16	M: 23-082	Grafton Holland Farm (Sunnymeade Farm)	2222 Brighton Dam Road	Brookeville
17	M: 23-058	Gustavus Jones Farm and Cemetery	4112 Brookeville Road	Brookeville
18	M: 23-060	Oakley Log House	Brookeville Road	Brookeville
19	M: 23-084	Brooke Meadow	1711 Gold Mine Road	Brookeville
20	M: 23-089	Walnut Hill (Rivermist Kennels)	19515 New Hampshire Avenue (MD 650)	Brinklow
21	N1: 23-084-01	Ellicott Mine	2201 Gold Mine Road	Brookeville
22	M: 23-063	Longwood	2900 Dubarry Lane	Brookeville
23	M: 23-064	Oak Grove	19201 Georgia Avenue (MD 97)	Brookeville
24	M: 23-057	Falling Green	4501 Olney-Laytonsville Road (MD 108)	Olney
25	M: 23-092	Della Brooke (Brother's Content)	Gold Mine Road	Brookeville
26	M: 28-01	Mary Chandlee House	18820 New Hampshire Avenue (MD 650)	Brinklow
27	M: 23-098	Olney Historic District		Olney
28	M: 23-093	Sharon (Brooke Grove Nursing Home)	1630 Hickory Knoll Road	Sandy Spring
29	M: 23-098-03	St. John's Episcopal Church	3427 Olney-Laytonsville Road (MD 108)	Olney
30	M: 23-098-04	St. John's Rectory	3423 Olney-Laytonsville Road (MD 108)	Olney
31	M: 28-03	Mt. Airy	18120 New Hampshire Avenue (MD 650)	Ashton
32	M: 15-37	Tanglewood	315 Ashton Road (MD 108)	Ashton
33	M: 28-11 [NR]	Sandy Spring Historic District		Sandy Spring
34	M: 23-098-02	Olney House (Little Olney, Olney)	3308 Olney Sandy Spring Road (MD 108)	Olney
35	M: 23-094	Avalon	1601 Olney Sandy Spring Road (MD 108)	Sandy Spring
36	M: 23-097	Rockland	Olney Sandy Spring Road (MD 108)	Olney
NR	Listed on the Nation	al Register of Historic Places		

NR Listed on the National Register of Historic Places NRE Eligible for the National Register of Historic Places

All other listings are on the Maryland Inventory of Historic Places



Laws and Regulations a.

The National Historic Preservation Act of 1966, as amended, the NEPA of 1969, and other applicable federal, state, and local legislation govern the identification, analysis, and treatment of cultural (historic) resources. The lead agency for this project (FHWA) is required to take into account, during the planning process, the effect of its proposed project on historic properties which are listed on, or eligible for, the National Register prior to the issuance of a permit or license, or before the approval of funds.

At the county level, Chapter 24 A of the Montgomery County Code, the Historic Preservation Ordinance (1979) provides the legal authority for protecting cultural resources. The county's Historic Preservation Commission (HPC) evaluates each proposed designation to see whether it meets HPC criteria for historical, cultural, or archeological design significance. Approved resources are placed on the Master Plan for Historic Preservation, the official listing of all the protected places and structures in the county. Changes to designated resources can be made but there are restrictions. Most changes require a Historic Area Work Permit (HAWP) and include plans to move, demolish, or alter the exterior of the structure (even if the changes are not visible from the street).

For new developments affecting cultural resources, a HAWP is required in addition to other permits required by the Montgomery County Department of Environmental Protection (DEP). HPC must approve a developers application before the DEP can issue other permits. Consideration for existing structures adjacent to proposed new development must include appropriate setback distances as well as other mitigation measures.

Trends Analysis b.

Numerous potential archeological areas and Maryland Inventory of Historic Places were identified throughout the SCEA boundary. Archeological grids were especially evident along the Patuxent River, surrounding the Towns of Brookeville and Claysville (western portion of the boundary). Clusters of Maryland Inventory of Historic Places were identified primary along roadways and within historic districts. Several National Register sites were also identified.

Coordination with the Montgomery County's Historic Preservation Commission revealed the presence of approximately fifty individually designated sites throughout the SCEA boundary as part of the county's Master Plan of Historic Sites. These sites are those recorded by the county as designated historic sites and are protected by County Historic Preservation Ordinances.

As described above, the DEP and HPC must grant the necessary permits prior to any proposed development that is either adjacent to a designated site or requiring the demolishment of a site. The majority of the designated sites are located north of the Town of Brookeville, in areas zoned either one lot per 25 acres (west of MD 97) or one lot per five acres (east of MD 97).

c. Potential Cumulative Effects – Historic and Archeological Sites

All the alternates, including the SHA's Selected Alternate would affect the cultural resources in the study area. The MHT states that there is the potential for adverse impacts to the historic district under the No-Build Alternate. For the SHA's Selected Alternate, and Alternates 8A, and Alternate 8B, acquisition of property within the Brookeville Historic District as the result of the construction of the MD 97 Brookeville Project Bypass will adversely affect the District. Opportunities to landscape will help minimize impacts on the Brookeville Historic District associated with Alternate 5C. In addition, a nearby archeology site should be fenced during construction. The SHPO concurred that a Phase II evaluation was warranted on the archeological site (Site 18MO368) associated with a mill complex to conclusively determine its their eligibility. Phase II evaluation of the site was conducted in March and April 2002. These investigations determined that Site 18MO368 is significant both individually and as a contributing resource to the Brookeville Historic District. An MOA has been processed to address the effects of Alternate 7 Modified (Section VI). Phase III data recovery is recommended in the appended draft MOA if the site cannot be avoided during final design.

Potential future impacts were determined by overlaying known proposed subdivision plans over the appropriate location of each cultural resource. Based on the review, the limited developments proposed in the area would not result in direct impacts to cultural resources. The majority of the designated sites are scattered throughout the SCEA boundary, most in areas with land use and zoning classifications compatible with the preservation of cultural resources.

There is the potential for future impacts, especially in areas of the SCEA boundary where development is more prevalent, principally around the Olney area and along portions of MD 108 east of Olney. These areas are within the PFA and new development is likely to result in an adverse effect on some structures, at least visibly.

Protecting cultural resources on a large scale throughout the SCEA boundary are various degrees of zoning and planning restrictions placed by the County and State and county including the necessary permits required by HPC and DEP. The County's historic preservation regulations serve to minimize the loss of historic sites by ensuring that proposed development plans are in compliance with County Historic Preservation Ordinances.

6. <u>Conclusions</u>

Direct impacts with each Build Alternate are unavoidable. SHA will comply with the environmental requirements to mitigate for the direct impacts. Through the planning process, steps have been taken to minimize impacts through changes in geometry and layout of alternates, and consideration of both open and closed sections, as well as spanning streams.

Secondary impacts are not expected to occur due to the MD 97 Brookeville Project. Based on the SCEA analysis, there are minor cumulative effects to resources in the SCEA boundary. There are four factors that support these findings (1) the project purpose and need; (2) SHA's commitment to limited access; (3) strong state and county protection of resources and an aggressive commitment to agricultural protection, within the SCEA boundary and beyond; and, (4) the results of the detailed resource studies provided in this section.

SHA's commitment to the four conditions described earlier in this section place unprecedented restrictions on future "loosening" of the project's initial purpose and need. The placement of permanent easements along SHA's Selected Alternate alignment closes any future attempt to provide access, widening, or other connections to it. In addition, any capacity that the Build Alternate might add to the network cannot be used to allow development outside the current boundaries of the Town of Brookeville. These conditions are an effort to successfully comply with Smart Growth requirements and at the same time meet the viable traffic concerns associated with existing MD 97 through the historic Town of Brookeville.

Complimenting SHA's efforts to comply with Smart Growth is Montgomery County's commitment to preserve areas within the SCEA boundary for generations to come as an agricultural community. The county has in place a series of land use designations and conservation efforts within the SCEA boundary conductive with long-term agricultural land and open space preservation. These efforts by the county demonstrate a consistency in land protection measures that practically negate cumulative effects. These include:

- High level of protection relevant to agricultural zoning (one dwelling unit per 25 acres)
- High overall effectiveness of zoning
- TDR, Purchase of Development Rights (PDR) and other easement programs (over 6,090 acres protected in SCEA boundary)
- State designated Rural Legacy Area
- SCEA boundary within county designated Agricultural Wedge as discussed in General Plan Refinement, 1993
- Proximity to and inclusion of state and county park systems within SCEA boundary

Using the current approved development plans as a precursor of future development pressures, cumulative resource impacts such as wetlands, forest, and farmland, will be minimal. Some development will occur, typically consisting of a small number of lots and will place some pressure on farming resources, especially active farming operations. Two local bridge and roadway projects, the MD 97 at Patuxent River Bridge and Bordly Drive, as described in Section IV.O.2.c, may also result in additional cumulative effects to wetlands, forest, and farmland. Many resources are protected through more than one set of regulations. For instance, many forested areas are also considered wetlands or are located within floodplains or steep slopes, areas usually not appropriate to development activities. Conversely, this has also been the pattern of land use and land use changes within the SCEA boundary throughout the SCEA time frame to date, a period of over 32 years. With the level of land protection mechanisms in place, land use changes are anticipated to be minimal through the year 2020.

P. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The long-term benefits of the Build Alternates would accrue at the expense of the short-term construction impacts in the immediate vicinity of the project area. These short-term effects would include localized noise and air pollution, and minor traffic delays. With proper controls, they would not have a lasting effect on the environment.

The local short-term impacts by the construction of the various Build Alternates are similar in nature and are consistent with the maintenance an enhancement of long-term productivity for the local area, state and region. The Comprehensive Plan for Brookeville identifies MD 97 as a key element of the regional arterial highway system. The plan emphasizes the need to remove the through-traffic from the center of town to preserve the integrity of the historic district, as well as to improve safety for motorists. The transportation improvements addressed in this document have been considered and proposed in accordance with the Comprehensive Plan.

Q. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION

The construction of any of the Build Alternates involves the irreversible and irretrievable commitment of various natural, human, and fiscal resources. The Build Alternates require the commitment of land to new highway construction, which is considered an irreversible commitment during the time period that the land is used for a highway facility. If a greater need for the land is proven, or the highway is proven no longer necessary, it is possible to re-convert the property to another use. It is not anticipated, however, that either of these two situations would occur.

Fossil fuels, labor, and natural resources are also used in the quarrying, manufacturing, mixing, and transporting of construction materials. The materials used in the highway construction process are irretrievable, however, they are not in short supply and their use should not have an adverse effect on continued availability of these resources.

Selection of a Build Alternate would require an irretrievable commitment of federal and state funds for ROW acquisition, materials, and construction. Funds for annual maintenance would also be required. Any loss of tax revenues from private land taken for highway use would be an irretrievable revenue loss for Montgomery County; however, this is not anticipated.

The commitment of these resources is established on the premise that the local and regional residents, commuters, and business communities would benefit from the proposed highway improvements. Benefits, which are anticipated to outweigh the loss of these resources, would include increased safety, accident reduction, improvements to traffic flow, reduction in travel time, and protection of the integrity of the Town of Brookeville Historic District.

Section V. Section 4(f) Evaluation

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

V. SECTION 4(f) EVALUATION

A. INTRODUCTION

Section 4(f) of the US Department of Transportation Act of 1966, 49 U.S.C. 303(c), states that the use of land from a significant publicly-owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site (as determined by the officials having jurisdiction over the resource) as part of a federally-funded or approved transportation project is permissible only if there are no feasible and prudent alternatives to the use and that the proposed action includes all possible planning to minimize harm to the property.

B. PROPOSED ACTION

Georgia Avenue (MD 97) is an arterial highway serving eastern Montgomery County and central Maryland, originating in Washington, D.C. and extending north past the Capital Beltway (I-495) and I-70 in Howard County to the Pennsylvania line. Regionally, MD 97 functions as a major north-south commuter route between employment areas in and around the Washington, D.C. metropolitan area (Figure ES-2). Locally, MD 97 also serves the residential communities of Howard and Carroll Counties and upper Montgomery County, including Brookeville, which is the focus of the MD 97 Project (Figure ES-1). Brookeville is a late 19th-century crossroads town and is centrally located in the eastern part of Montgomery County, Maryland. The entire Town of Brookeville has been listed on the National Register of Historic Places (National Register) since 1979 as a historic district (Figure V-1).

Transportation problems on MD 97 within the historic Town of Brookeville are associated with two intersecting roads and approximately 25 driveways; a narrow typical roadway section; and, substandard horizontal and vertical geometric conditions. These result in unsafe conditions and sight distance problems for motorists at the right angle intersection of MD 97 (High Street in Brookeville) and Brighton Dam Road (Market Street in Brookeville) (Figure V-1). Brookeville is a unique historic town whose quaint ambiance is being compromised by a continually increasing volume of commuter traffic. As explained in the Section I of this Final Environmental Impact Statement (FEIS), the Purpose and Need for the MD 97 Brookeville Project is to remove the increasing through-traffic volumes from the Town of Brookeville, to improve local traffic operations and safety on existing MD 97 and to preserve the historic character of Brookeville.

In addition to the No-Build Alternate, four Build Alternates (one east of Brookeville-Alternate 5C and three west of Brookeville-Alternate 7, Alternate 8A, and Alternate 8B) were initially considered to improve traffic operations on MD 97 through Brookeville. The four Build Alternates were presented in the August 2001 Draft Environmental Impact Statement (DEIS)/Section 4(f) Evaluation and are identified on **Figure V-2**. Detailed descriptions of these alternates are provided in **Section II** of this FEIS. The four DEIS Build Alternates were all developed as two-lane undivided roadways on new location with a typical section consisting of two 11-foot travel lanes with two 10-foot shoulders (five feet paved for bicycle traffic and safety grading). This typical section has been retained in this FEIS/Section 4(f) Evaluation and is discussed in the Minimization Options section of this document.







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The Build Alternates and typical sections considered in the DEIS were developed in 1999 in response to the October 1997 Smart Growth and Neighborhood Conservation Act, which was intended to control growth and urban sprawl. In compliance with the Smart Growth criteria, roundabouts would need to be included at the northern and southern termini of these alternates to control traffic flow and to help limit the capacity of the new roadway. The roundabouts would be landscaped as "gateways" to historic Brookeville. Proposed speed limits and access restrictions would enable future design to be consistent with Brookeville's small town setting. By incorporating these "traffic-calming" features into the proposed MD 97 Build Alternates, sprawl growth near Brookeville would be discouraged, while relieving traffic problems within the historic town. As described and illustrated in the Minimization Options section of this document, open drainage is the recommended project design as it is consistent with Smart Growth criterion; is compatible with the roadway sections where the proposed improvements would reconnect with existing MD 97 to the north and south of Town; and, would create a parkway type two-lane roadway section in Reddy Branch Stream Valley Park.

The Maryland State Highway Administration (SHA) has selected Alternate 7 Modified mainly as a result of post-DEIS coordination with resource agencies including the Maryland Historical Trust (MHT) and jurisdictional officials and owners of impacted parkland (Maryland-National Capital Park and Planning Commission [M-NCPPC] and Montgomery County). Based on results of Phase II archeological study and findings, Alternate 7 Modified was developed to reduce impacts to the National Register eligible Newlin/Downs Mill Complex archeological site, partially located within the Brookeville Historic District where it overlaps the Reddy Branch Stream Valley Park, and then extends to the west within the park. Alternate 7 Modified is similar to the DEIS Alternate 7 alignment except that Alternate 7 Modified has been shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Stream Valley Park between the proposed roundabout located at Brookeville Road and the area north of Dubarry Drive (Figure V-2). As discussed in the Mitigation Measures section of this document, a retaining wall design is proposed south of Brookeville Road and east of the proposed roundabout to reduce impacts to the Newlin/Downs Mill Complex site. The retaining wall would also reduce Section 4(f) use of Reddy Branch Stream Valley Park where the public park overlaps the Brookeville Historic District.

C. DESCRIPTION OF SECTION 4(f) RESOURCES

Based on consultation with jurisdictional officials, a total of five individual resources including three publicly owned parks or recreational facilities (Longwood Community Center, Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park), and two historic resources (Brookeville Historic District and Bordley's Choice) are present in the project study limits (Figure V-3). Each of the project's five Build Alternates would impact two of the five identified Section 4(f) resources. Bordley's Choice is not addressed in this Final Section 4(f) Evaluation because none of the five Build Alternates would impact this National Register eligible property. The National Register eligible Newlin/Downs Mill Complex site is not a Section 4(f) resource because MHT has agreed that data recovery is acceptable mitigation and preservation-in-place is not warranted (Appendix A).

It is important to note that portions of the regional Reddy Branch Stream Valley Park overlap the boundary for the National Register listed Brookeville Historic District (Figure V-3), as nominated in 1997 that includes the entire town of Brookeville (Figure V-1). Descriptions of all public recreational facilities, parks, and historic properties within the project area are included in Section III of this FEIS. As discussed in Section IV-A.1.c, the portion of the Longwood Community Center that would be impacted by the project is not considered to be a Section 4(f) impact because the publicly owned parcel was reserved for transportation use when the recreational facility was initially planned in 1980.

V. Section 4(f) Evaluation

2



1. Brookeville Historic District

The Brookeville Historic District, a late 19th-century crossroads village, is significant for its architecture and its history as a commercial and service center for the surrounding agricultural area. Brookeville comprises an important collection of well-preserved buildings in a pristine setting spanning to the late 18th-20th centuries. Homes reflecting both Federal style and Gothic Revival architecture are also included in the district. The Federal style and Gothic Revival architecture were common in the early and mid-1800s, respectively. The Brookeville Academy (circa 1810) was one of the first private academies in Montgomery County. The original road pattern of the historic village remains relatively unaltered, and is essential to its historic character.

The Town of Brookeville was originally settled by Richard Thomas in 1794 and was chartered by the legislature in 1808. Brookeville was incorporated in 1890 making it the oldest incorporated municipality in Montgomery County. It functioned as a center for education and commerce and was home to progressive agronomists including Thomas Moore who made several significant contributions to advance the farming industry at first locally then nationally. During the War of 1812, President James Madison fled Washington, D.C. during a short-lived British occupation of the capital and directed the federal government for two days from the home of Caleb Bently, a farmer in Brookeville. In the early 20th century automobiles were introduced which changed the traffic patterns around Brookeville. More products were developed in factories rather than in small artisan's shops. This changed the demographics and markets ending the commercial base of Brookeville. The town became a predominantly residential community.

In 1979, Brookeville was listed on the National Register as a historically significant 19th century rural settlement. In 1985, the Montgomery County Historic Preservation Ordinance was adopted. Subsequently, in 1986, the town was designated as a Master Plan Historic District to be protected under that Ordinance (Brookeville Planning Commission, 1994). Today, Brookeville remains a small town consisting of approximately 52 buildings (Brookeville Planning Commission, 1994) and 120 residents (US Census Bureau, 2000). Figure V-1 illustrates what can be considered current town conditions including the Brookeville Historic District National Register boundaries. The historic district boundary coincides with the boundary for the Town of Brookeville. The Maryland State Historic Preservation Officer (SHPO) concurred with the eligibility and recommended boundaries for the district (September 29, 1995). Figures V-1, V-2 and V-3 illustrate where portions of the historic district are part of Reddy Branch Stream Valley Park.

Associated with the Town of Brookeville, and located within Reddy Branch Stream Valley Park, is the Oakley Cabin Trail (**Figure V-2**). The Oakley Cabin trail historically connected the Town of Brookeville with the historic African American Oakley Cabin, which is located outside the limits of the project area. The historic Oakley Cabin, which was originally built for slaves and later became the center of a small roadside Free Black community, is the only publicly owned African American historical site in Montgomery County that is open to the public. The Oakley Cabin trail paralleled an old millrace for Newlin's Mill in Brookeville and was used by people who lived in the community and worked at Newlin's Mill, which is described in **Section III** of this FEIS. A small portion of the trail within the project impact area in the vicinity of the DEIS western alternate alignments has recently been cleared by M-NCPPC and is considered to be man-made and not historic.

2. <u>Reddy Branch Stream Valley Park</u>

Reddy Branch Stream Valley Park is a multi-jurisdictional regional conservation park that extends in an east-west direction throughout the project area (Figure V-3). It is part of a larger system of regional stream valley parks throughout Montgomery County. See Section IV-O.2.d for information regarding the Upper Patuxent Watershed Rural Legacy Area. The Reddy Branch Stream Valley Park portion of the regional park system currently totals approximately 274 acres of publicly owned lands acquired in segments (defined as three major units, two of which are within the project area) by Montgomery County and M-NCPPC administrations dating to the late 1960's. The park is administered by M-NCPPC. Based on consultations with jurisdictional park officials, several parcels were acquired by Maryland Program Open Space funds (Table V-1 and Figure V-4). No US Department of Interior's Lands and Water Conservation Act funding was used to acquire parcels in the MD 97 project area. Agency coordination letters are located in Section VI of this FEIS.

Unit 1 of Reddy Branch Stream Valley Park is located east of MD 97 (Figure V-4). In 1997, consultation with jurisdictional officials indicated that Unit 1 included 64.8 acres. Parcels 1, 5, 12, and 14 are in the ownership of Montgomery County, with Parcels 3, 4, and 11 in the ownership of M-NCPPC. All of the parcels are administered by M-NCPPC. This includes Parcels 7, 8, and 9, which added 61.7 acres deeded to M-NCPPC in 2001. All of this acreage is undeveloped and considered to be conservation parkland. Current public use of this park is generally limited to hiking and nature study with no defined trail system. Future recreational use is not likely to change substantially. Unit 1 Parcel 1 has been acquired with Maryland Program Open Space monies, as noted on **Table V-1**. The table includes only the parcels potentially impacted by the project and identifies ownership and the funds used to acquire the property.

Unit 2 of Reddy Branch Stream Valley Park is west of MD 97 and contains approximately 71.2 acres (Figure V-4). Parcels 8, 9A, 9B, 9C, and 11 are in the ownership of Montgomery County, Maryland (Table V-1). Parcels 7, 10, and 13 are in the ownership of M-NCPPC. As with Unit 1, there are no trails and the acreage is undeveloped and considered to be conservation parkland. Current public use of this park is generally limited to hiking and nature study activities. No substantial change in recreational use is expected in the future. Parcel 8 is the only property in Unit 2 acquired using Maryland Program Open Space funds.

3. <u>Hawlings River Stream Valley Park</u>

Hawlings River Stream Valley Park is also part of Montgomery County's multi-jurisdictional regional conservation system (Figure V-3). It totals 554 acres and is located at the north end of the project area, primarily east of the project area where it joins with the Reddy Branch Stream Valley Park. Two parcels (parkland parcel 20 and parkland parcel 26) are located in the MD 97 project area (Figure V-4). Parcel 20 is owned by M-NCPPC and was acquired with Patuxent River Watershed Act of 1969 funds (Table V-2). Parcel 26 is owned by Montgomery County and was purchased with Maryland Program Open Space funds. Both parcels are administered by M-NCPPC, as is the entire regional park system within Montgomery County.

Reddy Branch Stream Valley Park Parcels/Size (acres)	Parcel No-Build Size Alternate (acres) (acres)		Alternate 5C (acres)		Alternate 7 (acres)		SHA's Selected Alternate (acres)	Altern At-G (ac	Alternate 8A At-Grade (acres)		Alternate 8B Grade-Separated (acres)	
(40103)			Open	Closed	Open	Closed	Open	Open	Closed	Open	Closed	
Unit 1 Parcel 1 ^{1,3,5}	2.63	0	0	0	0.24*	0.21*	0.24 *	0.29 *	0.29 *	0.31 *	0.31 *	
Unit 1 Parcel 9 ^{2.5}	57.29	0	2.15	2.05	0	0	0	0	0	0	0	
Unit 1 Parcel 11 ^{2,5}	4.83	0	0.52	0.49	0	0	0	0	0	0	0	
Unit 2 Parcel 8 ^{1, 3,5}	54.30	0	0	0	2.19*	1.89*	2.19 *	3.30 *	2.87 *	4.26 *	3.69 *	
Unit 2 Parcel 9A ^{1, 4,5}	0.51	0	0	0	0.11	0.11	0.11	0.11	0.11	0.18	0.17	
Unit 2 Parcel 9B ^{1, 4,5}	0.86	0	0	. 0	0.50	0.50	0.50	0.50	0.50	0.61	0.59	
Unit 2 Parcel 9C ^{1, 4,5}	1.40	0	0	0	0.72	0.72	0.72	0.71	0.71	0.79	0.79	
Unit 2 Parcel 10 ^{2,5}	2.30	0	0	0	1.05	0.92	1.05	0.86	0.76	0.14	0.09	
Unit 2 Parcel 11 1.4.5	4.13	0	0	0	0.49	0.49	0.49	0.10	0.10	<0.01	<0.01	
Total Reddy Branch Stream Valley Park Acres and Uses	128.25 ac as part of 242 ac. park	0	2.67 ⁶	2.54 ⁷	6.65 ⁶	4.84 ⁷	5.626	7.226	5.347	7 .64 ⁶	5.64 ⁷	

TABLE V-1 Summary of Section 4(f) Impacts to Reddy Branch Stream Valley Park

2

Owned by Montgomery County, Maryland. Owned by Maryland-National Capital Park and Planning Commission.

3 Acquired with Maryland Program Open Space Funds. Located within Brookeville Historic District. 4

5

The impact quantities for the open section include the acreage to be required for stormwater management. The impact quantities for the open section include the acreage estimated for stormwater management. 6

7 The impact quantities for the closed section do not include acreage estimates for stormwater management facilities because the open section was selected as the typical section.

Indicates deed covenants and replacement land restrictions apply.

TABLE V-2 Summary of Section 4(f) Impacts to Hawlings River Stream Valley Park

Hawlings River Stream Valley Park Parcels	Parcel Size (acres)	Parcel Size (acres)	Parcel Size (acres)	No-Build Alternate (acres)	Alter (ac	nate 5C cres)	Alter (ac	nate 7 res)	SHA's Selected Alternate (acres)	Altern At-C (ac	nate 8A Grade res)	Altern Grade-S (ac	ate 8B eparated res)
			Open	Closed	Open	Closed	Open	Open	Closed	Open	Closed		
Parcel 26 ^{1, 3}	6.08	0	1.78 *	1.18 *	0	0	0	0	0	0	0		
Parcel 20 ^{2.4}	1.0	0	0.10 *	0.08 *	0	0	0	0	0	0	0		
Total Hawlings River Stream Valley Park Acres and Uses	7.08 ac. as part of 550.4 ac. park	0	1.88	1.26	0	0	0	0	0	0	0		

Owned by Montgomery County, Maryland. Owned by Maryland-National Capital Park and Planning Commission. 2

3 4

Acquired with Maryland Program Open Space Funds. Acquired with Patuxent River Watershed Act of 1969 Funds.

Indicates deed covenants and replacement land restrictions apply.

TABLE V-3 Summary of Impacts to Section 4(f) Resources

Section 4(f) Resource	Size (acres)	Size (acres)	No-Build Alternate (acres)	Altern (ac	ate 5C res)	Alter (ac	nate 7 res)	SHA's Selected Alternate (acres)	Altern At-Gra Byj (ac	ate 8A de West pass res)	Altern Gra Separat Byg (act	ate 8B Ide- ed West Dass res)
			Open	Closed	Open	Closed	Open	Open	Closed	Open	Closed	
Brookeville Historic District		0	0	0	2.24 ¹	2.24 ¹	1.66 ¹	1.66 ¹	1.42 ¹	1.58 ¹	1.55 ¹	
Reddy Branch Stream Valley Park (Table V-1)	242	0	2.67	2.54	6.65	4.84	5.62	7.22	5.34	7.64	5.64	
Hawlings River Stream Valley Park (Table V-2)	550.4	0	1.88	1.26	0	0	0	0	0	0	0	
Total Use of Section 4(f)		0	4.55 ²	3.80 ³	6.65 ²	4.84 ³	5.62 ²	7.22 ²	5.34 ³	7 .64 ²	5.64 ³	

Included within Reddy Branch Stream Valley Park acreages (Unit #2 parcels 9A, 9B, 9C and 11 on Tahle V-1). 2

The impact quantities for the open section include the acreage estimated for stormwater management. 3 The impact quantities for the closed section do not include acreage estimates for stormwater management facilities because the open section was selected as the typical section.



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D. IMPACTS TO SECTION 4(f) PROPERTIES

Similar to all the DEIS Build Alternates (Alternates 5C, 7, 8A, and 8B), SHA's Selected Alternate 7 Modified would impact two Section 4(f) properties (Figure V-4). The three western alignments (Alternates 7, 8A, and 8B) and SHA's Selected Alternate 7 Modified would impact the Brookeville Historic District and the Reddy Branch Stream Valley Park. The eastern alignment (Alternate 5C) would impact Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park

All Build Alternates, including SHA's Selected Alternate, would impact the Reddy Branch Stream Valley Park to varying degrees (Table V-1). This is because the park is a linear Section 4(f) resource extending in an east-west direction throughout the project area and all Build Alternates follow a north-south axis (Figure V-4). SHA's Selected Alternate 7 Modified and the DEIS western alternates (Alternates 7, 8A, and 8B) would impact both the Reddy Branch Stream Valley Park and the Brookeville Historic District, including areas where both Section 4(f) resources overlap. Alternate 5C adversely affects, but avoids Section 4(f) use of the Brookeville Historic District. It would, however, impact both the Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park. Table V-3 identifies impacts to individual resources and the total amount of Section 4(f) properties that would be used by the Build Alternates.

As discussed in the DEIS/Section 4(f) Evaluation, avoidance and minimization of Section 4(f) impacts was evaluated for each of the Build Alternates. These measures include consideration of a closed drainage design that would reduce right-of-way (ROW) when compared to open drainage as quantified in **Tables V-1**, **V-2** and **V-3** and described and illustrated subsequently in this section. For the SHA Selected Alternate 7 Modified alignment, the open drainage option has been selected primarily because existing MD 97 is an open roadway section where both the northern and southern tie-ins with existing MD 97 would occur outside of the Town of Brookeville (Figure V-4). The open roadway design is also compatible with Smart Growth criterion established for the project including the roundabout design at Brookeville Road and Georgia Avenue south of town. It would also create a parkway type design for the proposed two-lane roadway within Reddy Branch Stream Valley Park.

Stormwater management (SWM) facilities to control runoff and provide quantity control would also be required adjacent to all Build Alternates, including SHA's Selected Alternate 7 Modified. Each of the four western alternates, including SHA's Selected Alternate, share similar locations proposed for the four required pond facilities based on preliminary engineering. Tree clearing would also be required for each facility. In total, the proposed SWM facilities would add approximately one acre of Section 4(f) use as quantified in **Tables V-1** and **V-3**. The acreage is needed so that SHA would own and maintain the SWM facilities.

Section 4(f) impacts associated the SWM facilities are located in both the Reddy Branch Stream Valley Park and the Brookeville Historic District. Three of the four proposed pond facilities are within Reddy Branch Stream Valley Park, one of which is located where the parkland overlaps the historic district. The locations of each facility are based on the proposed drainage patterns once the roadway construction would be complete. In addition to the pond facilities, grass channels would be provided in areas where the runoff could not readily be treated with a pond facility. These grass channels, along with the roadside ditches within the project area, could be utilized to enhance water quality and provide some ground water recharge. The estimated one-acre of parkland to be acquired is considered to be a conservative maximum estimate and may be reduced during final design. Individual discussions for each of the impacted Section 4(f) properties are as follows:

1. <u>Brookeville Historic District</u>

The No-Build Alternate would not require Section 4(f) use of the Brookeville Historic District. Implementation of the No-Build, however, would not improve the identified traffic operations and safety on existing Georgia Avenue and, in turn, would do nothing to help preserve the historic character of the Town. Due to the size and configuration of the National Register boundaries of the historic district, the four western alignments (SHA Selected Alternate 7 Modified and Alternates 7, 8A, and 8B) would require property from the District, although there would be no direct impacts to contributing elements within the Brookeville Historic District. Pursuant to 36CFR800, the MHT has concurred that the historic district would be adversely affected by SHA's Selected Alternate (Appendix A), as well as all four DEIS Build Alternates (Alternates 7, 8A, 8B, and 5C).

As shown on **Figure V-4**, the four western alternates have similar alignments, resulting in similar Section 4(f) uses of property from the Brookeville Historic District. As quantified in **Table V-3** and illustrated on **Figures V-5A** through **V-8**, the impacts with the selected open drainage system vary and would range from 1.58 acres for Alternate 8B, due to the bridge over Brookeville Road (**Figure V-8**), to 1.66 acres for both the SHA Selected Alternate 7 Modified (**Figure V-6**) and Alternate 8A (**Figure V-7**), to 2.24 acres for Alternate 7 (**Figure V-5A**).

As illustrated on the respective figures, all four western alternates share a common alignment that would be at-grade near the southern project limit northward to approximately Station 25 located on each figure. North of Station 25, the portion of the Brookeville Historic District impacted by SHA's Selected Alternate 7 Modified and Alternates 7, 8A, and 8B include Unit 2 parkland parcels 9A, 9B, 9C, and 11 within Reddy Branch Stream Valley Park. This is a wooded area with wetlands along Meadow Branch, and there no structures in this area that contribute to the historic significance of the Town of Brookeville.

Figure V-5A which locates both Alternates 5C and 7, and **Figures V-6**, **V-7** and **V-8**, all locate the nearest historic structure, at 318 Georgia Avenue, within the Brookeville Historic District relative to the four western Alternates. As illustrated by the varying ROW on each of the figures, a ridge exists between the buildings in the historic district and the four western alternates. From the vicinity of Station 30 northward, the alignment would become slightly elevated on fill to a maximum height ranging from 8 to 20 feet depending on the alternate including location of the roundabout(s) and type of crossing of Brookeville Road. The shared alignment would then cut into the ridge near Station 35 for each of the alternates. As a result, this would effectively screen the Build Alternates, including SHA's Selected Alternate 7 Modified which is located about 330 feet from the nearest historic structure within the district south of Brookeville Road.

Compared to the SHA Selected Alternate 7 Modified (Figure V-6), Alternate 8A (Figure V-7), and Alternate 8B (Figure V-8) are located about 400 feet from the nearest historic structure, at 318 Georgia Avenue. Alternate 8 was developed as a realignment of the original Alternate 7 in order to minimize wetland impacts by shifting to the west of wetlands located north of Brookeville Road. Alternate 8 was later modified into Alternates 8A and 8B that were carried forward in the DEIS. Alternate 8A differs from the SHA Selected Alternate 7 Modified in that it provides a second roundabout north of Brookeville Road (Figure V-7) whereas Alternate 8B includes a bridge to cross over Brookeville Road (Figure V-8). As a result, the visual buffer from the nearest historic structure at 318 Georgia Avenue for Alternate 8B would not be as effective as the Selected Alternate which would require 1.66 acres of ROW from the historic district compared to 1.58 acres for Alternate 8B.













2. <u>Reddy Branch Stream Valley Park</u>

The No-Build Alternate would not impact the Reddy Branch Stream Valley Park. All five Build Alternates, including SHA's Selected Alternate 7 Modified, would impact portions of this public park (Table V-1 and Figures V-5A through V-8). As described, Reddy Branch Stream Valley Park is a linear resource throughout the project area (Figure V-3). It is therefore impossible to avoid impacting the park with an alignment on new location that will satisfy the identified project need.

SHA's Selected Alternate 7 Modified, and Alternates 7, 8A and 8B would all impact Reddy Branch Stream Valley Park in two locations (**Table V-1** and **Figure V-4**), one to the east of MD 97 and one to the west of MD 97. The portion of the park impacted east of MD 97 (Unit 1 Parcel 1) is owned by Montgomery County and was purchased with Maryland Program Open Space Funds. The wooded parcel fronts Georgia Avenue and originally included a residence that was demolished by M-NCPPC and remains mostly wooded. This parcel is not located in the Brookeville Historic District.

The second area of the park that would be impacted is a forested area located west of MD 97 and includes Unit 2 Parcels 9A, 9B, 9C, and 11, where portions of the park overlap the historic district (**Table V-1** and **Figure V-4**). As shown on the figure, the western alternates enter the park (and Brookeville Historic District) from the south, and would begin to shift north of Dubarry Drive. This is where the alignments begin to differ due to the positioning of the roundabout(s) and type of crossing (at-grade versus fill embankment and structure) of Brookeville Road.

SHA's Selected Alternate 7 Modified (Figure V-6) and Alternate 7 (Figure V-5A) would require a total of 5.30 acres of park property for ROW (see Table V-1 and Table V-3) to build the selected open typical roadway section. In comparison, Alternate 8A (Figure V-7) would require 5.87 acres, with Alternate 8B (Figure V-8) requiring 6.29 acres for ROW. As described above for the Brookeville Historic District, Alternates 8A and 8B were developed to avoid wetlands north of Brookeville Road. The alignments for Alternate 8A and Alternate 8B are similar, the major difference being a roundabout proposed for Alternate 8A (Figure V-7) in place of the approximately 24 foot high bridge spanning Brookeville Road for Alternate 8B (Figure V-8). North of Brookeville Road, the four alternates would span Reddy Branch where both sides of the stream are privately owned and anticipated by M-NCPPC to become part of the regional park system in the future. Based on coordination with M-NCPPC and the regulatory resource agencies, the vertical clearance of any structure spanning Reddy Branch would require a minimum of eight feet clearance over the stream.

Reddy Branch Stream Valley Park continues east of MD 97, forming a continuous Section 4(f) linear resource across the project area (Figures V-3 and V-4). Alternate 5C was originally developed in the early 1990s as an eastern alignment that would minimize floodplain impacts on several privately owned parcels at the time. The parcels impacted by Alternate 5C are now publicly owned as part of the Reddy Branch Stream Valley Park regional system and therefore protected under Section 4(f). As a result, Alternate 5C would impact 2.67 acres of parkland including lands from Unit 1 Parcels 9 and 11 (Table V-1 and FigureV-4) for the open roadway section. The design proposed for Alternate 5C (Figure V-5A) would consist of fill embankment in the park and a structure to span both Reddy Branch and nearby Brighton Dam Road. The impacted portion of the park is mostly wooded and primarily used for passive recreation. The proposed bridge would provide wildlife passage and pedestrian access along Reddy Branch with a vertical clearance of approximately 33 feet over the stream due to the steep topography in the area.

3. Hawlings River Stream Valley Park

The No-Build Alternate, SHA's Selected Alternate 7 Modified, and the DEIS western alternates (Alternates 7, 8A, and 8B) all avoid ROW acquisition from the Hawlings River Stream Valley Park.

Section 4(f) impacts for Alternate 5C (Figure V-5A) would total 1.88 acres for open drainage design (Table V-2). Two parcels (parkland parcel 20 owned by M-NCPPC and parkland parcel 26 owned by Montgomery County) would be impacted and have deed covenants requiring replacement land restrictions. The impacted area includes primarily open fields and woodland fronting MD 97.

E. AVOIDANCE AND MINIMIZATION ALTERNATES

The following section addresses a total Section 4(f) avoidance for the entire project followed by individual Section 4(f) avoidance for each of the three impacted Section 4(f) properties. Minimization alternates are then discussed, including the identification of two section 4(f) minimization alternates, one east of MD 97 and one west of MD 97.

1. <u>Total Section 4(f) Avoidance</u>

As illustrated on **Figure V-3**, the presence of the entire Town of Brookeville as a National Register listed historic district and the linear nature of the publicly owned Reddy Branch Stream Valley Park extending throughout the MD 97 study area as a 274 acre regional park, preclude the development of a total Section 4(f) avoidance alternate that would fully meet the project need. Reddy Branch Stream Valley Park is a linear park extending in an east-west direction throughout the project area, whereas all five Build Alternates follow a north-south axis (**Figure V-4**). For this reason, the No-Build (Alternate 1) is the only alternate that results in total avoidance of Section 4(f) properties.

Although the No-Build Alternate is capable of avoiding Section 4(f) resources, it is not considered to be prudent because it would not provide significant improvements to MD 97 in the Brookeville area and would not meet the project need. With the No-Build Alternate, minor improvements could occur as part of normal maintenance and safety operations (i.e., sidewalks, curbing, resurfacing, restriping, lighting, signing, drainage, etc.). These improvements would not measurably affect roadway capacity or reduce accident rates on MD 97 throughout the project area.

The No-Build Alternate would not solve the current congestion problems at the Market Street/High Street intersection (Figure V-1) in Brookeville nor the unsafe sight distance conditions that exist along the two-lane, undivided section of MD 97 through Brookeville and on the north and south approaches of MD 97 into town. These operational and safety deficiencies would be expected to worsen with time, due to continued development in the growth areas of Montgomery and Howard Counties, which will contribute to the traffic along MD 97 through Brookeville. The present average daily traffic of 9,000 vehicles on MD 97 through Brookeville is forecasted to double by Design Year 2020. As a result, MD 97 would effectively operate at an unacceptable LOS D north of Brookeville and at a worse LOS E, south of Town as discussed in Section II of this FEIS.

Currently, the T-intersection at Market Street and High Street operates at a LOS A but only after the long queues (back-ups) waiting in turn to pass through the intersection. LOS D exists along High Street south of the T-intersection resulting in long queues. These long queues together with the stop-controlled intersection degrade Brookeville's historic character and small town ambience. These conditions would only become worse with the No-Build Alternate.

The No-Build Alternate would not be consistent with the 1994 Brookeville Comprehensive Plan or the 1980 Olney Master Plan. The No-Build was compared to assess its ability to address project goals such as improving safety, reducing congestion, and supporting the Olney Master Plan and the Town of Brookeville's Comprehensive Land Use Plans and Smart Growth Initiatives. A summary of these is shown on **Table V-4** and includes the Section 106 Adverse Effect Determinations pursuant to 36 CFR 800.5. Descriptions of the individual Section 4(f) avoidance and design minimization alternates also considered for the project are discussed following the table.

Alternates		Use of	Section 4(f) Re	Sources	Addresses Project Need	Consistenc Land Use P	Section 106 Effects Determination					
A-Avoidance M-Minimization		Brookeville Historic District	Reddy Branch Stream Valley Park	Hawlings River Stream Valley Park	Safety/ Congestion	Supports Brookeville Comprehensive Plan	Located in Certified PFA Boundary	Adverse Effect				
A	Alternate I (No-Build)	No	No	No	No	No	Yes	Yes				
Μ	Alternate 5C	No	Yes	Yes	Yes	No	No	Yes				
М	Alternate 7 (West Bypass)	Yes	Yes	No	Yes	Yes	Yes	Yes				
М	SHA's Selected Alternate	Yes	Yes	No	Yes	Yes	Yes	Yes				
М	Alternate 8A (At-Grade)	Yes	Yes	No	Yes	Yes	Yes	Yes				
М	Alternate 8B (Grade-separated)	Yes	Yes	No	Yes	Yes	Yes	Yes				

TABLE V-4 Summary of Avoidance and Minimization Alternates

2. Individual Section 4(f) Property Avoidance

As explained in Section II of the DEIS, alternates were evaluated during the initial stages of the project's alternate development process to avoid impacts to five properties originally identified that could qualify as Section 4(f) resources. Alternates were then considered that would reduce the total number of impacted Section 4(f) properties as explained in Section II of the FEIS. This resulted in each of the five Build Alternates (SHA's Selected Alternate 7 Modified and Alternates 5C, 7, 8A and 8B) impacting two of the three Section 4(f) properties addressed in this Section 4(f) Evaluation (Table V-4). Avoidance of each of the three impacted Section 4(f) properties include the following:

a. Brookeville Historic District Avoidance

The No-Build Alternate would avoid the Brookeville Historic District. However, as explained previously, it would do nothing to improve the existing congestion problems in the Town of Brookeville, which would only become worse with the No-Build Alternate. This, in turn, would continue to adversely affect the Town's historic character and small town ambiance.

The 1990 Feasibility Study for the project evaluated a combination of nine eastern alignments capable of avoiding the Brookeville Historic District. The feasibility study concluded that the M-NCPPC should identify a western bypass alternate for land reservation purposes to be incorporated into the update of the Greater Olney Vicinity Master Plan. For this reason, the eastern bypass alternates; including Alternate 5C, were considered as not being compatible with the Greater Olney Vicinity Master Plan. It was also concluded at the time that any alternate adopted for reservation of ROW would be subjected to a full project planning study by the SHA. This resulted in the MD 97 Brookeville Bypass Study, which was initiated by the SHA in January 1995.

Alternate 5C was initially carried forward in 1995 as the least impactive eastern alternate and remains the only current Build Alternate capable of avoiding the Brookeville Historic District. For the open roadway section, Alternate 5C would impact 2.67 acres of Reddy Branch Stream Valley Park compared to 5.62 acres that would be impacted by SHA's Selected Alternate 7 Modified, the least amount of any of the western alternates. Alternate 5C, however, is the only Build Alternate that would impact Hawlings River Stream Valley Park (1.88 acres) for a total Section 4(f) use of 4.55 acres, as quantified in **Table V-2** and shown on **Figure V-5A**. As a result, Alternate 5C would impact two Section 4(f) properties (Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park) and not reduce the total number of Section 4(f) impacts (two) which is the same as the four western Build Alternates including SHA's Selected Alternate 7 Modified that also impact two Section 4(f) properties (Brookeville Historic District and Reddy Branch Stream Valley Park).

Of the five Build Alternates, Alternate 5C would also use the least amount of Section 4(f) resources (4.55 acres) compared to 5.62 acres for SHA's Selected Alternate 7 Modified, the least amount of Section 4(f) impact by the western alternates. Alternate 5C, however, would introduce a transportation corridor to the east of Brookeville and this is not consistent with the local Comprehensive Plans. It would disrupt community cohesion within the developing Brookeville Farms community. Three undeveloped lots planned for in the Brookeville Farms Subdivision off Lubar Drive south of Bordly Drive would also be impacted. It would also remove the entire small community of Sunnymeade consisting of five residences including one business that would be displaced (Figure V-5A) compared to none for the other Build Alternates. The estimated \$34 million cost of Alternate 5C is nearly three times more costly as SHA's Selected Alternate at \$12.5 million. Only two (out of 38) comments received at the project's Combined Location/Design Public Hearing expressed support for Alternate 5C and 20 of the 38 total public comments specified opposition to Alternate 5C (Section VI of this FEIS). For these reasons, Alternate 5C is not considered a prudent avoidance of the historic district.

b. <u>Reddy Branch Stream Valley Park Avoidance</u>

Reddy Branch Stream Valley Park is a linear Section 4(f) resource that extends throughout the MD 97 project area (Figure V-4). Its boundaries extend west to North Branch Stream Valley Park near MD 108, which connects to Rock Creek State Park. To the east, the Reddy Branch Stream Valley Park connects with the Hawlings River Stream Valley Park, which then extends to the east to the Patuxent River State Park (Figure V-4). All of the Build Alternates follow a north/south axis and therefore would result in impacts to the linear Reddy Branch Stream Valley Park system. For this reason, only the No-Build Alternate is capable of avoiding Reddy Branch Stream Valley Park. As explained previously, implementation of the No-Build would not solve the current and future traffic congestion and safety problems along existing MD 97, and is not consistent with local and regional planning goals that include a western bypass of the Town of Brookeville. For these reasons, the No-Build Alternate is not a prudent or feasible avoidance of Reddy Branch Stream Valley Park.

The 1990 Feasibility Study for the project evaluated a combination of nine eastern alignments capable of avoiding the Brookeville Historic District. The feasibility study concluded that the M-NCPPC should identify a western bypass alternate for land reservation purposes to be incorporated into the update of the Greater Olney Vicinity Master Plan. For this reason, the eastern bypass alternates; including Alternate 5C, were considered as not being compatible with the Greater Olney Vicinity Master Plan. It was also concluded at the time that any alternate adopted for reservation of ROW would be subjected to a full project planning study by the SHA. This resulted in the MD 97 Brookeville Bypass Study, which was initiated by the SHA in January 1995.

Alternate 5C was initially carried forward in 1995 as the least impactive eastern alternate and remains the only current Build Alternate capable of avoiding the Brookeville Historic District. For the open roadway section, Alternate 5C would impact 2.67 acres of Reddy Branch Stream Valley Park compared to 5.62 acres that would be impacted by SHA's Selected Alternate 7 Modified, the least amount of any of the western alternates. Alternate 5C, however, is the only Build Alternate that would impact Hawlings River Stream Valley Park (1.88 acres) for a total Section 4(f) use of 4.55 acres, as quantified in Table V-2 and shown on Figure V-5A. As a result, Alternate 5C would impact two Section 4(f) properties (Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park) and not reduce the total number of Section 4(f) impacts (two) which is the same as the four western Build Alternates including SHA's Selected Alternate 7 Modified that also impact two Section 4(f) properties (Brookeville Historic District and Reddy Branch Stream Valley Park).

Of the five Build Alternates, Alternate 5C would also use the least amount of Section 4(f) resources (4.55 acres) compared to 5.62 acres for SHA's Selected Alternate 7 Modified, the least amount of Section 4(f) impact by the western alternates. Alternate 5C, however, would introduce a transportation corridor to the east of Brookeville and this is not consistent with the local Comprehensive Plans. It would disrupt community cohesion within the developing Brookeville Farms community. Three undeveloped lots planned for in the Brookeville Farms Subdivision off Lubar Drive south of Bordly Drive would also be impacted. It would also remove the entire small community of Sunnymeade consisting of five residences including one business that would be displaced (Figure V-5A) compared to none for the other Build Alternates. The estimated \$34 million cost of Alternate 5C is nearly three times more costly as SHA's Selected Alternate at \$12.5 million. Only two (out of 38) comments received at the project's Combined Location/Design Public Hearing expressed support for Alternate 5C and 20 of the 38 total public comments specified opposition to Alternate 5C (Section VI of this FEIS). For these reasons, Alternate 5C is not considered a prudent avoidance of the historic district.

b. **Reddy Branch Stream Valley Park Avoidance**

Reddy Branch Stream Valley Park is a linear Section 4(f) resource that extends throughout the MD 97 project area (Figure V-4). Its boundaries extend west to North Branch Stream Valley Park near MD 108, which connects to Rock Creek State Park. To the east, the Reddy Branch Stream Valley Park connects with the Hawlings River Stream Valley Park, which then extends to the east to the Patuxent River State Park (Figure V-4). All of the Build Alternates follow a north/south axis and therefore would result in impacts to the linear Reddy Branch Stream Valley Park system. For this reason, only the No-Build Alternate is capable of avoiding Reddy Branch Stream Valley Park. As explained previously, implementation of the No-Build would not solve the current and future traffic congestion and safety problems along existing MD 97, and is not consistent with local and regional planning goals that include a western bypass of the Town of Brookeville. For these reasons, the No-Build Alternate is not a prudent or feasible avoidance of Reddy Branch Stream Valley Park.

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c. <u>Hawlings River Stream Valley Park Avoidance</u>

In addition to the previously described No-Build Alternate, SHA's Selected Alternate 7 Modified, and Alternates 7, 8A, and 8B, all avoid Hawlings River Stream Valley Park. This is because the four western alternates connect with MD 97 about one-half mile south of the park (Figure V-4). In the DEIS/Section 4(f) Evaluation, a shift of the eastern Alternate 5C was evaluated that would avoid Hawlings River Stream Valley Park by tying into MD 97 to the south of the park. This Section 4(f) avoidance of the Hawlings River Stream Valley Park (evaluated as Alternate 5C Option 2 on Figure V-5C) would shift the proposed MD 97 tie-in to the west. This would impact the residential property west of MD 97 including displacement of the residence in addition to the five residential relocations and one business displacement required to build Alternate 5C. A 0.24 acre pond would be impacted with approximately 0.19 acre of wetland impact in addition to the 0.21 acre required by Alternate 5C. In addition to these social and environmental impacts, Alternate 5C Option 2 would cost an estimated \$500,000 more when compared to Alternate 5C. For these reasons, Alternate 5C Option 2 was not considered to be a prudent avoidance of Hawlings River Stream Valley Park.

3. <u>Minimization Alternates</u>

Each of the five Build Alternates can be considered to be a Section 4(f) minimization alternate. This is mainly as a result of the alignment shifts and design measures that have been made throughout the project development process in order to reduce Section 4(f) impacts wherever practical prior to and during the development of the DEIS. Section II of the DEIS discusses the 1997 Preliminary Alternates (Alternate 3 Option B, Alternate 4 Modified Option A, and Alternate 5C) including Section 4(f) impacts. At the time, Section 4(f) impacts estimated for those alternates included approximately one acre more of public parkland impacts when compared to the four DEIS Build Alternates (Alternate 5C, Alternate 7, Alternate 8A, and Alternate 8B) that are retained in this FEIS along with the SHA Selected Alternate 7 Modified. The preliminary engineering and design modifications to minimize harm to Section 4(f) properties throughout the project area have resulted in the following minimization alternates to the east and west of MD 97.

a. <u>Section 4(f) Minimization of Reddy Branch Stream Valley Park and</u> <u>Hawlings River Stream Valley Park (east of MD 97)</u>

As part of the design avoidance of Hawlings River Stream Valley Park described above as Alternate 5C Option 2, a design minimization to reduce impacts to the park was evaluated as Alternate 5C Option 1 in the DEIS/Section 4(f) Evaluation. As illustrated on **Figure V-5C**, Option 1 would connect the eastern alignment back into MD 97 about 600 feet south of Alternate 5C and not impact the residence and wetlands west of MD 97. Although this shift would reduce Alternate 5C impacts to Hawlings River Stream Valley Park from 1.8 to 0.5 acre for the open section, most of the previously identified impacts associated with Alternate 5C would remain for Alternate 5C Option 2. These include the highest construction cost (\$34 million compared to \$12-\$17 million), the most residential displacements (five compared to none for the other Build Alternates), and the highest prime farmland soils impacts (24 acres compared to less than 5 acres), as summarized in **Table V-5**.

			ALTERNATES H	EVALUATED IN THE FEI	S
FEATURE	Alternate 1 No-Build	Alternate 5C East Bypass ⁵	Alternate 7 West Bypass	Alternate7 Modified West Bypass	 !
		Open Section	Open Section	Open Section	
Length (miles) ¹	0	2.12	0.72	0.72	_
Cost (millions-2001 dollars)	0	\$ 34.2	\$ 12.2	Approximately \$12.5 (assuming retaining wall along Brookeville Road	
an a	1. A.	Socio-Econon	nic Resources		
Residential Relocations (no.)	0	5	0	0	
Business Displacements (no.)	0	1	0	0	
Affected Properties (no.)	0	26	11	11	
Comprehensive Plan Compatibility	No	No	Yes	Yes	
Recreational Facilities (acres)	0	4.55	6.65	5.62	
Historic District (acres)	0	0	2.24 ^{3, 4}	1.66 ^{3,4}	-
Section 106 Adverse Effects	Yes	Yes	Yes	Yes	
Total Section 4(f) ⁶ (acres)	0	4.55 ^{2 parks}	6.65 ^{1 park}	5.62 ^{1 park}	
Impacted Waste Sites (no.)	0	0	1	in the second se	
Air Quality (SIP Conformance)	0	Yes	Yes	Yes	
Noise Receptors (no.) ²	0	8	10	10	
	···· ·	Natural R	esources	- I.	
Prime Farmland Soils (acres)	0	25.88	4.84	4.53	
Statewide Important Soils (acres)	0	5.63	1.79	1.63	
Wetlands (acres)	0	0.21	0.13	0.12	
Streams ⁷ (linear feet)	0	482.12	1169.2	1211.8	

NOTES:

Alignment length does not include frontage, access roads and exclude additional length for traffic roundabouts.

0

0

Noise levels 66 dBA or greater or those which increase 10 dBA or more over ambient levels. 2

Included within Reddy Branch Stream Valley Park Acreages. 3

FEMA 100-year Floodplains (acres)

Forest Cover (acres)

One park property, two locations. 4

For this alternate, impacts do not include right-of-way needed for storm water management. All other alternates include right-of-way impacts for storm water management ponds. 5

2.59

11.50

3.34

10.47

3.22

9.02

-

Includes overlapping acreage of the Brookeville Historic District within impacted Public Parkland. 6

Based on re-evaluation, the impact numbers decreased from the Selected Alternate and Conceptual Mitigation Package. 7

V. Section 4(f) Evaluation

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Annual de la constante	
Alternate 8A At-Grade West Bypass	Alternate 8B Grade Separated West Bypass
Open Section	Open Section
0.95	0.95
\$ 13.7	\$ 18.0
0	0.
0	0
14	14
Yes	Yes
7.22	7.64
1.84 ^{3, 4}	2.00 ^{3,4}
Yes	Yes
7.22 ^{1 park}	7.64 ^{1 park}
2 .	1
Yes	Yes
10	10
5.50	5.34
7.50	8.51
0.11	0.17
1067.32	1191.72
3.03	3.34
13.53	14.2

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Final Environmental Impact Statement

Alternate 5C would also not be compatible with the local Comprehensive Plans and would disrupt the community cohesion of Brookeville Farms east of town by bisecting the entire community (Figures V-6A and 6B). For these reasons, Alternate 5C Option 1 is not considered to be a prudent Section 4(f) minimization alternate compared to Alternate 5C, which can be considered to be the Section 4(f) design minimization alternate to the east of MD 97.

As explained previously, Alternate 5C would result in 4.55 acres of total Section 4(f) impacts in Reddy Branch Stream Valley Park and Hawlings River Stream Valley Park, and this is the least total amount of Section 4(f) impacts when compared to 5.62 acres for SHA's Selected Alternate 7 Modified; 6.65 acres for Alternate 7; 7.72 acres for Alternate 8A; and, 7.64 acres for Alternate 8B, as compared in Table V-5. As also explained, Alternate 5C impacts to Reddy Branch Stream Valley Park can not be avoided but would be reduced to 2.67 acres, which would be the least amount of ROW required from the park by the Build Alternates (Tables V-1, V-3 and V-5).

Although Alternate 5C would minimize impacts in Reddy Branch Stream Valley Park, it is the only Build Alternate that would impact Hawlings River Stream Valley Park, where 1.88 acres of the total 4.55 acres of Section 4(f) impacts would be required. Alternate 5C, however, would introduce a transportation corridor in the park to the east of Brookeville. This is not consistent with M-NCPPC plans including purchase of lands reserved for transportation use to the west of Brookeville (Figure 5A). Alternate 5C also lacks compatibility with the local Comprehensive Plans and would disrupt community cohesion within the developing Brookeville Farms community. It would also remove the entire small community of Sunnymeade including five residences and one business that would need to be displaced (Figure V-5A). The estimated \$34 million cost of Alternate 5C is nearly three times more costly as SHA's Selected Alternate at \$12.5 million Only two (out of 38) comments received at the project's Combined Location/Design Public Hearing expressed support for Alternate 5C with 20 comments of the 38 total public comments specifying opposition to Alternate 5C (Section VI). For these reasons, Alternate 5C is not considered to be a prudent Section 4(f) minimization alternate when compared to the four alternates to the west of MD 97.

Section 4(f) Minimization of Brookeville Historic District and Reddy b. Branch Stream Valley Park (west of MD 97)

Each of the western alignments presented in the project's DEIS/Section 4(f) Evaluation (Alternate 7, Alternate 8A, and Alternate 8B) and the SHA Selected Alternate 7 Modified, have included design refinements to minimize impacts to Reddy Branch Stream Valley Park and Brookeville Historic District. As compared in Table V-5, the SHA's Selected Alternate 7 Modified would require the least amount of ROW from the Brookeville Historic District (1.66 acre) and would result in the least amount of total Section 4(f) use (5.62 acres) of the four western Build Alternates. It would require no displacements and would result in the least amount of impacts to prime farmland soils, statewide important soils, streams, and forest cover. For these reasons, SHA's Selected Alternate 7 Modified is considered to be the prudent and feasible alternate for the project.

MEASURES TO MINIMIZE HARM F.

Measures to minimize harm that would result from SHA's Selected Alternate 7 Modified have included an evaluation of reduced typical sections that occurred early in the project development process and mitigation measures developed to offset impacts to Section 4(f) resources.

V. Section 4(f) Evaluation

1. Minimization Options

A minimization option that occurred early in the project development phase was an evaluation of reduced typical sections for all of the Build Alternates. As explained in Section II of the DEIS, previous typical sections that were considered and not carried forward because of their Smart Growth implications ranged from a four-lane divided roadway with full shoulders and safety grading to a roadway section of two 12-foot wide travel lanes and ten-foot shoulders (DEIS Figure II-5). The two-lane roadway section proposed for the DEIS Alternates and retained in the FEIS consists of a 42-foot wide paved roadway to accommodate two 11-foot travel lanes and two ten-foot shoulders (five-foot paved shoulders for bicycle traffic and five-foot for safety). Both open and closed sections are illustrated on Figure V-9. In addition to the 42-foot of pavement, open drainage includes an additional six-foot graded shoulder for roadside safety and open drainage. The closed drainage system includes curb and gutter along the five-foot paved shoulders with four-foot of curb backing and four-foot slope, reducing ROW by approximately 15 feet.

The difference in impact acreages between the open and closed sections is compared in **Tables V-1**, **V-2** and **V-3**. As indicated in **Table V-3**, the impacts that would be reduced range from less than one acre for Alternate 5C to two acres for Alternate 8B. Although the open drainage section would result in an estimated 1.8 acre of additional Section 4(f) impacts, it has been selected as the roadway section for SHA's Selected Alternate 7 Modified mainly due to its compatibility to the Smart Growth criterion established for the project and the support it has received from the regulatory resource agencies and jurisdictional officials based on the following:

Although the open section would result in the use of up to 2 additional acres of Section 4(f) property, it was selected mainly because of its compatibility with the Smart Growth criterion established for the project. It would accommodate the need for a permanent easement bordering the entire roadway that would preclude access points for unplanned development, as well as the traffic-calming design requirements discussed in **Section IV** of this FEIS. The open section is also consistent with the open drainage roadway sections where the SHA Selected Alternate 7 Modified reconnects into MD 97 at the northern and southern project limits. The proposed open section is also consistent with "the recommendation that Environmentally Sensitive Design elements be introduced for the project in order to keep the new road as environmentally friendly as possible in the form of no curb and gutter and narrower roadway widths". These comments were made by the Maryland Department of Planning (MDP), the State Clearinghouse coordinator for intergovernmental review of the DEIS (Section VI of the FEIS).

The SHA Selected Alternate and Conceptual Mitigation package for MD 97 Brookeville, which included the proposed open section, has been coordinated with FHWA, the cooperating agencies (US Army Corps of Engineers, US Fish and Wildlife Service and US Environmental Protection Agency) and other State and local review agencies, resulting in concurrence on SHA's Selected Alternate 7 Modified and the proposed mitigation measures. MDP commented that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl while meeting the Purpose and Need for the MD 97 Brookeville Project. In addition, MHT, M-NCPPC and Montgomery County as the jurisdictional agency officials of the impacted Section 4(f) properties, have agreed to the SHA Selected Alternate7 Modified and proposed mitigation for the Brookeville Historic District and Reddy Branch Stream Valley Park. Consultation letters are included in **Appendices A and B**.



Based on this agency support and because the open section would reconnect into existing open roadway sections north and south of the project limits; better accommodate the Smart Growth criteria for the roundabout designs to function as traffic-calming features which also serve as gateways to historic Brookeville; and, in effect, create a two-lane parkway type roadway within the proposed permanent easement required to satisfy Smart Growth criteria for the MD 97 Brookeville Project, the closed section design is not considered to be a prudent option.

In addition to the evaluation of the typical sections and the alignment adjustments to minimize Section 4(f) impacts as described above, additional design measures also occurred for the Build Alternates and are addressed in the DEIS/Section 4(f) Evaluation. The following discussions identify the design measures recommended specifically for the SHA Selected Alternate 7 Modified, which minimize harm to Section 4(f) resources.

Table V-6 lists the locations of project stations identified on **Figure V-7**, where design adjustments have been made to SHA's Selected Alternate 7 Modified in order to minimize Section 4(f) impacts. These include cross section adjustments, slope reductions and use of retaining walls (where necessary) to reduce fill/cut requirements in order to minimize Section 4(f) impacts. For example, 2:1 slopes are proposed for SHA's Selected Alternate 7 Modified between Stations 27+50 and 31+00 to minimize Section 4(f) use of public parkland and the historic district.

Alternate	Station	Cross Section Adjustments	Minimization of Impacts
SHA's Selected Alternate Open	Sta 24+00 to 27+50 LT	3:1 Slopes	Reduce Fill / Reduce Impact to ROW, Streams, Wetlands, Floodplains, Woodlands and Parklands
SHA's Selected Alternate Open	Sta 27+50 to 31+00 RT	2:1 Slopes	Reduce Fill / Reduce Impact to ROW, Streams, Floodplains, Woodlands, Parkland, Shingle Oaks and Historic District
SHA's Selected Alternate Open	Sta 28+00 to 32+00 LT	3:1/2:1 Slopes	Reduce Fill/Cut / Reduce Impact to ROW, Streams, Wetlands, Floodplains, Woodlands, Parkland, Shingle Oaks and Historic District
SHA's Selected Alternate Open	Sta 38+00 to 40+00 LT	2:1/3:1 Slopes	Reduce Cut / Reduce Impact to ROW, Streams, Wetlands, Floodplains, Woodlands, Parkland and Historic District
SHA's Selected Alternate Open	Sta 38+50 to 44+00 RT	2:1/3:1 Slopes	Reduce Fill / Reduce Impact to ROW, Floodplains, Woodlands, Parkland and Historic District

 TABLE V-6 Summary of Design Minimization of Section 4(f) Impacts

As discussed previously in this Section 4(f) Evaluation, Alternate 7 Modified was developed to minimize impacts to the Newlin/Downs Mill Complex archeological site by shifting Alternate 7 approximately 30-40 feet to the west to avoid the core of the site. For SHA's Selected Alternate 7 Modified, this would involve design of a retaining wall that would be placed on the south side of Brookeville Road to further minimize impacts to the Mill Complex, reducing impacts to five percent of the site. Because the site is located where the Brookeville Historic District overlaps Reddy Branch Stream Valley Park, the proposed retaining wall has also reduced Section 4(f) impacts in the Brookeville Historic District to 1.66 acres and total Section 4(f) impacts to 5.62 acres in Reddy Branch Stream Valley Park, as identified throughout this document and summarized in **Table V-5**. For these reasons, the design features proposed for SHA's Selected Alternate 7 Modified are considered to be prudent and feasible.

2.0 <u>Mitigation Measures</u>

The mitigation measures to further minimize harm to the Section 4(f) resources that have been coordinated with officials having jurisdiction of the Brookeville Historic District and Reddy Branch Stream Valley Park are as follows:

a. Brookeville Historic District

The mitigation measures proposed to minimize harm and mitigate the identified impacts to the Brookeville Historic District include:

- SHA will design a landscape plan to reduce the visual intrusion of Alternate 7 Modified on the Brookeville Historic District.
- SHA will coordinate with M-NCPPC and the SHPO concerning the development and placement of an interpretive sign at the Newlin/Downs Mill Complex, along the Oakley Cabin Trail, concerning its historic significance. The panel will satisfy the public interpretive component of the proposed data recovery treatment of the Newlin/Downs Mill Complex, a contributing resource to the Brookeville Historic District.

b. Reddy Branch Stream Valley Park

The mitigation measures proposed to minimize harm and mitigate for the permanent use of Reddy Branch Stream Valley Park property include:

- SHA will coordinate with M-NCPPC, and the Maryland Department of Natural Resources to identify suitable replacement land of equal or greater natural resource and economic value for the estimated 5.62 acres of Reddy Branch Stream Valley Park required for construction of Alternate 7 Modified. The estimated 5.62 acres of public parkland required includes two parcels [Unit 1 Parcel 1 (0.24 acre) and Unit 2 Parcel 8 (2.19 acres)] totaling 2.43 acres that were acquired by Montgomery County with Maryland Program Open Space Funds. For this reason, negotiations for these two parcels as part of the 5.62 acres will also involve coordination with the owners, Montgomery County. SHA will acquire the replacement park properties during the design phase of the project and will complete the transfer prior to construction.
- SHA will continue coordination regarding floodplain impacts with M-NCPPC and state and federal resource agencies regarding final design of the structure over Reddy Branch and the culvert type and size for Meadow Branch within Reddy Branch Stream Valley Park.
- Stormwater management design will also be coordinated with M-NCPPC officials.
- SHA will continue coordination with the M-NCPPC and state and federal resource agencies in the development of more detailed design of the M-NCPPC approved wetland mitigation and stream restoration locations within Reddy Branch Stream Valley Park. Wetland areas will be monitored and maintained in conformance with the timeframe specified in the Section 404 permit. Stream restoration techniques will likely include riparian buffer plantings as well as in stream stabilization measures such as grading and stabilization of eroded stream banks.

Final Environmental Impact Statement

- Mitigation for loss of forested areas will be coordinated with M-NCPPC. SHA complies with the Maryland Reforestation Law, which requires a one for one replacement. SHA will coordinate with M-NCPPC staff to identify viable areas for reforestation, including areas of MD 97 pavement removal and within Reddy Branch Stream Valley Park. No mitigation is required for the shingle oak impacts; however, SHA would include shingle oak plantings as part of the reforestation efforts.
- SHA will coordinate with the M-NCPPC regarding the replacement of trees that are damaged during construction.
- Design of wildlife passage along Reddy Branch will be coordinated with M-NCPPC officials. The design goal will be a north side passage meeting the 25 feet of horizontal and 8 feet of vertical clearance requested by the resource agencies. Additional design measures to reduce wildlife collisions could include combinations of fencing, one-way gates, passageways, reflectors, lighting, etc. within state-owned property or SHA ROW.
- No equipment or materials will be stored on park property. Additionally, sediment and erosion controls will be implemented prior to construction to minimize sediment runoff into park property and any streams within the vicinity of the proposed project.
- Orange construction fences will be placed around specific trees that will be identified by M-NCPPC and SHA for protection, thereby minimizing the risk of impacts from construction of the proposed MD 97 improvements.

3. <u>Description of Proposed Temporary Use</u>

In addition to the permanent use of park property as outlined above, temporary use of park property will also be required from Reddy Branch Stream Valley Park for the creation of wetland mitigation and stream restoration located within the park. On May 1, 2003, M-NCPPC formally concurred with FHWA's temporary use criteria and agreed that the proposed MD 97 improvements will not result in permanent or adverse impacts to Reddy Branch Stream Valley Park (Appendix B).

As discussed in Section IV of this FEIS, SHA's Selected Alternate 7 Modified will impact an estimated 1,211 linear feet of streams and 0.12 acre of wetlands. Replacement mitigation is proposed at a 2:1 ratio for 0.03 acre of palustrine forested and 0.03 acre of palustrine scrub shrub wetlands, and at a 1:1 ratio for 0.06 acre of palustrine emergent wetlands. Accordingly, the wetland mitigation needed for this project totals approximately 0.18 acre. Areas identified for stream restoration include a section of Meadow Branch south of Brookeville Road and a section of along Reddy Branch adjacent to Brighton Dam Road as mapped in Appendix B.

Approved stream restoration sites are also mapped in **Appendix B**, and include sites upstream and downstream of the proposed location where SHA's Selected Alternate 7 Modified would cross Meadow Branch, and along a section of Reddy Branch adjacent to Brighton Dam Road. Stream restoration techniques are likely to include riparian buffer plantings and grading and stabilization of eroded stream banks. SHA will work closely with the regulatory resource agencies and M-NCPPC in the development of the detailed stream restoration and wetland mitigation design as part of project design, when funding activities are approved.

The M-NCPPC, as the agency with jurisdiction over Reddy Branch Stream Valley Park, has no objections to the temporary occupancy of parkland and has concurred with the proposed project (see May 1, 2003 letter, **Appendix B**) with consideration of the following conditions:

- 1. The M-NCPPC Planning Board supports the selection of Alternate 7 Modified including the recommended stream restoration and wetland mitigation locations within Reddy Branch Stream Valley Park coordinated with M-NCPPC staff.
- 2. The temporary occupation of the parkland will not affect ownership of the land (M-NCPPC will retain ownership of the area) and will be limited to the creation of stream restoration and wetlands mitigation locations with a maintenance easement to be granted by M-NCPPC. The SHA will maintain and monitor the wetland and stream restoration sites for a period not to exceed the regulatory requirements to be established during the permitting.
- 3. The M-NCPPC staff finds the wetlands creation and stream restoration mitigation locations to be beneficial and consistent with M-NCPPC's Policy for Parks guidance on non-park uses that serve the greater public interests. As a result, there will not be temporary or permanent adverse change to the activities or features that are important to the purpose or function that qualifies the resource under Section 4(f).
- 4. The temporary occupation will include a minor amount of land.

In accordance with the FHWA guidance on the applicability of Section 4(f) in cases of temporary use and based on FHWA's July 7, 2003 concurrence (Appendix B), the temporary occupancy of Reddy Branch Stream Valley Park for stream restoration and wetland creation mitigation is not subject to the requirements of Section 4(f).

G. CORRESPONDENCE AND COORDINATION

As stated previously in this document, federal and state resource agencies have concurred with the SHA Selected Alternate 7 Modified and proposed open design section as part of the Maryland Streamlined Environmental and Regulatory Process. Concurrence letters are included in Section VI of this FEIS. The discussions below summarize the Section 4(f) coordination that has occurred including the mitigation previously described that would be implemented during project design.

1. Brookeville Historic District

Project coordination with MHT commenced in June 1995. On November 6, 2002, the MHT concurred that SHA's Selected Alternate would constitute an adverse effect on the Brookeville Historic District (Appendix A) similar to their prior notification of adverse effect for the Build Alternates 5C, 7, 8a and 8B. A Memorandum of Agreement (MOA) for the execution of specific actions and measures designed to constitute adequate and acceptable mitigation of adverse effects of SHA's Selected Alternate has been prepared and is included in Appendix A. The MOA was circulated by FHWA to the Advisory Council on Historic Preservation (ACHP) in April 2003. On June 3, 2003, FHWA was notified that the ACHP would not be a signatory to the MOA. The MOA was signed by MHT on August 28, 2003. FHWA signed the MOA on December 10, 2003 and submitted it to the ACHP on December 15, 2003 (Page V-A-1) to be processed and filed pursuant to 36CFR800.6 (b) (IV).

2. <u>Reddy Branch Stream Valley Park</u>

Project coordination with M-NCPPC began in December 1995. On September 25, 2002, SHA met with M-NCPPC's Director of Planning and staff to present the preliminary design concepts presented in the DEIS (Appendix B). This resulted in Montgomery County Council expressing support of the improvements and willingness to work with the FHWA, SHA, and MHT in constructing the proposed improvements.

Mitigation for both the temporary and Section 4(f) permanent use of public parkland is described in M-NCPPC correspondence located in **Appendix B**.

H. CONCLUSION

Based on the above consideration, there is no prudent or feasible alternate that avoids impacts to Section 4(f) lands. The alternate resulting in the least harm to Section 4(f) resources (after mitigation) is Alternate 7 Modified, which has been selected for the following reasons:

<u>Alternate 7 Modified –Western Bypass shift of Alternate 7</u> was selected to minimize impacts to the Newlin/Downs Mill Complex archaeological site. The approximate 30 to 40 feet shift to the west and retaining wall design proposed south of Brookeville Road under Alternate 7 Modified would avoid the core of the site and reduce impacts to less than five percent of the site. The retaining wall design would also reduce Section 4(f) use of the Brookeville Historic District and Reddy Branch Stream Valley Park. As a result, Alternate 7 Modified would have the least amount of Section 4(f) use of the historic district and public parkland, as compared to the other three western alternates (Alternate 7, Alternate 8A, and Alternate 8B). It would also have the least amount of impacts to prime farmland soils, statewide important soils, streams, and forest cover. Alternate 7 Modified satisfies the project's Purpose and Need, addresses the proposed roundabouts, and complies with Smart Growth criteria.

The following alternates were evaluated and found not to be prudent:

<u>Alternate 1 –(No-Build)</u> was not considered prudent and was not selected because it does not satisfy the Purpose and Need. The quality of life for the Town of Brookeville would not be enhanced by the selection of the No-Build Alternate because commuter through traffic would continue to deteriorate the quality of life in the historic Town of Brookeville.

<u>Alternate 5C – (Eastern Bypass)</u> was not considered prudent and was not selected due to excessive cost (nearly three times the \$12.5 million cost of SHA's Selected Alternate 7 Modified), and strong opposition from the public including local residents, Montgomery County, and M-NCPPC as jurisdictional officials of impacted parkland. It is the only alternate that would impact two public parks and would also have Section 106 adverse effects on the Brookeville Historic District (visual intrusion and increased noise), similar to the other Build Alternates. Alternate 5C is not consistent with the local Comprehensive Plan and would bisect the Brookeville Farms development and disrupt community cohesion. Alternate 5C would triple the length of the Selected Alternate 7 Modified impacting 26 properties that would include five residential relocations and one business displacement compared to 11 property impacts with no displacements for SHA's Selected Alternate 7 Modified.

<u>Alternate 7 – (Western Bypass)</u> was not considered prudent and was not selected because it would result in 6.65 acres of Section 4(f) impacts compared to 5.62 acres for Alternate 7 Modified, including the highest use (2.24 acres) of the Brookeville Historic District. An identified project Purpose and Need is to preserve the historic character of the town. Alternate 7 would have greater impacts to the Newlin/Downs Mill Complex.

<u>Alternate 8A – (At-Grade Western Bypass)</u> was not considered prudent and was not selected because of the highest amount (7.72 acres) of Section 4(f) impacts, lack of public support, and costs that would be \$1.5 million more than SHA's Selected Alternate 7 Modified.

<u>Alternate 8B – (Grade Separated Western Bypass)</u> was not considered prudent and was not selected because of a greater amount of Section 4(f) impacts (7.62 acres), including viewshed impacts and increased noise in the historic Town of Brookeville. The elevated structure is within sight distance from the historic district; a concern expressed by citizens of Brookeville. In addition, the estimated \$18.5 million cost of Alternate 8B is about \$5.5 million more than SHA's Selected Alternate 7 Modified.

Concluding Statement: Based upon the above considerations, there is no prudent or feasible alternate to the use of land from the Brookeville Historic District and Reddy Branch Stream Valley Park, and the proposed action includes all possible planning to minimize harm to the historic district and public park property resulting from such use.

Section V Appendix A Post DEIS SHA Correspondence with FHWA and MHT for Brookeville Historic District

MD 97 Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

V. SECTION 4(F) EVALUATION APPENDIX A

POST-AUGUST 2001 DEIS SHA CORRESPONDENCE WITH FHWA AND MHT FOR BROOKEVILLE HISTORIC DISTRICT

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Maryland Division The Rotunda 711 West 40th Street, Suite 220 U.S. Department of Transportation Federal Highway Baltimore, Maryland 21211 Administration December 15, 2003 Mr. Donald Klima Director, Eastern Division of Project Review Advisory Council on Historic Preservation 1100 Pennsylvania Avenue, N.W. Washington D.C. 20004 Dear Mr. Klima: Re: Project No. MO72 6B11: MD 97 Brookeville Project from South of Gold Mine Road To North of Holid ay Drive, Montgomery County, MD On April 24 Federal Highway Administration (FHWA) forwarded the required information to your office notifying you of adverse effects on the Brookeville Historic District (M 23-65) and archeological site 18M0368 (Newlin/Downs Mill Complex), which are eligible for or listed on the National Register of Historic Places (NRHP) and inviting you to participate in the consultation. On June 3, FHWA received a letter from your agency declining participation. Pursuant to 36 GFR 8(10(6)(iv), FHWA would like to file the final Memorandum of Agreement (MOA) developed in consultation with the Maryland State Historic Preservation Officer (SHPO) with your office. The filing of this MOA will complete FHWA's compliance responsibilities under Section 106 of the National Historic Preservation Act. If you have any questitins or concerns, please contact Deniše W. King at (410) 962-4342 ext. 116. Sincerely yours, rier 31 đ Nelson J. Castellanos **Division Administrator** Attachment CC: Mr. Nicholas Blendy, SHA Ms. Joseph Kresslein, 3HA Ms. Cynthia Simpson, SHA Ms. Donald Sparklin, SHA DEC19'03 AND 1.54 CTYPE



December 15, 2003 FHWA Letter to Advisory Council on Historic Preservation with FHWA, SHPO and SHA-Signed Memorandum of Agreement (MOA) (Cont'd)

Memorandum of Agreement MD 97: Gold Mine Road to North of Holiday Drive Page 2

Stipulations

FHWA and SHA will ensure that prior to and during the construction of the Selected Alternate 7 Modified, the following stipulations are implemented:

- 1. Brookeville Historic District (M:23-65)
 - A. Design Features
 - 1. SHA will design a landscape plan to reduce the visual intrusion of Alternate 7 Modified on the historic district.
 - 2. SHA will coordinate with MNCPPC and MD SHPO concerning the development, placement and installation of an interpretative sign at the Newlin/Downs Mill Complex, along the Oakley Cabin Trail, concerning its historic significance. The panel will satisfy the public interpretive component of the proposed data recovery treatment of the Newlin/Downs Mill Complex, a contributing resource to the Brookeville Historic District.
 - B. Plans

SHA will submit plans and specifications for the selected alternate, including landscape, signage, and resource treatment plans to reduce and mitigate impacts to the Brookeville Historic District (M:23-65), to MD SHPO for review and approval to ensure that the designs are compatible with the historic property at the 60% completion stage (Type, Size, Location) and when 90% complete (Final Design).

II Newlin/Downs Mill Complex (18MO368)

SHA shall develop and implement a treatment plan for the recovery of data from the Newlin/Downs Mill Complex (18MO368), in consultation with the MD SHPO. The plan shall be consistent with relevant guidance listed in Stipulation V, Performance Standards, and shall specify:

- A. The portions of the property where mitigation shall occur;
- B. Any portions of the property that will be destroyed without data recovery;
- C. The research questions to be addressed through data recovery with a description of their relevance and importance;

 D. The research and field methods to be used, with an explanation of their relevance to the research questions; E. The methods to be used in analysis, data management, and dissemination of data, including a schedule; F. The proposed disposition of recovered materials and records; G. Proposed methods for involving and informing the interested public; H. A proposed schedule for the submission of progress reports to the MD SHA. SHA shall submit the mitigation plan to the MD SHPO. Unless the MD SHPO objects within 30 days after receipt of the plan, SHA shall implement the mitigation strategy. III. <u>Unexpected Discovery of Historic Properties</u> Should historic properties be unexpectedly identified during the implementation of the undertaking, SHA shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties, and shall consult to resolve any unavoidable adverse effects pursuant to 36 CFR 800.6. IV. <u>Future Activities</u> Related ancillary activities including but not limited to wetland mitigation, stormwater management, and reforestation, may be added to this undertaking in the future. Should such activities be added for which cultural resources staff shall review any additions or changes to the project and implement identification investigations necessary. The SHA shall provide all completed information to the MD SHPO and all consulting parties under this MOA for review and comment. B. <u>Evaluation</u>. The SHA shall ensure that all historic resources identified in any areas inventoried under Stipulation IV(A) will be evaluated in accordance with 36 CFR 800.4(c). The results of any such evaluation efforts shall be provided to the MD SHPO and all consulting parties under this MOA for review and MD SHPO and all consulting parties under this MOA for review and MD SHPO oncoursence. The consulting parties shall provide comment within 30 days of receipt of acceptable documentation. Should the partie	 D. The research and field methods to be used, with an explanation of their relevance to the research questions; E. The methods to be used in analysis, data management, and dissemination of data, including a schedule; F. The proposed disposition of recovered materials and records; G. Proposed methods for involving and informing the interested public; H. A proposed schedule for the submission of progress reports to the MD SHA. SHA shall submit the mitigation plan to the MD SHPO. Unless the MD SHPO objects within 30 days after receipt of the plan, SHA shall implement the mitigation strategy. III. <u>Unexpected Discovery of Historic Properties</u> Should historic properties be unexpectedly identified during the implementation of the undertaking, SHA shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties, and shall consult to resolve any unavoidable adverse effects pursuant to 36 CFR 800.6. IV. <u>Future Activities</u> Related ancillary activities including but not limited to wetland mitigation, stormwater management, and reforestation, may be added to this undertaking in the future. Should such activities be added for which cultural resources studies have not been completed, SHA shall implement such studies adhering to all relevant standards and guidelines referenced in Stipulation V and in accordance with the following: A. <u>Identification</u>. SHA professional cultural resources staff shall review any additions or changes to the project and implement identification investigations necessary. The SHA shall ensure that all historic resources identified in any areas inventoried under Stipulation IV(A) will be evaluated in accordance with 36 CFR 800.4(c). The results of any such evaluation efforts shall be provided to the MD SHPO concurrence. The consulting parties shall provide comment, within 30 days of receipt of acceptable documentation. Should the parties not be able to reach 	Page	norandur 97: Gole 3	n of Agreement 1 Mine Road to North of Holiday Drive
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Memorandum of Agreement MD 97: Gold Mine Road to North of Holiday Drive Page 4 agreement, the FHWA shall forward the documentation to the Keeper of the National Register of Historic Places for a final determination. C. Treatment. Should any property eligible for inclusion in the National Register of Historic Places be identified under Stipulation IV (A) and (B), the SHA shall make a reasonable good-faith effort to avoid adversely impacting the resources. If adverse impacts are unavoidable, SHA shall, in consultation with the MD SHPO and all consulting parties to this MOA, consider appropriate treatment options. Such options may include, but are not limited to, public interpretation, architectural salvage, landscaping, architectural recordation, sale, relocation, archeological data recovery, or loss without mitigation. Performance Standards and Professional Qualifications V. A. Professional Qualifications. SHA shall ensure that all cultural resources work carried out pursuant to this MOA is carried out by or under the direct supervision of a person or persons meeting at a minimum the Professional Qualifications Standards set forth at 36 CFR 61 Appendix A. B. Standards and Guidelines. SHA shall ensure that all cultural resources investigations and work performed pursuant to this agreement shall be conducted consistent with the principles and standards contained in the documents (and subsequent revisions thereof) listed bclow: Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1983). Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole 1994). Recommended Approach for consultation on Recovery of Significant Information from Archeological Sites, ACHP 1999 (64 FR 27085-27087). C. Curation. All materials and records resulting from cultural resources investigations conducted for the project will be curated in accordance with 36 CRF 79 at the Maryland Archeological Conservation Laboratory, unless clear title or Deed of Gift to the collection can not be obtained.



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Memorandum of Agreement MD 97: Gold Mine Road to North of Holiday Drive Page 6 FEDERAL HIGHWAY & DMINISTRATION Date: 12/10/03 By: Nelson J. Castellanus, Division Administrator MARYLAND STATE HISTORIC PRESERVATION OFFICER Date: 8/28/03 By: DEPUTY SHAD J.Rodney Little, Sta e Mistorig Preservation Officer MARYLAND STATE HI JHWAY ADMINISTRATION 1 failure With By: 6/2/07 Date: Neil J. Pedersen, Acministrator

Ig120803-2970 Robert L. Ehrlich, Jr., Gov mor Michael 5. Stoele, Lt. Gov mor Robert L. Flansgan, Secretary Nell J. Podersen, Administrator MARYLAND DEPARTMENT OF TRANSPORTATION DEC 0 8 2003 RE: Project No. MO746B11 MD 97 Brookeville Project From South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland Mr. Nelson Castellanos Federal Highway Administration Division Administrator The Rotunda - Suite 220 711 West 40th Street Baltimore MD 21211 Attn: Ms. Denise W. King Dear Mr. Castelianos: Transmitted for your review and signature is the Memorandum of Agreement (MOA) for the MD 97 Brookeville project, addressing adverse effects on the National Register listed Brookeville Historic District and the National Register eligible Newlin/Downs Mill Complex site. The fully executed NIOA will be incorporated into the revised FEIS/Section 4(f) Evaluation. Should you have any questions, please contact Mr. Joseph Kresslein at 410 545-8550. Sincerely, Neil J. Pedersen Administrator が記が空 by: mm Doughs H. Simmons puty Administrator for lanning and Engineering 410-545-7411 My tals shone number/toll-free number is Maryland Relay . ervice for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free Street Address: 707 North Calve t Street + Baltimore, Maryland 21202: + Phone: 410.545.0300 + www.marylandroads.com \$

December 3, 2003 MOA Transmittal Letter from SHA to FHWA

December 3, 2003 MOA Transmittal Letter from SHA to FHWA (Cont'd)

Mr. Nelson Castellanos MD 97 Brookeville Project Page Two

Attachment

- cc: Mr. Nicholas Blendy Environmental Manager, Project Planning Division, SHA (w/Attachment)
 - Ms. Wanda Brocato, Information Specialist, Project Planning Division, SHA
 - Ms. Allison Grooms, Environmental Analyst, Project Planning Division, SHA
 - Ms. Carmeletta Harris, Project Manager, Project Planning Division, SHA (w/Attachment)
 - Mr. Dan Johnson, Fe Jeral Highway Administration

Mr. Joseph Kresslein, Assistant Division Chief, Project Planning Division, SHA (w/Attachment)

Ms. Cynthia D. Simr son, Deputy Director, Office of Planning and Preliminary Engineering, SHA

Mr. James Wynn, Assistant Division Chief, Project Planning Division, SHA

August 28, 2003 State Historic Preservation Office Transmittal Letter and SHPO and SHA Signature Page for the Memorandum of Agreement

Robert L. Ehrlich, Jr. Governor Michael S. Steele Lt. Governor Victor L. Hoskins Secretary Shawn S. Karimian Deputy Secretary MARYLAND DEPARTMENT OF HOUSING August 28, 2003 & COMMUNITY DEVELOPMENT Mr. Bruce M. Grey **Deputy Division Chief Project Planning Division** State Highway Administration 707 North Calvert Street P.O. Box 717 Baltimore, MD 21202-0717 RE Project No. MO746B11 MD 97: Goldmine Road to North of Holiday Drive Montgomery County, Maryland Dear Mr. Grey Thank you for providing the Maryland Historical Trust (Trust) the opportunity to comment on the Memorandum of Agreement (MOA) for the above referenced project. We are enclosing a signed original copy of the MOA. Per Stipulation I.A.2, the State Highway Administration will coordinate with the Maryland-National Capital Park and Planning Commission (MNCPPC) and the Trust in the development, design, placement and installation of an interpretive sign at the Newlin/Downs Mill Complex. It is our understanding that SHA will negotiate in good faith with the MNCPPC to seek their input and agreement prior to consulting with the Trust during the conduct of this MOA stipulation. We request that SHA demonstrate that coordination with MNCPPC has successfully taken place. At your convenience, please forward a copy of the fully executed amendment to the Trust for our files. If you have questions or require additional information, please contact Tim Tamburrino at 410-514-7637/tamburrino@dhcd.state.md.us or Beth Cole at 410-514-7631/cole@dhcd.state.md.us. Sincerety Michael K. Day Deputy Director/Deputy SHPO Chief, Office of Preservation Services EJC/TJT 200303301 Mr. Don Sparklin (SHA) cc: Ms. Mary F. Barse (SIIA) DIVISION OF HISTORICAL AND CULTURAL PROGRAMS - 100 COMMUNITY PLACE - CROWNSVELLE, MARYLAND 21032 - PHONE: 410-514-7600 FAN: 410-987-4071 TOLL FREE: 1-800-756-0119 TTY/RELAY: 711 OR 1-800-735-2258 WWW.DHCD.STATE.MD.US

August 28, 2003 State Historic Preservation Office Transmittal Letter and SHPO and SHA Signature Page for the Memorandum of Agreement (Cont'd)

Memorandum of Agreement MD 97: Gold Mine Road to North of Holiday Drive Page 6 FEDERAL HIGHWAY ADMINISTRATION By: Date: _____ Nelson J. Castellanos, Division Administrator MARYLAND STATE HISTORIC PRESERVATION OFFICER Date: 8/28/03 <u>AMMANA Marcing</u> SHAD ANT By: MARYLAND STATE HIGHWAY ADMINISTRATION mil & proure Date: 10/1107 By: Neil J. Pedersen, Administrator

June 3, 2003 Mr. Nelson J. Castellanos **Division Administrator** Federal Highway Administration The Rotunda, Suite 220 711 West 4th Street Baltimore, MD 21211-2187 REF: Proposed Reconstruction of MD 97 (Georgia Avenue) Goldmine Road to North of Holiday Drive Montgomery, Maryland Dear Mr. Castellanos: The ACHP recently received your notification and supporting documentation regarding the adverse effects of the referenced project on properties listed on and eligible for listing on the National Register of Historic Places. Based upon the information you provided, we do not believe that our participation in 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 and related documentation at the conclusion of the consultation process. The filing of the Agreement with us is required in order to complete the requirements of Section 106 of the National Historic Preservation Act. Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Martha Catlin at 202-606-8505. Sincerely, Raymond V. Wallace Raymond V. Wallace Historic Preservation Technician Office of Federal Agency Programs ADVISORY COUNCIL ON HISTORIC PRESERVATION 1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004 Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

June 3, 2003 Advisory Council on Historic Preservation Letter

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 1 – SHA Selected Alternate Plans

Robert L. Ehrlich, Jr. Governor Michael S. Steele, Lt. Governor



MARYLAND DEPARTMENT OF TRANSPORTATION

Robert L. Flanagan, Secretary Neil J. Pedersen, Acting Administrator

APR 1 7 2003

Re: Project No. MO746B11 MD 97: Goldmine Road to North of Holiday Drive Montgomery County, MD USGS Sandy Spring 7.5" Quadrangle

Mr. Nelson J. Castellanos Division Administrator Federal Highway Administration The Rotunda-Suite 220 711 West 40th Street Baltimore MD 21211

Attention: Ms. Denise King

Dear Mr. Castellanos:

Please inform the Advisory Council on Historic Preservation (ACHP) of the determination that the proposed MD 97 project (Selected Alternate 7 Modified) will have adverse effects on the Brookeville Historic District (M 23-65) and archeological site 18MO368 (Newlin/Downs Mill Complex), which are eligible for or listed on the National Register of Historic Places (NRHP). In addition, we request that you review the attached draft Memorandum of Agreement (MOA) prepared to address these adverse effects. Please ask the ACHP if it wishes to review and be a signatory to the MOA, which is currently formulated for two parties. The State Historic Preservation Officer (SHPO) concurred with our recommendation of the adverse effects of Alternate 7 Modified on historic properties on November 6, 2002. By carbon copy of this letter, we also request comments on the draft MOA from the SHPO, the Maryland National Capital Park and Planning Commission (MNCPPC) and Montgomery Preservation Inc. Project plans are included as Attachment 1 and a map with cultural resources is identified as Attachment 2.

Street Address 707 North Caivert Street • Baltimore, Marvland 21202 • Phone 410.545.0300 • www.marvlandroads.com

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 1 – SHA Selected Alternate Plans (cont'd)



April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 1 – SHA Selected Alternate Plans (cont'd)



We invited the MNCPPC and local preservation concerns to provide comments and participate in the consultation process. The MNCPPC Planning Board responded on October 7, 2002 and the Montgomery County Council on September 25, 2002 that they endorsed Alternate 7 Modified (letters included as Attachment 8). The Montgomery County Council recommended that subsequent project planning and design activities accommodate safe pedestrian and bicycle crossings for the existing man-made Oakley Cabin trail and a potential future natural surface trail. It also recommended that we preserve the archeological resources in the core areas of the Newlin/Downs Mill site, based on the recommendations of the MNCPPC. The MNCPPC also endorsed our considering the provision of an interpretative panel at the latter site.

There were no negative comments from the public concerning impacts on cultural resources posed by Alternate 7 Modified.

If you have any questions regarding standing structures please call Ms. Rita M. Suffness at 410-545-8561 or via email at *rsuffness@sha.state.md.us*. Ms. Mary F. Barse can be reached at 410-545-2883 or via email at *mbarse@sha.state.md.us* with concerns regarding archeology

Sincerely,

Neil. J. Pedersen Acting Administrator

by:

Douglas H. Simmons, Director Office of Planning and Preliminary Engineering

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 1 – SHA Selected Alternate Plans (cont'd)





April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA

Section

4(f)

Evaluation Appendix A

V-A-17

76

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 3 – Impact Matrix for 18MO368

Attachment VI	load to North of	Holiday Drive	
Impacts to Compone Alternates 7, 7 Mod	ents of the Newl ified, and 8B	in-Downs Mill Co	omplex under
	Impacts under Alternate 7	Impacts under Alternate 7 Modified	Impacts under Alternate 8B
18M0368 Newlin Downs Mill Complex	60% of Site's Core	5% of Site's Core	Core of Site is Avoided
Components of Site 18MO368			
Mill Worker's House Including Stone Retaining Wall and Well	YES	NO	NO
Mill Structure including Cobble Roadway, Wheel Race/Pit, and Tail Race	YES	NO	NO
C-Shaped Mound (Refuse Disposal Area)	YES	NO	NO
Large Race (Western Race along Reddy Branch)	600 Linear Feet	500 Linear Feet	300 Linear Feet
Small Race (Southern Race along Reddy Branch)	200 Linear Feet	200 Linear Feet	200 Linear Feet
Total Mill Race Impacts	800 Linear Feet	700 Linear Feet	500 Linear Feet
Project Costs	12.2 Million	Approximately	17.0 Million
Data Recovery Costs	\$350,000.00 - 400,000.00	\$100,000.00	\$75,000.00

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 4 - Map Showing Limits of Disturbance under Alternates 7, 7 Modified, and 8B

> This is a folded enlargement of the SHA Selected Alternate 7 Modified Alignment

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 5 – SHPO November 6, 2003 Concurrence on Eligibility/Effects

Mr. J. Rodney Little
MD 97: Goldmine Road to North of Holiday Drive
Page Nine
Concurrence with the MD State Highway Administration?
Determination(s) of Eligibility and/or Effects
Project No.: MO746B11 MHT Log No. 200203306
Project Name: MD 97: Goldmine Road to North of Holiday Drive
County: Montgomery
Letter Date: August 19, 2002
The Maryland Historical Trust has reviewed the documentation attached to the referenced letter
and concurs with the MD State Highway Administration's determinations as follower
Service and the service of the servi
Eligibility (as noted in the Eligibility/Effect Table [Attachment VIII)
X Concur 18mo 368 = NR Elicitie
[] Do Not Concur 18mort60 = Not FLUM.
Effect (as noted in the Effects Table [Attachment VII])
[] No Properties Affected
[] No Adverse Effect
[] Conditioned upon the following action(s) (see provisions outlined in body
of the letter)
Adverse Effect
Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced
letter, if applicable):
[] Agree
Comments: MHT a with for the second second
ITTIT awaits Turther Consultation with SHA/FHUSA
to resolve the project's adverse effects and
neroticte an appropriate MOA
0
Cha. Il
By: THEN 11-6-02
MD State Historic Preservation Office/ Date
Maryland Historical Trust
Return by U.S. Mail or Facsimile to: Mr. Bruce Grov, Assistant Division Chief During Manager Branches Branches
MD State Highway Administration, P.O. Box 717. Balamore, MD 21203-0717
Telephone: 410-545-8564 and Facsimile: 410-209-5004

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA



April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA (cont'd)

Stipu	lations	
FHW the fo	A will ollowing	ensure that prior to and during the construction of the Selected Alternate 7 Modified g stipulations are implemented:
I.	Broo	keville Historic District (M23-65)
	A.	Design Features
		1. SHA will design a landscape plan to reduce the visual intrusion of Alternate 7 Modified on the historic district.
		2. SHA will coordinate with MNCPPC and the MD SHPO concerning the development and placement of an interpretative sign at the Newlin/Downs Mill Complex, along the Oakley Cabin Trail, concerning its historic significance. The panel will satisfy the public interpretive component of the proposed data recovery treatment of the Newlin/Downs Mill Complex, a contributing resource to the Brookeville Historic District.
		 SHA will ensure the continuity of the Oakley Cabin Trail in the design of Alternate 7 Modified.
	B.	Plans
		SHA will submit plans and specifications for the selected alternate, including landscape, signage, and resource treatment plans to reduce and mitigate impacts to the Brookeville Historic District, to the MD SHPO for review and approval. This will ensure that the designs are compatible with the historic district at the 30% completion stage (Preliminary Investigation) and when 90% complete (Fina Review).
II.	New	lin/Downs Mill Complex (18MO368)
	SHA New cons shall	shall develop and implement a treatment plan for the recovery of data from the lin/Downs Mill Complex, in consultation with the MD SHPO. The plan shall be istent with relevant guidance listed in Stipulation V, Performance Standards, and specify:
	Å.	The portions of the property where mitigation shall occur;
	B.	Any portions of the property that will be destroyed without data recovery;
	C.	The research questions to be addressed through data recovery with a description

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA (cont'd)

D.	The research and field methods to be used, with an explanation of their relevance to the research questions;
E.	The methods to be used in analysis, data management, and dissemination of data, including a schedule;
F.	The proposed disposition of recovered materials and records;
G.	Proposed methods for involving and informing the interested public; and
H.	A proposed schedule for the submission of progress reports to the MD SHA.
SH wit	A shall submit the mitigation plan to the MD SHPO. Unless the MD SHPO objects nin 30 days after receipt of the plan, SHA shall implement the mitigation strategy.
Ш. <u>Un</u>	expected Discovery of Historic Properties
Sho und effi pur	ould historic properties be unexpectedly identified during the implementation of the lertaking, SHA shall make reasonable efforts to avoid, minimize or mitigate adverse acts to such properties, and shall consult to resolve any unavoidable adverse effects suant to 36 CFR 800.6.
IV. <u>Fu</u> t	ure Activities
Rei ma suc SH refi	ated ancillary activities, including but not limited to wetland mitigation, stormwater nagement and reforestation, may be added to this undertaking in the future. Should h activities be added for which cultural resources studies have not been completed, A shall implement such studies adhering to all relevant standards and guidelines erenced in Stipulation V and in accordance with the following:
А.	<u>Identification</u> . SHA professional cultural resources staff shall review any additions or changes to the project and implement identification investigations which are necessary. The SHA shall provide all completed information to the MD SHPO and all consulting parties under this MOA for review and comment.
April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA (cont'd)

	C.	<u>Treatment</u> Should any property eligible for inclusion in the NRHP be identified under Stipulation IV (A) and (B), the SHA shall make a reasonable good-faith effort to avoid adversely impacting the resource. If adverse impacts are unavoidable, SHA shall, in consultation with the MD SHPO and all consulting parties to this MOA, consider appropriate treatment options. Such options may include, but are not limited to, public interpretation, architectural salvage, landscaping, architectural recordation, sale, relocation, archeological data recovery, or loss without mitigation.
V.	Perfc	ormance Standards and Professional Qualifications
	SHA carrie miniu	shall ensure that all cultural resources work carried out pursuant to this MOA is ed out by or under the direct supervision of a person or persons meeting at a mum the Professional Qualifications Standards set forth at 36 CFR 61 Appendix A.
	А.	Standards and Guidelines. SHA shall ensure that all cultural resources investigations and work performed pursuant to this agreement shall be conducted consistent with the principles and standards contained in the documents (and subsequent revisions thereof) listed below:
	B.	Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1983).
	C.	Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole 1994).
	D.	Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites, ACHP 1999 (64 FR 27085-27087).
	E.	Curation: All materials and records resulting from cultural resources investigations conducted for the project will be curated in accordance with 36 CRF 79 at the Maryland Archeological Conservation Laboratory, unless clear title or Deed of Gift to the collection cannot be obtained.
VI.	Disp	ute Resolution
	Shou any p the o canne Histo provi account the F of the	Id the MD SHPO, or any of the signatories to this MOA, object within 30 days to plans or actions proposed pursuant to this agreement, the FHWA shall consult with bjecting party to resolve the objection. If the FHWA determines that the objection of the resolved, the FHWA shall request the comments of the Advisory Council on oric Preservation (ACHP) pursuant to 36 CFR 800.11(g). Any ACHP comment ided in response to such a request will be taken into account by the FHWA in redance with 36 CFR 800.11(g)(2) with reference only to the subject of the dispute; HWA's responsibility to carry out all actions under this MOA that are not subjects e dispute will remain unchanged.

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA (cont'd)

VII. Amendment

If any of the signatories to this MOA believe that the terms of the MOA cannot be carried out, or that an amendment to these terms must be made, that signatory shall immediately consult with the other signatories to develop amendments in accordance with 36 CFR 800.6(c). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation VI will be followed.

VIII. Termination

Any signatory to this agreement may terminate the MOA by providing 30 days written notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA would require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent agreement that explicitly terminates or supersedes its terms.

IX. Duration

This MOA shall be null and void if its terms are not carried out within 5 (five) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

Execution of the MOA by FHWA and the MD SHPO, its subsequent acceptance and implementation of its terms, evidence that FHWA has afforded the signatories an opportunity to comment on Alternate 7 Modified in Montgomery County, Maryland, and its potential effects on historic properties, and that the FHWA has taken into account the potential effects of the undertaking on historic properties.

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 6 – Draft MOA (cont'd)

FEDER	AL HIGHWAY ADMINISTRATION	
By:		Date:
ł	lelson J. Castellanos, Division Administrator	
MARY	LAND STATE HISTORIC PRESERVATION OFFI	CE
By:		Date:
J	Rodney Little, State Historic Preservation Otheer	
Concur	•	
MARY	LAND STATE HIGHWAY ADMINISTRATION	
_		•
By:	Neil J. Pedersen, Acting Administrator	Date:

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 7 – Montgomery County Planning Board September 25, 2002 Letter

MONTGOMERY COUNTY COUNCIL ROCKVILLE, MARYLAND OFFICE OF THE COUNCIL PRESIDENT September 25, 2002 Mr. Parker Williams, Administrator State Highway Administration 707 North Calvert Street Baltimore, Maryland 21202 Dear Mr. Williams: On September 25, 2002 the Council reviewed the results of the State Highway Administration's project planning study for the Brookeville Bypass. After reviewing the final alternates, the Council recommended proceeding to final design with Alternate 7 Modified as recommended by the Montgomery County Planning Board and as described in the Planning staff's packet (attached). The Council also concurred with the associated recommendations on ©2 of the packet. We wish to thank Doug Simmons and Carmen Harris for briefing us at our Council worksession. Along with Dan Hardy and Jeff Price of the Planning Board's staff, they aided greatly in helping us understand the alternates that were developed for this study, and in particular the advantages of Alternate 7 Modified. Sincerely, 18/ Steven A. Silverman Council President SS:go cc: The Honorable Kumar Barve, Chair, Montgomery County House Delegation The Honorable Ida Ruben, Chair, Montgomery County Senate Delegation The Honorable Douglas Duncan, Montgomery County Executive . John Porcari, Secretary, Maryland Department of Transportation Nelson Castellanos, Maryland Division Chief, Federal Highway, Administration Derick Berlage, Chair. Montgomery County Planning Board-Albert J. Genetti, Jr., Director, Department of Public Works and Transportation STELLA B. WERNER COUNCIL OFFICE BUILDING, 100 MARYLAND AVENUE, ROCKVILLE, MARYLAND 20850 240/777-7900 TTY 240/777-7914 FAX 240/777-7989 WWW.CO.MO.MD.US/COUNCIL 3

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 8 – Montgomery County Planning Board October 7, 2002 Letter

Jan 10 03 02:58p MRO 301-495-1302 P.2 SIONS INTO REAL 'ears THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION Office of the Chairmon, Montgomery County Planning Board October 7, 2002 Parker Williams, Administrator Maryland Department of Transportation State Highway Administration P.O. Box 717 Baltimore, MD 21203-0717 Parker Dear Mr. Wittams: The Montgomery County Planning Board reviewed the MD 97 Brookeville project planning study at the regularly scheduled meeting of September 19, 2002. The Board endorsed the staff recommendations (copy enclosed) as described below: The Montgomery County Planning Board recommends that the State 1. Highway Administration select Alternate 7 Modified, a western bypass of the Town of Brookeville, as the preferred alternate for the MD 97 Brookeville project planning study, 2. During the preparation of the Final Environmental Impact Statement, SHA should prepare interagency memoranda of understanding defining the process to achieve the Smart Growth condition which specifies future widening or access to be prohibited via third-party easement. 3. Subsequent project planning and design activities should incorporate the following, prior to mandatory referral: а. Accommodation of safe pedestrian and bicycle crossings for the existing Oakley Cabin Trail and a potential future natural surface trail as described in the Countywide Park Trails Plan. Preservation of the archeological resources in the core areas of the b. Newlin/Downs Mill site MONTGOMERY COUNTY PLANNING BOARD, 8787 GEORGIA AVENUE, SILVER SPRINC, MARYLAND 20910 www.mncppc.org

April 17, 2003 SHA Letter to FHWA for Concurrence to Circulate the Draft MOA Attachment 8 – Montgomery County Planning Board October 7, 2002 Letter (cont'd)

301-495-1302 p.3 Selection of a bridge, rather than a culvert, to cross Meadow Ċ. Branch Mitigation strategies for parkland and wetlands impacts d. Identification of stormwater management pond locations е Identification of construction impacts, including required staging f. areas Determination of ownership and maintenance responsibility for the g. portions of existing MD 97 to be bypassed We look forward to continued coordination with your staff on this important project as it moves forward into detailed design. Sincerely, in P Br-C 1 Derick P. Berlage Chairman DPB:DKH:cmd MCPB MD 97 Brookeville Recommendations to SHA.doc 2

		· · · · · · · · · · · · · · · · · · ·
		August 19, 2002
F	Re:	Project No. MO746B11 MD 97: Goldmine Road to North of Holiday Drive Montgomery County, MD USGS Sandy Spring 7.5" Quadrangle
Mr. J. Rodney Little State Historic Preservation Officer Maryland Historical Trust 100 Community Place Crownsville MD 21032-2023		
Dear Mr. Little:		
Our previous consultation in Fe adverse effects to historic properties us 8B. Since that time, we have studied t (Alternate 7A), and developed Alterna Mill Complex (18MO368). We have s 8A. Alternates that are being carried f Alternate 8B, for which all identificati archeology has been completed. All h	ebrua nder A he po ite 7 M since forwar	ry and April 2001, resulted in a determination of Alternate 5C, Alternate 7, Alternate 8A, and Alternate assibility of bridging Alternate 7 over Reddy Branch Modified to minimize impacts to the Newlin Downs dropped Alternate 5C, Alternate 7A, and Alternate rd consist of Alternate 7, Alternate 7 Modified, and d evaluation studies for both historic structures and c properties within the APE have been identified and
Previously identified NRHP eli the Brookeville Historic District (M 22 18MO368 (Newlin Downs Mill Comp listing on the NRHP Determination of	igible 3-65), olex).	or listed properties within the Ar E have been identified and Bordleys Choice (M 23-66), and archeological site It is our opinion that site 18MO460 is not eligible for
		some roms for archeological sites on 0506 as

Mr. J. Rodney Little MD 97: Goldmine Road to North of Holiday Drive Page Two

effect determination for Bordleys Choice. Modifications, including the development of Alternate 7 Modified, and re-assessment of the potential for effects has resulted in our determination that the site would not be impacted by any of the alternatives.

Alternates Retained for Detailed Study Alternate 7

Alternate 7 is located on the west side of Brookeville. Alternate 7 bcgins at a roundabout located on MD 97 near the northern edge of the Longwood Community Center. Access to the town of Brookeville would be via the northeast leg of the roundabout. Alternate 7 continues from the roundabout in a northwesterly direction through the Maryland National Capital Park and Planning Commission (MNCPPC) property, which is reserved for transportation use, and through the Reddy Branch Park. The alignment intersects with Brookeville Road west of cxisting MD 97 at a roundabout and then continues in a northeasterly direction. The roundabout at Brookeville Road has four legs, the north leg and the south leg of the roundabout is to access the proposed alignment, and the west leg and east leg of the roundabout access Brookeville Road. The alternate connects to existing MD 97 north of Brookeville Road. The portion of MD 97 between the northern connection and the Reddy Branch would be closed. Consequently, southbound motorists destined for the town of Brookeville would pass though the roundabout at Brookeville Road to access existing MD 97 in town.

Alternate 7 Modified

Alternate 7 Modified is similar to Alternate 7 except that the alignment is shifted 30 feet away from Alternate 7 in a more westerly direction between the Reddy Branch Stream Valley Park and the M-NCPPC property, which is reserved for transportation use, to minimize impacts to the Newlin Downs Mill Complex. Alternate 7 Modified is located on the west side of Brookeville. Alternate 7 Modified begins at a roundabout located on MD 97 near the northern edge of the Longwood Community Center. Access to the town of Brookeville would be via the northeast leg of the roundabout. Alternate 7 Modified continues from the roundabout in a northwesterly direction through the MNCPPC property, which is reserved for transportation use, and through the Reddy Branch Stream Valley Park. The alignment intersects with Brookeville Road west of existing MD 97 at a roundabout and then continues in a northeasterly direction. The roundabout at Brookeville Road has four legs, the north leg and the south leg of the roundabout is to access the proposed alignment, and the west leg and east leg of the roundabout access Brookeville Road. A retaining wall will be constructed on the eastern leg to allow for a reduced typical section that incorporates a 4-foot wide shoulder. The alternate connects to existing MD 97 north of Brookeville Road. The portion of MD 97 between the northern connection and the Reddy Branch would be closed. Consequently, southbound motorists destined for the town of Brookeville would pass though the roundabout at Brookeville Road to access existing MD 97 in town.

Mr. J. Rodney Little MD 97: Goldmine Road to North of Holiday Drive Page Three

Alternate 8B

Alternate 8B is located west of both Alternate 7 and Alternate 7 Modified. Alternate 8B begins at a roundabout located on MD 97 near the northern edge of the Longwood Community Center and heads in a northwesterly direction through the MNCPPC property and the Reddy Branch Stream Valley Park. Alternate 8B would cross Brookeville Road on a bridge with no direct access between the bypass and Brookeville Road. Access to MD 97 and the town of Brookeville Road would remain unchanged. The alignment continues northeast from the bridge and connects to existing MD 97 with a three-leg roundabout located north of Brookeville Road. This three-leg roundabout includes existing MD 97 from the north, the bypass from the southwest, and the in-town portion of MD 97 from the southeast.

Funding : Federal funds are anticipated for this project.

Status Update: Area of Potential Effects (APE)

We have examined the project area in light of any changes that might be introduced that would have the potential to affect characteristics qualifying historic properties for inclusion in the NRHP. We have developed the APE in consideration of both architecture and archeology (Attachment II). As previously coordinated under western bypass Alternates 7, 8A, and 8B, the APE for architecture was drawn broadly enough for these carlier alternatives to accommodate all possible construction impacts, and the extent of viewsheds from the roadway, including Alternate 7 Modified. The current APE for archeology is defined by the anticipated limits of disturbance under Alternates 7, 7 Modified, and Alternate 8B. Although Alternate 7 Modified proposes to shift the centerline 30 feet to the west of Alternate 7, there is no expansion of the APE as previously coordinated under Alternates 7, 8A, and 8B.

Status Update: Identification Methods and Results

All historic properties within the APE have been identified and evaluated for eligibility to the NRHP. NRHP eligible or listed properties within the current APE include the Brookeville Historic District (M 23-65), Bordleys Choice (M 23-66), and archeological site 18MO368 (Newlin Downs Mill Complex).

Architecture: The Brookeville Historic District, and Bordleys Choice are the only above ground resources located within the current APE. All other previously identified historic properties are located outside the APE.

Archeology: SHA previously conducted Phase I Identification studies (Fehr et al. 1997) for Alternates 3A, 3B, 4A, 4B, and 5. The survey identified Sites 18MO459, 18MO460, and a number of decontextualized random finds (18MOX86), and reinvestigated previously recorded Sites 18MO368 and 18MO387. Of these sites, 18MO387, 18MO368, and 18MO460 were recommended for evaluation if impacts could not be avoided. Site 18MO459 was determined

Jb2

August 19, 2002, SHA Letter to MHT for Review Request for Concurrence of Eligibility of Archaeological Resources and Effects to Historic Resources (cont'd)

Mr. J. Rodney Little MD 97: Goldmine Road to North of Holiday Drive Page Four

not eligible for listing on the NRHP (MHT letter of August 13, 1997).

Subsequently, new and modified alternatives were developed (Alternates 7, 8A, 8B, 5C), and further archeological identification investigations were conducted (Fehr et al. 2001). Two previously undocumented sites (18MO558 and 18MO559) were identified in areas of the expanded APE not subject to prior archeological survey efforts, and were determined not eligible as documented in your letter of April 16, 2001. Site 18MO387 was reinvestigated and would be avoided by Alternate 5C. In addition, Site 18MO368 (the Newlin Downs Mill) was reinvestigated to more precisely define its boundaries, character, and research potential, and to assess potential impacts under the newly developed alternatives. Consequently, you concurred that Phase II evaluation of sites 18MO368 and 18MO460, and precautionary measures during construction in the vicinity of Locust Grove Farm, were warranted.

The results of our recent Phase II investigations of 18MO368 and 18MO460 are documented in the enclosed technical report entitled **Phase II Archeological and Historical Investigations at Sites 18MO368 and 18MO460 for Project No. MO746B11, MD 97 from Goldmine Road to North of Holiday Drive, Montgomery County, Maryland**, for your review and comment (Attachment III). The report was prepared on behalf of SHA by R. Christopher Goodwin and Associate, Inc. We have reviewed the report and believe the consultant has satisfactorily documented the evaluation of each site's integrity, research value, and eligibility to the NRHP. Our specific comments are appended as Attachment IV.

Site 18MO368 is significant both individually and as a contributing resource to the Brookeville Historic District. It qualifies for inclusion on the NRHP under Criteria A, C, and D. This site is important chiefly for the information it contains and does not warrant preservation in place. It is considered significant at a local level. The information it contains can be recovered through available techniques and technologies, and will not require extreme measures or costs. A general data recovery plan detailing research issues and strategies is provided for your comment as **Attachment V**. This plan may be further modified in consultation with your office to accommodate varying ranges of impacts specific to each of the alternatives.

Criterion A (Event): Association with "a pattern of events or a historic trend that made a significant contribution to the development of a community". This pattern of events is the establishment and evolution of small commercial town centers in Montgomery County to serve the local farming communities. Site 18MO368 is an archeologically intact example of a 19th century mill site that is representative of these rural industrial enterprises which fueled and sustained the development of agriculture in Montgomery County. Although mills were typical components of town systems in Montgomery County, the Newlin-Downs Mill was only one of



August 19, 2002, SHA Letter to MHT for Review Request for Concurrence of Eligibility of Archaeological Resources and Effects to Historic Resources (cont'd)





and effects to historic properties as indicated on the attached eligibility and effects table (Attachment VIII). SHA will continue consultation with your office regarding selection of an alternate, and appropriate treatment measures to mitigate adverse effects once an alternative has been selected. Possible mitigation measures, besides Phase III survey, may include landscaping to reduce the visual intrusion of the proposed roadway on the Brookeville Historic District. In addition, signage could be developed to interpret the historic trails in the project area, in concert with MNCPPC, especially the Oakley Cabin Trail connecting Brookeville with the historic African American Cabin. Furthermore, SHA will ensure the continuity of the Oakley Cabin Trail in the design process, regardless of which alternative is selected.

By carbon copy, we invite the Montgomery County Historic Preservation Commission and Montgomery Preservation, Inc. to provide comments and participate in the consultation process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR 800.2 (4) and (6), and 800.3 (f) for information regarding the identification and participation of consulting parties, and 800.4 and 800.5 regarding the identification of historic properties and assessment of effects). For additional information regarding the Section 106 regulations, see the Advisory Council on Historic Prescrvation's website, <u>www.achp.gov</u>, or contact the Maryland State Highway Administration or the Maryland Historical Trust. If no response is received by, September 23, 2002 we will assume that this office declines to participate. Please call Ms. Rita M. Suffness at 410-545-8561 with questions regarding standing structures for this project. Ms. Mary F. Barse can be reached at 410-545-2883 with concerns regarding archeology.



Mr. J. Rodney Little MD 97: Goldmine Road to North of Holiday Drive Page Nine Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects Project No.:MO746B11MHT Log No.200203306Project Name:MD 97:Goldmine Road to North of Holiday Drive Montgomery County: Letter Date: August 19, 2002 The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MID State Highway Administration's determinations as follows: Eligibility (as noted in the Eligibility/ Effect Table [Attachment VII]) N Concur 1800368 = MREI; blc [] Do Not Concur 1800760 = Not Elyble Effect (as noted in the Effects Table [Attachment VII]) [] No Properties Affected [] No Adverse Effect Conditioned upon the following action(s) (see provisions outlined in body [] of the letter) М Adverse Effect Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable): [] Agree **Comments:** awaits Forther consultation with SHA/FALWA 105. dverse MD State Historic Preservation Office/ Date Maryland Historical Trust Recurs by U.S. Mail or Facsimile to: Return by U.S. Mult or Factimite to: Mr. Bruce Grey, Assistant Division Chief, Project Planning Division, MD State Highway Administration. P.O. Box 717. Baltamore, MD 21203-0717 Telephone: 410-545-8564 and Facsimile: 410-209-5004

Hybrid Eligibility/Effects Table Attachment VIII

Project Name: MD 97: Gold Mine Road to North of Holiday Drive

August 19, 2002

				Alte	ernate 7	Alternat	e 7 Modified	Alte	nate 8B		
Resource	Туре	SHA NR Det.	SHPO Opinion	Impact	SHPO Concur	Impact	SHPO Coucur	Impact	SHPO Concur	Attachment	Remarks
Brookeville Historic District (M23-65)	HD	NRL	6/29/95	Adverse	4/16/2001	Adverse	Requested 8/2002	Adverse	4/16/2002		
Bordleys Choice (M23-66)	S B	NR	6/29/95 4/16/96	None	(5/24/2001) Requested 8/2002	None	Requested 8/2002	None	(5/24/2002) Requested 8/2002		
Newlin Downs Mill Complex 18MO368	A	NR	Requested 8/2002	Adverse	Requested 8/2002	Adverse	Requested 8/2002	Adverse	Requested 8/2002	Attach. 3, Attach. 6	Data Recovery Recommended
18MO460	A	x		None	Requested 8/2002	None	Requested 8/2002	None	Requested 8/2002	Attach. 3	No Further Work Recommended
Effects	1			AE	Requested 8/2002	AE	Requested 8/2002	AE	Requested 8/2002		

Codes:

Resource Types: S (Structure), A (Archeological Site), HD (Historic District), NHL (National Historic Landmark) NR Determination: ND (Not Determined), X (Not Eligible), NR (Eligible), NRL (Listed), NHL (Landmark) SHPO Opinion: (B) designates opinion regarding boundary, Code following date signifies SHPO opinion Impact: None, No Adverse, Adverse

Effects: NPA (No Properties Affected), NAE (No Adverse Effect), AE (Adverse Effect)

Bold rows indicate review action requested

V-A.3 The Impact of the Brookeville Bypass Alternates on the Oakley Cabin Trail Interpretive Plan Submitted by M-NCPPC Summer 2002

The Impact of the Brookeville Bypass Alternates on the Oakley Cabin Interpretive Plan Susan Soderberg, Education and Outreach Planner

Oakley Cabin is the only publicly owned African American historical site in Montgomery County that is open to the public. According to archeological research the cabin, along with two identical cabins next door to this one, were built in the early 1800s to house slaves on the Dorsey farm, "Oakley." The $1\frac{1}{2}$ story cabin was first the home to slaves and later became the center of a small roadside Free Black community. Now owned by the Montgomery County Parks Department, the cabin has been fully restored and furnished to depict the various periods of its history.

Programming at this unique African American architectural and cultural site centers on promoting awareness of and education about the Free Black rural neighborhoods that appeared after the Civil War, what it was like to live in that time, and how these small communities evolved and influenced the larger culture.

Interpretation of the Cabin centers on the post-Civil War period when it was the center of a roadside community. From census records we know that some whites lived in this community as well as family groups of African Americans. Some of these people worked at Newlins Mill in Brookeville. This mill is a significant part of the interpretation since the mill pond was directly behind the Cabin and provided water for the people and animals in the community. A trail has been created along the mill race that connected the mill pond with the mill. This trail provides a way for tours of hikers to get from Oakley Cabin to the historic Town of Brookeville.

Brookeville Road, a Montgomery County Rustic Road, also is included as an important part of the interpretation of Oakley Cabin. Oakley and other early farms in the county were established along Brookeville Road because it was one of the main east-west roads in the area connecting the Potomac River crossing at the Mouth of the Monocacy River, to the Patuxent River crossing at Snell's Bridge – thus connecting the port of Baltimore with western Virginia and points west. This makes it one of the few sections of original "Baltimore Roads" that we have left in the county. Oakley Cabin is a much better housing facility for slaves than can usually be found because it is so large and has a floor and inside stairway. It may have been built as a "model cabin" to show off the carpentry skill of Oakley slaves who would then be rented out to others for building similar houses. This is speculation, but the fact that the post-war community had a carpenter, a blacksmith and a basketmaker, gives even more evidence that the people who lived in the cabins made a living from selling products and services to those traveling on the Brookeville (or Baltimore) Road.

Brookeville Road may also have figured in the re-grouping of the United States soldiers after the Battle of Bladensburg defeat by the British in August, 1814. The soldiers had scattered to areas of central and western Montgomery County and were regrouped in Ellicott Mills (Ellicott City). Those who came from the western area of the county would have come along Brookeville Road to get to Snell's Bridge to cross the Patuxent River to get to Ellicott Mills.

Since Brookeville Bypass Alternates #7 and #8A would destroy part of the mill race and trail, and would disrupt Brookeville Road and its original connection to Brookeville and Snell's Bridge. I endorse Alternate #8B which will bridge both the mill race and the road.

The Impact of the Brookeville Bypass Alternates on the Oakley Cabin Trail interpretive Plan Submitted by M-NCPPC Summer 2002 (cont'd)







V-A.4 May 16, 2002 M-NCPPC Fax to SHA Requesting Shift in Option 7A

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THE	MARYLAND-NATIONAL	CAPITAL PARK / 8787 George	AND PLANNING CON la Avent 5 • Silver'Spring, Marylan	MISSION 20910-3760
			(30	1) 495-4605
	TO: Mary Barse, Archaeologist	, Maryland Department of	Tran portation	
	FROM: James D. Sorensen, Ph.	D., Archaeologist, Montg Park &	omer County 2 Planning Commission	
	SUBJECT: Adjustment to the A Bypass	lignment of Alternative 7.	A of he Proposed Brookeville	e
	It is the position of the Montgor Planning, Park Planning & Resc staffs) that if the proposed Broo be adjusted and shifted west so dwelling and related outbuilding the project.	nery County Park & Plann surce Analysis, Historic Pr keville Bypass 7A option i that the historical sites of I as would no longer fall wit	ning ! taff (Transportation reser ation and Archaeologica is chosen, its alignment shoul New in's Mill and miller's thin he limits of disturbance of	ul d
	CC: Daniel Hardy Michael Ziniore			
	Gwoll Wilgh			
	M	ontgomery County Planning B	ioe ra	

Section V Appendix B Post-DEIS SHA Correspondence with FHWA and M-NCPPC for Reddy Branch Stream Valley Park

MD 97 Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

V. SECTION 4(f) EVALUATION APPENDIX B

POST-AUGUST 2001 DEIS SHA CORRESPONDENCE WITH FHWA AND M-NCPPC FOR REDDY BRANCH STREAM VALLEY PARK

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Robert L. Ehrlich, Jr., Governor Michael S. Steele, Lt. Governor



Robert L. Flanagan, Secretary Nell J. Pedersen, Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION

November 25, 2003

Re: Project No. MO746B11 MD 97 Brookeville Project from south of Gold Mine Road to north of Holiday Drive Montgomery County, Maryland

Mr. Derick P. Berlage, Chairman Maryland National Capital Park and Planning Commission Montgomery County Planning Board 8787 Georgia Avenue Silver Spring MD 20910

Dear Mr. Berlage:

The Maryland State Highway Administration (SHA) is writing to request your concurrence that the proposed mitigation measures to offset impacts to the Reddy Branch Stream Valley Park are acceptable. The purpose of the subject project is to improve the operation and safety of MD 97 (Georgia Avenue) within the project limits, as well as preserve the historic character of the Town of Brookeville.

SHA has identified Alternate 7 Modified as the selected alternate for the project. Alternate 7 Modified, which the Montgomery County Planning Board recommended in your letter dated October 7, 2002 (*Attachment 1*), includes a 30 to 40 foot shift of the original Alternate 7 alignment to minimize impacts to the Newlin/Downs Mill Complex. This shift was recommended by the SHA and M-NCPPC's Staff Archaeologist in May 2002. SHA staff presented Alternate 7 Modified to the Montgomery County Council on September 19, 2002. On September 25, 2002, the Council recommended that SHA proceed to final design with Alternate 7 Modified as proposed by the Planning Board in their Memorandum dated September 13, 2002. Detailed information regarding the Selected Alternate and Conceptual Mitigation (SACM) was presented at the March 19, 2003 Interagency Review Meeting attended by Mr. Dan Hardy of your staff.

The SHA is currently completing the Final Environmental Impact Statement (FEIS)/Section 4(f) Evaluation and will submit it to the Federal Highway Administration (FHWA) for approval. Reddy Branch Stream Valley Park is publicly-owned public parkland under your jurisdiction that will be impacted by SHA Selected Alternate 7 Modified. Anticipated Section 4(f) impacts within Reddy Branch Stream Valley Park include 5.62 acress that will be required for the relocation of MD 97. The proposed alignment of Alternate 7

November 25, 2003 SHA Draft Letter to M-NCPPC Requesting Concurrence of the Assessment of Impacts to Park Property and Associated Mitigation (cont'd)

Mr. Derick P. Berlage MD 97 Brookeville Project Page Two

Modified and associated park impacts are illustrated on *Attachment 2*. As part of the Section 4(f) documentation process, we are seeking your agreement as the officials having jurisdiction over the impacted public parkland regarding the assessment of impacts to the park property and the associated mitigation.

The SHA has addressed or is in the process of addressing many of the recommendations in your October 7, 2002 correspondence. These include:

- SHA selection of Alternate 7 Modified;
- SHA preparation of an interagency memorandum of understanding to define the process to achieve Smart Growth conditions. The Maryland Environmental Trust has tentatively agreed to co-hold the easement pending the development of the Letter of Commitment and the Memorandum of Understanding (MOU). The exact acreage and location of this easement will be finalized during the design phase of this project;
- The inclusion of the following seven project planning and design activities:
- a. Accommodation of a safe pedestrian and bicycle crossing of the existing Oakley Cabin trail and a potential future natural surface trail as described in the countywide park trails plan. The SHA has incorporated a pedestrian and bicycle crossing of Alternate 7 Modified. (See Attachment 2)
- b. Preservation of archeological resources in the core areas of the Newlin/Downs mill site. SHA will preserve archaeological resources within the Alternate 7 Modified footprint as stipulated in the Section 106 Memorandum of Agreement (MOA) that was forwarded to the FHWA on April 17, 2003 and circulated to the Advisory Council on Historic Preservation on May 2, 2003.

USDOT Section 4(f) criterion requires avoidance and minimization of impacts to historic properties and public parkland. M-NCPPC's staff position, outlined in an April 11, 2003 draft mitigation summary (see Attachment 3), and discussed at a May 5, 2003 meeting attended by M-NCPPC and SHA staff, requested additional mitigation for archaeological resources located outside of the footprint of the SHA Selected Alternate, including continuation of the man-made Oakley Cabin Trail to the west towards Oakley Cabin and to the east into Brookeville, and providing either a pedestrian bridge or culvert extension at Brookeville Road. Because both requests would, in effect, create additional impacts to Section 106 and Section 4(f) resourcess; the Brookeville Historic District and public parkland, SHA will design their portion of the trail so as to not preclude these elements by M-NCPPC.

Mr. Derick P. Berlage MD 97 Brookeville Project Page Three

- c. Selection of a bridge, rather than a culvert, to cross Meadow Branch. Based on additional information provided, M-NCPPC staff agreed to a culvert recommended by SHA for the Meadow Branch crossing. The SHA will investigate culvert design options which will approximate the current channel length, in accordance with Maryland Department of Environment criteria and will evaluate a flood relief culvert in the vicinity of the MD 97 crossing of Reddy Branch as recommended at the May 3, 2003 meeting. SHA will coordinate with M-NCPPC during the design phase of the project once these culvert design options are developed.
- d. Development of mitigation strategies for parkland and wetlands impacts. This issue was addressed in M-NCPPC's correspondence to SHA dated May 1, 2003 (see Attachment 4) that documents your concurrence of the temporary use of sites within Reddy Branch Stream Valley Park for stream restoration and wetlands replacement for the MD 97 Brookeville Project. Please note that your concurrence has resulted in FHWA's July 7, 2003 determination that Section 4(f) would not apply to the temporary use of Reddy Branch Stream Valley Park property for mitigation. If necessary, SHA's future need for any temporary construction easements for the stream restoration and wetland mitigation will be coordinated with members of your staff and SHA's right-of-way officials as part of project design and prior to construction. The extent of the mitigation monitoring will be determined during the future permitting process.
- e. Identification of stormwater management pond locations. Preliminary stormwater management pond locations within Reddy Branch Stream Valley Park have been identified and are shown on Attachment 2.
- f. Identification of construction impacts, including required staging areas. The SHA will advise construction contractors that construction staging areas be restricted from public park property.
- g. Determination of ownership and maintenance responsibility for the portions of existing MD 97 to be bypassed. SHA will coordinate future ownership and maintenance responsibility for the portions of MD 97 that will remain for local access with the County and Town of Brookeville officials. SHA has decided that the existing MD 97 structure over Reddy Branch will be removed after the project is built and in operation.

Mr. Derick P. Berlage MD 97 Brookeville Project Page Four

The concurrence that SHA is now requesting will satisfy Section 4(f) requirements for the permanent use of (impacts to) lands within Reddy Branch Stream Valley Park. In total, the proposed realignment of MD 97 under the SHA Selected Alternate 7 Modified to the west of the Town of Brookeville will require an estimated 5.62 acre of permanent use (right-of-way) from Reddy Branch Stream Valley Park at two locations *(see Attachment 2)*. This includes 5.38 acres located to the south of Brookeville Road from Unit 2 of the park and 0.24 acre from Unit 1 Parcel 1, to the east of Georgia Avenue where the new alignment ties into the existing alignment.

An estimated 3.45 acres of land will be required from the Longwood Community Center. This property is not subject to protection under Section 4(f) of the US DOT Act because it was previously reserved for transportation use at the same time the development plan for the Center was established. Compensation for this non-Section 4(f) property will be negotiated with Montgomery County officials, the owners of the parcel.

Accordingly, the measures proposed by SHA to minimize harm and mitigate for the Section 4(f) permanent use of Reddy Branch Stream Valley Park property include the following:

- SHA will coordinate with M-NCPPC and the Maryland Department of Natural Resources to identify suitable replacement land of equal or greater natural resource and economic value for the estimated 5.62 acres of Reddy Branch Stream Valley Park required for construction of Alternate 7 Modified. The estimated 5.62 acres of public parkland required includes two parcels [Unit 1 Parcel 1 (0.24 acre) and Unit 2 Parcel 8 (2.19 acres)] totaling 2.43 acres that were acquired by Montgomery County with Maryland Program Open Space Funds. For this reason, negotiations for these two parcels as part of the 5.62 acres will also involve coordination with the owners, Montgomery County. SHA will acquire all replacement park properties during the design phase of the project and will complete the transfer prior to construction.
- SHA will continue coordination regarding floodplain impacts with M-NCPPC and state and federal resource agencies regarding final design of the structure over Reddy Branch and the culvert type and size for Meadow Branch within Reddy Branch Stream Valley Park.
- Stormwater management design will also be coordinated with M-NCPPC officials.
- SHA will continue coordination with the M-NCPPC and state and federal resource agencies in the development of more detailed design of the M-NCPPC approved wetland mitigation and stream restoration locations within Reddy Branch Stream Valley Park. Wetland areas will be monitored and maintained in conformance with the timeframe specified in the Section 404 permit. Stream restoration techniques are likely to include riparian buffer plantings as well as in stream stabilization measures such as grading and stabilization of eroded stream banks.

Mr. Derick P. Berlage MD 97 Brookeville Project Page Five

- Mitigation for loss of forested areas will be coordinated with M-NCPPC. SHA complies with the Maryland Reforestation Law, which requires a one for one replacement. SHA will coordinate with M-NCPPC staff to identify viable areas for reforestation, including areas of MD 97 pavement removal and within Reddy Branch Stream Valley Park. No mitigation is required for the shingle oak impacts; however, SHA would include shingle oak plantings as part of the reforestation efforts.
- SHA will coordinate with the M-NCPPC regarding the replacement of trees that are damaged during construction.
- Design of wildlife passage along Reddy Branch will be coordinated with M-NCPPC officials. The design goal will be a north side passage meeting the 25 feet of horizontal and 8 feet of vertical clearance requested by the resource agencies. Additional design measures to reduce wildlife collisions could include combinations of fencing, one-way gates, passageways, reflectors, lighting, etc. within state-owned property or SHA right-of-way.
- No equipment or materials will be stored on park property. Additionally, sediment and erosion controls will be implemented prior to construction to minimize sediment runoff into park property and any streams within the vicinity of the proposed project.
- Orange construction fences will be placed around specific trees that will be identified by M-NCPPC and SHA for protection, thereby minimizing the risk of impacts from construction of the proposed MD 97 improvements.

In addition to the above-cited Section 4(f) mitigation measures, coordination with M-NCPPC will also include the following items addressed in the Section 106 Memorandum of Agreement:

- SHA will design a landscape plan for review by M-NCPPC to reduce the visual intrusion of Alternate 7 Modified on the Brookeville Historic District.
- SHA will coordinate with M-NCPPC and the Maryland State Historic Preservation Officer (MD SHPO) concerning the development and placement of an interpretive sign at the Newlin/Downs Mill Complex pertaining to its historic significance. The sign will satisfy the public interpretive component of the proposed data recovery treatment of the Newlin/Downs Mill Complex, a contributing resource to the Brookeville Historic District.

Mr. Derick P. Berlage MD 97 Brookeville Project Page Six Based on the preceding information, we ask that you indicate your concurrence with the proposed minimization and mitigation measures as jurisdictional agency official for Reddy Branch Stream Valley Park on the signature line below. Should you have any questions or concerns regarding the proposed permanent use of Reddy Branch Stream Valley Park property, or the proposed mitigation measures outlined above, please contact Ms. Carmeletta Harris, Project Manager at 410-545-8522 or Mr. Nick Blendy, Environmental Manager at 410-545-2864. Very truly yours, Douglas H. Simmons, Director Office of Planning and Preliminary Engineering Cynnia D. Simpson Deputy Director Office of Planning and Preliminary Engineering CONCURRENCE: Maryland National Capital Park and Planning Commission Attachments[4] Mr. Brian Bernstein, KCI (w/Attachments) cc: Mr. Nick Blendy, SHA-PPD (w/Attachments) Ms. Allison Grooms, SHA-PPD (w/Attachments) Mr. Dan Hardy, M-NCPPC (w/Attachments) Ms. Carmeletta Harris, SHA-PPD (w/Attachments) Ms. Denise W. King, FHWA (w/Attachments) Mr. Joseph R. Kresslein, SHA-PPD (w/Attachments) Mr. Jim Wynn, SHA-PPD

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ATTACHMENT 1



Selection of a bridge, rather than a culvert, to cross Meadow C. Branch đ. Mitigation strategies for parkland and wetlands impacts Identification of stormwater management pond locations e. Identification of construction impacts, including required staging f. areas Determination of ownership and maintenance responsibility for the g. portion: of existing MD 97 to be bypassed We lock forward to continued coordination with your staff on this important project as it moves forward into detailed design. Sincerely, P. B.C Derick P. Berlage Chairman DPB:DKH:cmd MCPB MD 97 Brookeville Recommenda lons to SHA.doo



MO NTGOMERY COUNTY COUNCIL ROCKYLLE, MARYLAND

FICE OF THE COUNCIL PRESIDENT

September 25, 2002

Mr. Parker Williams, Administrator State Highway Administration 707 North Calvert Street Baltimore, Maryland 21202

Dear Mr. Williams:

On September 25, 2002 the Council reviewed the results of the State Highway Administration's project planning; study for the Brookeville Bypass. After reviewing the final alternates, the Council recommer ded proceeding to final design with Alternate 7 Modified as recommended by the Montgomery County Planning Board and as described in the Planning staff's packet (attached). The Council also concurred with the associated recommendations on \$2002 of the packet.

We wish to thank Doug Sinumons and Carmen Harris for briefing us at our Council worksession. Along with Dan Hardy and Jeff Price of the Planning Board's staff, they aided greatly in helping us understand the alternates that were developed for this study, and in particular the advantages of Alternate 7 Modified.

Sincerely,

Steven A. Silverman Council President

SSign

ce: The Honorable Kumar Barve, Chair, Montgomery County House Delegation The Honorable Ida Ruben, Chair, Montgomery County Senate Delegation The Honorable Douglas Duncar, Montgomery County Executive John Porcari, Secretary, Maryland Department of Transportation Nelson Castellanos, Maryland L ivision Chief, Federal Highway Administration Derick Berlage, Chair, Montgorvery County Planning Board Albert J. Genetti, Jr., Director, Department of Public Works and Transportation

STELLA 9. WERNER COUNCIL OFFICE BUILDING, 100 MARYLAND AVENUE, ROCKVILLE, MARYLAND 20850 240/777-7100 TTY 240/777-7914 FAX 240/777-7989 www.co.mo.md.us/council

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ATTACHMENT 1 (Cont'd)

	September 13, 2002
MEMORAN	MUC
TO:	Montgomery County Planning Board
VIA:	Jeffrey Zyontz, Chief County-wide Planning Division
	Richard C. Hawthome, Chief Transportation Planning County-wide Planning Division
	Judy Daniel, Teach Leader Rural Team Community-Based Planning Division
FROM:	Daniel K. Hardy, Supervisor (301-495-4530)—DKth Transportation Planning County-wide Plar ning Division
	Khalid Afzal, Tearn Leader DICH For Georgia Avenue Team Community-Based Planning DMsion
SUBJECT:	MD 97 Brookeville Bypass DEIS Recommendations
Recommer Administra	idation: Transmit the following comments to the State Highway
1. T H	he Montgomery County Planning Board recommends that the State lighway Administration (SHA) select Alternate 7 Modified, a western bypass f the Town of Brookeville, as the preferred alternate for the MD 97 makeville project a page but to



PURPOSE OF BRIEFING

The purpose of this brinking is to provide comments to SHA in the selection of a preferred alternate for the MD 97 Brookeville study, commonly known as the Brookeville Bypass. SHA completed a Craft Environmental Impact Statement (DEIS) in August 2001 and held a Location and Design Public Hearing on October 3, 2001. The DEIS findings are summarized in the Public Hearing Brochure, attached to copies of this memorandum distributed to Planning Board members. Others may pick up the Brochure at Room 105 in the Montgomery Regional Office. 8787 Georgia Avenue in Silver Spring or request the Brochure from 3HA's project manager, Carmeletta Harris, at 1-800-548-5026.

Five alternates are described in the DEIS:

- The No-Build Alternate (A ternate 1)
- An eastern bypass alternate (Alternate 5C)
- Three western bypass alternates (Alternate 7, Alternate 8A, and Alternate 8B)

The locations of these alternates are shown in Exhibit 1. Each of the four build alternates are shown in greater detail in Attachments A through D.

After the October 3, 2001 Public Hearing, SHA performed additional archeological studies at the Newlin/Downs Mill site and the study team developed Alfemate 7 Modified, which sightly realigns Alternate 7 to avoid the core areas of archeological interest.

STUDY BACKGROUND

The 1980 Olney Master Plan recommends the realignment of Georgia Avenue to the west of the Town of Brookeville. The Planning Board last reviewed the Brookeville Bypass in worksessions of Oc ober 12, 1992 and October 22, 1992. The purpose of these worksessions was to review comments on the M-NCPPC feasibility study of the Brookeville Bypass. The Planning Board recommended that SHA begin a project planning study to investigate conceptual details that the M-NCPPC feasibility study did not have resources to address.

SHA initiated the MD 97 3rookeville project planning study in January 1995. After an Alternates Public Meeting in May 1996, three build alternates (two western bypass alignments and one eastern bypass alignment) were retained for detailed study.

In early 1998, the study vias delayed due to concerns regarding consistency with the 1997 Maryland Smart Growth and Nelghborhood Conservation Act, which established Priority Funding Areas (PFA) where growth is to be encouraged through investment in public infrastructure. While the Town of Brookeville is located within a

PFA (because it is a municipal corporation), the majority of the bypass alternative alignments are not.

Following an agreement with local elected officials, the Maryland Department of Transportation, and the Bovernor's office, the study resumed in April 2000, with the establishment of four "smart growth" conditions. These conditions, and the means for meeting them, are described in the section of this memorandum on Relationship to Smart Growth.

WHY SELECT A WESTERN BYPASS

The alternates examined in the DEIS fall into three general categories; No-Build, eastern bypass, and western bypass. Staff believes that the differences among these three categories are substantive enough to briefly summarize the reasons why a western bypass should be selected before describing the more subtle differences between the western bypass alternates.

Staff believes that the purpose and need for a Brookeville Bypass has been established repeatedly from both civic and technical perspectives, through both our own Master Plan process and the NEPA process. Briefly, the purpose and need for the project are to resolve the noompatible nature of an important State highway serving the needs of 21st century travelers within the setting and alignment of an 18th century town. Therefore, the project airs to:

- protect the historic Town of Brookeville from the adverse effects of through traffic, and
- improve safety for Iravelers on MD 97 through Brookeville

Exhibit 2 provides a summary of the environmental impacts of each of the DEIS alternates. The No-Build alternate does not meet the purpose and need of the study. Each of the build alternates listed in Exhibit 2 do meet the purpose and need.

The eastern bypas:: alternate, Alternate 5C, was retained for detailed study as it avoids the Brookeville Historic District and minimizes the impacts on parkland resources. As shown in Ethibit 2, Alternate 5C passes through a more narrow portion of Reddy Branch Stream Velley Park, resulting In Section 4(f) resource acreage that is roughly an acre lower than the western bypass alternates.

However, Alternate 5C has several major disadvantages. It is more than twice as long as any of the western bypass alternates, resulting in a much larger project footprint, it requires purchase of five homes, whereas the western bypass alternates do not take any homes. At approximately \$35M, Alternate 5C costs more than twice as much as any of the western bypass alternates. Alternate 5C is not consistent with the Olney Master Plan. Staff linds that these disadvantages clearly outweigh the parklands

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and historic district minimization/avoidance features of Alternate 5C. Therefore, Alternate 5C should not be recommended.

COMPARISON OF WESTERN BYPASS ALTERNATES

Each of the three wes ern bypass alternates described in the DEIS have relatively similar quantitative irm acts, as presented in Exhibit 2. Staff finds that each of these three western bypass alternates would be consistent with the Olney Master Plan. The subtle differences betweer the western bypasses involve the connections to the existing roadway network and location of the alignment relative to adjacent natural resources, communities, and historic and cultural features.

Staff reviewed the western bypass alternates in a two-stage process. In the first stage, the three DEIS alternates; were compared and public testimony was considered. This comparison led to the conclusion that Alternate 7 was generally the preferred alternate. Alternate 7, however, creates undesirable and avoidable impacts to the core areas of the Newlin/Downs Mill archeological site. Therefore, in the second stage of the process, Alternate 7 Modified was developed to realign a portion of the roadway to avoid those core areas.

Comparison of DEIS Alternates

The DEIS describes three western bypass alignment alternates. All three alternates have a similar southern terminus with a three-leg roundabout at Georgia Avenue at the northeast corner of the Longwood Community Center. The designs of these three alternates are influenced by the desire to avoid an area of wetlands (Wetland #12) in the Reddy Branch floodplain.

- Alternate 7, shown in Altachment B, is the easternmost of the western bypass alternates. It meets Brockeville Road at a four-leg roundabout, has a low-profile bridge crossing Reddy Branch, and passes east of Wetland #12. In Alternate 7, a 300' segment of existing Georgia Avenue including the bridge across the Reddy Branch is closed to vehicular traffic. Access to and from the north into Brookeville is provided via the round about at Brookeville Road.
- Alternate 8A, shown in Attachment C, follows an alignment to the west of Atternate 7. Like Alternate 7, Alternate 8A also includes a low-profile bridge over Reddy Branch. However, Alternate 8A passes west of Wetland #12. Access to and from the west on B cokeville Road is provided via a three-leg roundabout. Access to and from the north into Brookeville is provided via a three-leg roundabout at the northern bypass terminus. The Alternate 8A alignment requires closure of a 600' segment of existing Brookeville Road. Access to and from the west into Brookeville is achieved via a dog-leg movement between the two threeleg roundabouts on either side of Reddy Branch.

S






The current project mapping indicates that the Brookeville Bypass will cross Meadow Branch via a culvert. The DEIS indicates that selection of bridge structures and culverts will be made during the subsequent project design phase. Staff recommends that the Meadow Branch crossing be bridged to reduce impacts on hydrology and wildlife passage.

Other perspectives

Staff considered several other perspectives in weighing the prosland cons of the western bypass alternates.

Network connectivity

The primary objective of the Brookeville Bypass is to remove MD 97 traffic, or north-south traffic, from the Town of Brookeville. Traffic currently traveling east-west into, or through, the Town of Brookeville uses Brookeville Road to and from the west and Brighton Dam Road to and from the east.

The 1980 Olney Master Plan classified Brookeville Road and Brighton Dam Road as primary residential roadways (both with the designation P-23). The 1980 Plan envisioned a relocation of a portion of P-23 slightly to the north. To the east of MD 97, P-23 was reassigned to Boldly Drive as part of the Abrams property subdivision approval in 1993. To the west of MD 97, Brookeville Road was reclassified as a Rustic Road In the 1996 Rustic Roads Master Plan. Brighton Dam Road is currently classified as an interim Rustic Road.

Staff believes that bypass alternates which either provide a roundabout connection to the bypass at Erookaville Road (Alternates 7, 7 Modified, and 8A) or via existing Georgia Avenue (Alternate 8B) both meet the intent of the master plan and serve local network connectivity needs.

Citizen testimony has raised the concern that the different western bypass alternates being considered could affect the desirability of Brookeville Road, Bordly Drive, and Brighton Dam Road as east-west cut-through routes. Staff recognizes the concern and concurs that the use of either rustic roads or primary residential roads by through traffic should be disccuraged.

Staff finds that the effects of each western bypass alternative on east-west traffic will be minor, based on the level of connectivity retained in each option. The different connection options proposed in Alternates 7, 7 Modified, 8A, and 8B, have only minor effects on east-west travel 'ime. For instance, the closure of a portion of existing Brookeville Road to vehicular traffic in Alternate 8A would increase the east-west travel distance by approximately one-fifth of a mile, or about one-half minute at 30 MPH. Similarly, the closure of a portion of Georgia Avenue in Alternates 7 and 7 Modified would increase travel distance for the motorist entering Brookeville from the north by about one-tenth of a mile, or about one-quarter of a minute at 30 MPH.

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Rustic Road effects

Brookeville Roac is a rustic road based both on its outstanding natural features and its historic value. The 1996 Rustic Roads Master Plan states that "the designation of this road as a rustic road is not to be used to affect in any way the Brookeville Bypass when that road is constructed". Staff believes that the differences in the effects of the different bypass alterna ives should nonetheless be noted.

Each of the western bypass alternates has an adverse effect on the rustic nature of Brookeville Road, which is classified as a Rustic Road. Alternates 7, 7 Modified, and 8A both include a roun fabout junction between Brookeville Road and the Brookeville Bypass, whereas in Alternate 8B the Brookeville Bypass crosses over Brookeville Road on a structure. Staff believes that neither Alternate 7 Modified nor Alternate 3B offers a clear advantage, as the roundabout construction would have a greater impact on the historic nature of the existing road alignment but the overpass would have a greater impact on the roadway viewshed.

Typical Section

Each of the bypass alternates was evaluated as an open-section (no curb-andgutter) and as a closed-section (curb-and-gutter) roadway, as shown in Exhibit 4. The basic cross-section includes one travel lane in each direction and a five-foot paved shoulder to accommodate bloycle traffic. Because the curb and gutter act as a means to radirect emant vehicles back onto the roadway, the closed-section option has a smaller footprint in terms of graded area than the open-section. Pedestrian accommodations such as sidewalks are not included because the bypass is intended to have no adjacent land use or future access points.

Because the closed-section option has a more narrow footprint than the opensection option, it also generally has lower environmental impacts as identified in Exhibit 2. However, the capital cost and stormwater management needs are greater with a closed-section roadway. Because the area adjacent to the roadway is generally parkland or other open area, staff concurs with the study team recommendation to select an open-section roadway design.

Treatment of Portions of Existing MD 97 to be Bypassed

The Brookeville Eypass will carry MD 97 around the Town of Brookeville, removing the need for S IA ownership and maintenance of those portions of existing MD 97 that will be bybassed. Staff concurs with the 1980 Olney Master Plan recommendation that the portion of existing MD 97 between the two bypass termini should not be included in the Master Plan of Highways, indicating that the functional classification is lower than primary residential roadway. SHA is coordinating with DPWT and the Town of Brooke ille to develop ownership and maintenance agreements for these roadway segments.

Alternate 7 Modified also proposes closure of a portion of MD 97 between Reddy Branch and the northern bycass terminus. As the ownership and maintenance agreements are developed, the desirability of retaining this link as a bikeway will be evaluated. If the pavement and bridge structure are to be removed entirely, staff recommends applying reforestation and stream restoration techniques.

SMART GROWTH CONSISTENCY

As part of the Maryland Smart Growth and Neighborhood Conservation Act passed in October 1997, Mon gomery County identified Priority Funding Areas (PFA) where state investment in nfrastructure is considered consistent with desired development patterns. By policy, all municipal corporations, such as the Town of Brookeville, are considered PFAs. The alignment for most of the Brookeville Bypass alternates, however, lies outside any PFA.

In 1999, the Maryland E epartment of Transportation, the Governor's office, and local elected officials agreed that the Brookeville Bypass could be considered consistent with Smart Growth policies if four conditions were met during design and construction:

- Under local ordinance, Montgomery County is to adopt, through appropriate enforceable action, restrictions that will prevent this bypass from allowing sprawl development. Any capacity a bypass might add to the road network cannot be used to allow development outside the current boundaries of the Town of Brookeville.
- Permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure no future access, widening, or connection to the bypass is possible.
- If for any reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass.
- Montgomery County, the Maryland Department of Transportation, and Howard County Government will work out a safe traffic calming point north of the bypass, which limits traffic capacity to the current capacity of MD 97 through Brookeville.

The first condition has Leen addressed by Montgomery County by incorporation into the Annual Growth Policy. Staff concurs with the State Highway Administration that the last condition is met through the establishment of roundabouts as the traffic control devices for bypass junctions.

The definition of permanent easement and the identification of the entity responsible for maintaining that easement has not yet been developed. SHA has been working with the Maryland Environmental Trust to develop appropriate interagency agreements to ensure that this Smart Growth criterion is met. Staff requests that this

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ATTACHMENT 2



ATTACHMENT 3



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•	Provide a bridge where the Oakley Cabin Trail crosses Reddy Branch (approximately 150 east of Oakley Cabin) to complete the pedestrian connection between the Brooksville historic district, the archeologic site, and the Oakley Cabin
•	M-NCPPC staff finds that the Oakley Cabin Trail, Improved as described in this document, will serve as the natural surface trail in the Reddy Branch stream valley referenced in the 1998 Countywide Park Trails Plan. No additional provision for future pedestrian trails within the Reddy Branch stream valley need be considered.
Refo	restation
•	Reforest the area where pavement along existing MD 97 will be removed Identify areas, preferably in the Hawlings River watershed, where the remaining reforestation will occur to maintain the required 1:1 replacement ratio
Strea	m Restoration
•	Provide stream restoration along Meadow Branch and Reddy Branch as indicated in Attachments 1 and 2 Additional participation in future DEP restoration projects in the Hawlings River watershed, particularly along the lowest portion of Meadow Branch, could also be considered.
Wetl	Inds
	Provide replacement wetlands
•	Maintain wetlands for a period of 20 years, with perpetual maintenance easement to be granted by M-NCPPC.
Othe	r
•	M-NCPPC staff support the Corps of Engineers interest in relocating the agreed- upon 8' high by 25' wide bench under the Relocated. MD 97 bridge crossing Reddy Branch from the south side of the stream channel to the north side of the stream channel to facilitate wildlife passage. However, M-NCPPC staff do not find the north-side specification important enough to warrant additional adverse impacts to other resources. Identify construction staging areas
•	Determine the owne ship and maintenance responsibilities for the portions of existing MD 97 to be sypassed.
•	Provide interagency memoranda of understanding defining the process to achieve the Smart Growth condition which specifies future widening or access to be prohibited via thirc-party easement.
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ATTACHMENT 4



Thank you for you: continuing efforts on this important project. If you have further questions please contact me or Dan Hardy at (301) 495-4530,

Sincerely,

and P. Berly

Derick P. Berlage Chairman

DPB:DH:ss

cc: Paul Wettlaufer, US Army Corps of Engineers Bill Schultz, US Fish and Wildlife Service Jeff Zyontz Dan Hardy





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V-B.2 July 7, 2003 FHWA Concurrence of SHA's June 20, 2003 Request for Section 4(f) Non-Applicability of Temporary Use

Robert L. Ehrlich, Jr., Governor Michael S. Steele, Lt. Governor



Robert L. Flanagan, Secretary Neil J. Pedersen, Administrator

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MARYLAND DEPARTMENT OF TRANSPORTATION

UN 2 0 2003

RE: Project No. MO746B11 MD 97 – Brookeville Project From South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland

Mr. Nelson J. Castellanos Division Administrator Federal Highway Administration The Rotunda – Suite 220 711 West 40th Street Baltimore, Maryland 21211

Attention IMIS-Denise W-Kinge-

Dear Mr. Castellanos:

The Maryland State Highway Administration (SHA) requests your concurrence with a determination of the non-applicability of Section 4(f) of the US DOT Act (49 U.S.C. Section 303) regarding the temporary use of publicly-owned public parkland for the development of one wetland mitigation and two stream restoration sites being considered for the MD 97 Brookeville Project. The construction of the stream restoration and wetland mitigation improvements, as currently proposed, will require temporary construction easement within the Reddy Branch Stream Valley Park. This regional park is owned by the Maryland National Capital Park and Planning Commission (MNCPPC). The SHA initiated project coordination with MNCPPC in 1997.

During the summer of 2002, SHA met with MNCPPC to discuss mitigation strategies and stream restoration opportunities within the park. Potential areas for stream restoration and wetland mitigation within the Reddy Branch Stream Valley Park were agreed upon by representatives of MNCPPC, and they subsequently provided written approval to SHA on May 1, 2003 (Attachment 1).

The SHA Selected Alternate 7 Modified will impact 1,339 linear feet of streams and 0.12 acre of wetlands. Replacement mitigation is proposed at a 2:1 ratio for 0.03 acre of palustrine forested and 0.03 acre of palustrine scrub shrub wetlands, and at a 1:1 ratio for 0.06 acre of

My telephone number/toll-free number is ______ Maryland Relay Service for Impaired Hearing or Speech 1.800.201.7165 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

July 7, 2003 FHWA Concurrence of SHA's June 20, 2003 Request for Section 4(f) Non-Applicability of Temporary Use (cont'd)

Mr. Nelson J. Castellanos MD 97 – Brookeville Project Page Two

palustrine emergent wetlands. Therefore, the wetland mitigation needed for this project totals approximately 0.18 acre. Recommended areas of potential stream restoration included a section of Meadow Branch south of Brookeville Road and a section along Reddy Branch adjacent to Brighton Dam Road.

Approved stream restoration sites include upstream and downstream of the proposed location where Alternate 7 Modified would cross Meadow Branch (Attachment 2) and along a section of Reddy Branch adjacent to Brighton Dam Road (Attachment 3). Stream restoration techniques are likely to include riparian buffer plantings and grading and stabilization of eroded stream banks. The SHA will work closely with the regulatory resource agencies and MNCPPC in the development of the detailed stream restoration and wetland mitigation design as part of project design, when funding for design activities is approved.

The MNCPPC, as the agency with jurisdiction over Reddy Branch Stream Valley Park, has no objections to the temporary occupancy of parkland and has concurred with the proposed project (see May 1, 2003 letter Attachment 1) with consideration of the following conditions:

- 1) The MNCPPC Planning Board supports the selection of Alternate 7 Modified including the recommended stream restoration and wetland mitigation locations within Reddy Branch Stream Valley Park coordinated with MNCPPC staff.
- 2) The temporary occupation of the parkland will not affect ownership of the land (MNCPPC will retain ownership of the area) and will be limited to the creation of stream restoration and wetlands mitigation locations with a maintenance easement to be granted by MNCPPC. The SHA will maintain and monitor the wetland and stream restoration mitigation sites for a period not to exceed the regulatory requirements to be established during the permitting.
- 3) The MNCPPC staff finds the wetlands creation and stream restoration mitigation locations to be beneficial with MNCPPC's Policy for Parks guidance on non-park uses that serve the greater public interests. As a result, there will be no temporary or permanent adverse change to the activities or features which are important to the purpose or function that qualifies the resource for protection under 4(f); and,
- 4) The temporary occupation will include a minor amount of land.

July 7, 2003 FHWA Concurrence of SHA's June 20, 2003 Request for Section 4(f) Non-Applicability of Temporary Use (cont'd)

Mr. Nelson J. Castellanos MD 97 – Brookeville Project Page Three

Therefore, in accordance with the Federal Highway Administration guidance on the applicability of Section 4(f) in cases of temporary use, we request your concurrence that the temporary occupancy of Reddy Branch Stream Valley Park for stream restoration and wetland creation mitigation is not subject to the requirements of Section 4(f).

Sincerely,

Neil J. Pedersen Administrator

by:

Douglas H. Simmons, Director Office of Planning and Preliminary Engineering

Concurrence:

Federal Highway Administration

Division Administrator

Attachments

- cc: Mr. Nicholas Blendy, Environmental Manager, State Highway Administration, Project Planning Division (w/Attachments)
 - Mr. Bruce M. Grey, Deputy Director, State Highway Administration, Project Planning Division
 - Ms. Carmeletta Harris, Project Manager, State Highway Administration, Project Planning Division (w/Attachments)
 - Mr. Joseph R. Kresslein, Assistant Division Chief, State Highway Administration, Project Planning Division
 - Ms. Cynthia D. Simpson, Deputy Director, State Highway Administration, Project Planning Division
 - Mr. James Wynn, Assistant Division Chief, State Highway Administration, Project Planning Division

V-B.3 May 1, 2003 M-NCPPC Response to SHA Request for Wetland Mitigation Sites



May 1, 2003 M-NCPPC Response to SHA Request for Wetland Mitigation Sites (cont'd)

Thank you for your continuing efforts on this important project. If you have further questions please contact me or Dan Hardy at (301) 495-4530. Sincerely, and P. Berly Derick P. Berlage Chairman DPB:DH:ss Paul Wettlaufer, US Army Corps of Engineers cc: Bill Schultz, US Fish and Wildlife Service Jeff Zyontz Dan Hardy



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May 1, 2003 M-NCPPC Response to SHA for Wetland Mitigation Sites (cont'd)

V-**B-**34



May 1, 2003 M-NCPPC Response to SHA for Wetland Mitigation Sites (cont'd)

V-B.4 November 27, 2002 M-NCPPC Coordination Meeting Summary

MY INAI	rvland l	Department of Transportation		Parris N. Glendening Governor	
Sta	ate Hi	ghway Administration		John D. Porcari	
				Parker F. Williams	
			RECEIVED	Administrator	
			DEC 1 7 2002		
MENIORAI	NDUM		Ans'd		
TO:	Ms. C	ynthia D. Simpson			
	Deput	y Director			
••	Prelim	inary Engineering			
			(
FROM:	Carme	eletta T. Harris	fur-		
	Projec	t Planning Division			
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DATE:	Decen	nber 11, 2002			
SUBJECT:	MD 9	7 Brookeville Project			
	Montgomery County				
	Contra	act Number MO746B11			
RE:	M-NC	PPC Coordination Meeting			
On Wednesd	ay, Nove	mber 27, 2002, a meeting was held in	the Project Plannin	g Conference Room,	
On Wednesd at the State H	ay, Nove Iighway I	mber 27, 2002, a meeting was held in Administration (SHA) Headquarters in	the Project Plannin Baltimore.	g Conference Room,	
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November 27, 2002 M-NCPPC Coordination Meeting Summary (cont'd)

MD 97 Brookeville Rd Page 2

The attendees introduced themselves and Carmeletta Harris briefly reviewed the outstanding issues raised at the Selected Alternate Meeting with the Administrator. At the meeting, Mr. Dan Hardy from the M-NCPPC stated that Montgomery County would prefer to have a bridge structure rather than to provide box culverts, over Meadow Branch stream north of the M-NCPPC property reserved for transportation use. Dan also stated that having a structure rather than box culverts would minimize impacts to the stream meander. Mr. Prakash Dave from Bridge Hydraulics replied that a study had been performed to determine if a bridge or box culverts were needed at the Meadow Branch stream crossing. After the hydrological study was completed it was determined that two 11' x 9.5' size box culverts will be the most appropriate adequate solution at the Meadow Branch crossing and that a bridge was not needed. Mr. Mike Zamore from M-NCPPC asked if it was possible to have box culverts that would follow the path of the stream in order to minimize impacts to the stream. Mr. Prakash Dave answered that it is possible to have box culverts that would closely follow the stream flow but the maintenance costs would be higher because of the large debris that could get stuck trying to make its way through the box culverts. Mr. Dan Hardy requested copies of the hydrological studies so that his office could review the results and comment on them.

Mr. Dan Hardy inquired whether the bridge over the Reddy Branch Stream could be lengthened in order to minimize impacts to the floodplain. Ms. Danelle Bernard from the Office of Bridge Design responded that the structure over Reddy Branch will provide a horizontal clearance to be 25 feet on the south side and 10 feet on the north side. The vertical clearance would be 8.5 ft on the south side. This will meet the minimum requirements preferred by USFWS, DNR and ACOE, which consist of a minimum of an 8' vertical clearance with a 25 foot embankment on the south side for wildlife passage. She added that after the respective analyses had been performed it was determined that a bridge length of 75 feet was sufficient, but in order to comply with USFWS, DNR and ACOE requests, the bridge length was extended to 120 feet. Mr. Dan Hardy asked if it was possible to span the floodplain area. Mr. Prakash Dave answered that it was not necessary to span the whole floodplain and that was not standard practice, he added that a 120 feet long bridge was more than required by the different analyses performed. Mr. Prakash Dave also added that some of the analyses performed might change if the bridge upstream, on existing MD 97, would be removed. Ms. Carmeletta Harris said that there was still no decision made regarding the removal of the bridge on existing MD 97 at Brookeville Road. Mr. Dan Hardy requested copies of the analyses performed so that his office could review the results and comment on them.

A report was submitted by RK&K to Highway Hydraulics concerning possible SWM sites. Highway Hydraulics did not have any comments on the methodology to determine the approximate sizes or the possible locations of the ponds. It was noted by Ms. Karen Kahl from RK&K that the SWM Report had been submitted for Alternates 5C and 8B so the locations of the ponds for Alternate 7 Modified would have to be slightly modified from those for Alternate 8B. Mr. Dan Hardy requested a map of Alternate 7 Modified with the respective SWM pond locations, the bridge north of Brookeville Road at Reddy Branch Stream as well as the proposed connection of the Oakley Trail at the roundabout.

October 7, 2002 Montgomery County Planning Board Letter

ONS IN, 51 ars THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION Office of the Chairman, Montgomery County Planning Board October 7, 2002 Parker Williams, Administrator Maryland Department of Transportation State Highway Administration P.O. Box 717 Baltimore, MD 21203-0717 Parker Dear Mr. Wittiams: The Montgomery County Planning Board reviewed the MD 97 Brookeville project planning study at the regularly scheduled meeting of September 19, 2002. The Board endorsed the staff recommendations (copy enclosed) as described below: 1. The Montgomery County Planning Board recommends that the State Highway Administration select Alternate 7 Modified, a western bypass of the Town of Brookeville, as the preferred alternate for the MD 97 Brookeville project planning study, 2. During the preparation of the Final Environmental Impact Statement, SHA should prepare interagency memoranda of understanding defining the process to achieve the Smart Growth condition which specifies future widening or access to be prohibited via third-party easement. 3. Subsequent project planning and design activities should incorporate the following, prior to mandatory referral: а. Accommodation of safe pedestrian and bicycle crossings for the existing Oakley Cabin Trail and a potential future natural surface trail as described in the Countywide Park Trails Plan. Preservation of the archeological resources in the core areas of the Ъ. Newlin/Downs Mill site MONTGOMERY COUNTY PLANNING BOARD, 8787 GEORGIA AVENUE, SILVER SPRING, MARYLAND 20910

www.mncppc.org

October 7, 2002 Montgomery County Planning Board Letter (cont'd)

- c. Selection of a bridge, rather than a culvert, to cross Meadow Branch
- d. Mitigation strategies for parkland and wetlands impacts
- e. Identification of stormwater management pond locations
- f. Identification of construction impacts, including required staging areas
- g. Determination of ownership and maintenance responsibility for the portions of existing MD 97 to be bypassed

We look forward to continued coordination with your staff on this important project as it moves forward into detailed design.

Sincerely,

En P Bul

Derick P. Berlage Chairman

DPB:DKH:cmd

MCPB MD 97 Brookeville Recommendations to SHA.doc

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September 25, 2002 Montgomery County Planning Board Letter



V-B-40

SIONS INT MCPB Item No. 18 9-19-02 ars THE MARYLAND -NATIONAL CAPITAL PARK AND PLANNING COMMISSION September 13, 2002 MEMORANDUM Montgomery County Planning Board TO: Jeffrey Zyontz, Chief VIA: County-wide Planning Division Richard C. Hawthome, Chief Transportation Planning County-wide Planning Division Judy Daniel, Team Leader **Rural Team Community-Based Planning Division** Daniel K. Hardy, Supervisor (301-495-4530) FROM: **Transportation Planning** County-wide Planning Division Khalid Afzal, Team Leader DKH For Georgia Avenue Team Community-Based Planning Division MD 97 Brookeville Bypass DEIS Recommendations SUBJECT: Recommendation: Transmit the following comments to the State Highway Administration The Montgomery County Planning Board recommends that the State 1 Highway Administration (SHA) select Alternate 7 Modified, a western bypass of the Town of Brookeville, as the preferred alternate for the MD 97 Brookeville project planning study. MONTCOMERY COUNTY DEPARTMENT OF PARK AND PLANNING, 8787 GEORGIA AVENUE, SILVER SPRING, MARYLAND 20910 www.mncppc.org V-B-41

During the preparation of the Final Environmental Impact Statement, SHA 2. should prepare an interagency memoranda of understanding defining the process to achieve the Smart Growth condition that requires a third-party easement to prohibit future access or widening. 3. Subsequent project planning and design activities should incorporate the following, prior to mandatory referral: а Accommodation of safe pedestrian and bicycle crossings for the existing Oakley Cabin Trail and a potential future natural surface trail as described in the County-wide Park Trails Plan. Preservation of the archeological resources in the core areas of the b. Newlin/Downs Mill site Selection of a bridge, rather than a culvert, to cross Meadow Branch C. d Mitigation strategies for parkland and wetlands impacts е Identification of stormwater management pond locations f. Identification of construction impacts, including required staging areas Determination of ownership and maintenance responsibility for the g. portions of existing MD 97 to be bypassed **ORGANIZATION OF THIS REPORT** This report contains five sections: Purpose of the briefing and relationship to SHA decision-making process Study background Why select a western bypass; comparison to the eastern bypass (Alternate 5C) and No-Build (Alternate 1) options Comparison of western bypass alternates; pros and cons of Alternate 7, Alternate 8A, and Alternate 8B, and development of Alternate 7 Modified **Relationship to Smart Growth** Next steps

PURPOSE OF BRIEFING

The purpose of this briefing is to provide comments to SHA in the selection of a preferred alternate for the MD 97 Brookeville study, commonly known as the Brookeville Bypass. SHA completed a Draft Environmental Impact Statement (DEIS) in August 2001 and held a Location and Design Public Hearing on October 3, 2001. The DEIS findings are summarized in the Public Hearing Brochure, attached to copies of this memorandum distributed to Planning Board members. Others may pick up the Brochure at Room 105 in the Montgomery Regional Office, 8787 Georgia Avenue in Silver Spring or request the Brochure from SHA's project manager, Carmeletta Harris, at 1-800-548-5026.

Five alternates are described in the DEIS:

The No-Build Alternate (Alternate 1)

An eastern bypass alternate (Alternate 5C)

• Three western bypass alternates (Alternate 7, Alternate 8A, and Alternate 8B)

The locations of these alternates are shown in Exhibit 1. Each of the four build alternates are shown in greater detail in Attachments A through D.

After the October 3, 2001 Public Hearing, SHA performed additional archeological studies at the Newlin/Downs Mill site and the study tearn developed Alfernate 7 Modified, which slightly realigns Alternate 7 to avoid the core areas of archeological interest.

STUDY BACKGROUND

The 1980 Olney Master Plan recommends the realignment of Georgia Avenue to the west of the Town of Brookeville. The Planning Board last reviewed the Brookeville Bypass in worksessions of October 12, 1992 and October 22, 1992. The purpose of these worksessions was to review comments on the M-NCPPC feasibility study of the Brookeville Bypass. The Planning Board recommended that SHA begin a project planning study to investigate conceptual details that the M-NCPPC feasibility study did not have resources to address.

SHA initiated the MD 97 Brookeville project planning study in January 1995. After an Alternates Public Meeting in May 1996, three build alternates (two western bypass alignments and one eastern bypass alignment) were retained for detailed study.

In early 1998, the study was delayed due to concerns regarding consistency with the 1997 Maryland Smart Growth and Neighborhood Conservation Act, which established Priority Funding Areas (PFA) where growth is to be encouraged through investment in public infrastructure. While the Town of Brookeville is located within a



PFA (because it is a municipal corporation), the majority of the bypass alternative alignments are not.

Following an agreement with local elected officials, the Maryland Department of Transportation, and the Governor's office, the study resumed in April 2000, with the establishment of four "smart growth" conditions. These conditions, and the means for meeting them, are described in the section of this memorandum on Relationship to Smart Growth.

WHY SELECT A WESTERN BYPASS

The alternates examined in the DEIS fall into three general categories; No-Build, eastern bypass, and western bypass. Staff believes that the differences among these three categories are substantive enough to briefly summarize the reasons why a western bypass should be selected before describing the more subtle differences between the western bypass alternates.

Staff believes that the purpose and need for a Brookeville Bypass has been established repeatedly from both civic and technical perspectives, through both our own Master Plan process and the NEPA process. Briefly, the purpose and need for the project are to resolve the incompatible nature of an important State highway serving the needs of 21st century travelers within the setting and alignment of an 18th century town. Therefore, the project aims to:

 protect the historic Town of Brookeville from the adverse effects of through traffic, and

improve safety for travelers on MD 97 through Brookeville

Exhibit 2 provides a summary of the environmental impacts of each of the DEIS alternates. The No-Build alternate does not meet the purpose and need of the study. Each of the build alternates listed in Exhibit 2 do meet the purpose and need.

The eastern bypass alternate, Alternate 5C, was retained for detailed study as it avoids the Brookeville Historic District and minimizes the impacts on parkland resources. As shown in Exhibit 2, Alternate 5C passes through a more narrow portion of Reddy Branch Stream Valley Park, resulting in Section 4(f) resource acreage that is roughly an acre lower than the western bypass alternates.

However, Alternate 5C has several major disadvantages. It is more than twice as long as any of the western bypass alternates, resulting in a much larger project footprint. It requires purchase of five homes, whereas the western bypass alternates do not take any homes. At approximately \$35M, Alternate 5C costs more than twice as much as any of the western bypass alternates. Alternate 5C is not consistent with the Olney Master Plan. Staff finds that these disadvantages clearly outweigh the parklands

and historic district minimization/avoidance features of Alternate 5C. Therefore, Alternate 5C should not be recommended.

COMPARISON OF WESTERN BYPASS ALTERNATES

Each of the three western bypass alternates described in the DEIS have relatively similar quantitative impacts, as presented in Exhibit 2. Staff finds that each of these three western bypass alternates would be consistent with the Olney Master Plan. The subtle differences between the western bypasses involve the connections to the existing roadway network and location of the alignment relative to adjacent natural resources, communities, and historic and cultural features.

Staff reviewed the western bypass alternates in a two-stage process. In the first stage, the three DEIS alternates were compared and public testimony was considered. This comparison led to the conclusion that Alternate 7 was generally the preferred alternate. Alternate 7, however, creates undesirable and avoidable impacts to the core areas of the Newlin/Downs Mill archeological site. Therefore, in the second stage of the process, Alternate 7 Modified was developed to realign a portion of the roadway to avoid those core areas.

Comparison of DEIS Alternates

The DEIS describes three western bypass alignment alternates. All three alternates have a similar southern terminus with a three-leg roundabout at Georgia Avenue at the northeast corner of the Longwood Community Center. The designs of these three alternates are influenced by the desire to avoid an area of wetlands (Wetland #12) in the Reddy Branch floodplain.

- Alternate 7, shown in Attachment B, is the easternmost of the western bypass alternates. It meets Brookeville Road at a four-leg roundabout, has a low-profile bridge crossing Reddy Branch, and passes east of Wetland #12. In Alternate 7, a 300' segment of existing Georgia Avenue including the bridge across the Reddy Branch is closed to vehicular traffic. Access to and from the north into Brookeville is provided via the roundabout at Brookeville Road.
- Alternate 8A, shown in Attachment C, follows an alignment to the west of Alternate 7. Like Alternate 7, Alternate 8A also includes a low-profile bridge over Reddy Branch. However, Alternate 8A passes west of Wetland #12. Access to and from the west on Brookeville Road is provided via a three-leg roundabout. Access to and from the north into Brookeville is provided via a three-leg roundabout at the northern bypass terminus. The Alternate 8A alignment requires closure of a 600' segment of existing Brookeville Road. Access to and from the west into Brookeville is achieved via a dog-leg movement between the two threeleg roundabouts on either side of Reddy Branch.





selection of a preferred alternate. SHA therefore postponed the selection of a preferred alternate to complete the Phase II survey work.

The Phase II survey, completed in July 2002, confirmed the hypothesis that Alternate 7 would cause far greater disruption to the core areas of the Newlin/Downs Mill site, specifically the mill site and miller's house, than would Alternate 8B. The Phase II survey also reports that avoidance of the core areas is the most desirable action, but that if these features cannot be avoided, the recommended mitigation is data recovery.

Staff believed that Alternate 7 could be refined to avoid the core areas of Newlin/Downs Mill and requested that SHA examine this possibility. SHA developed Alternate 7 Modified, which is the same as Alternate 7, except for:

 A slight shift of approximately 30' to the west in the vicinity of the Newlin/Downs Mill site, including a slightly sharper turn into the Brookeville Road roundabout

A retaining wall on the south side of the portion of Brookeville Road adjacent to the Newlin/Downs Mill site.

These refinements protect the core area of the mill and the miller's house

The Focus Group has continued to meet periodically as the Phase II archeological survey work has been conducted. The attendees at the most recent Focus Group meeting on July 14, 2002, unanimously endorsed the concept of Alternate 7 Modified.

Staff believes the Alternate 7 Modified alignment provides the best compromise between natural and cultural resource impacts for the Brookeville Bypass. Alternate 7 Modified does clip the southwest corner of the Brookeville Historic District (triggering the need for an Historic Area Work Permit), removes a portion of the Newlin/Downs Mill race, and requires realignment of the Oakley Cabin trail with an at-grade trail-crossing of MD 97. However, the primary objective for the Brookeville Bypass project is to preserve the historic resource that is the Town of Brookeville. Staff and Town representatives alike believe that Alternate 7 Modified achieves this objective.

Mitigating Actions

The Brookeville Bypass will create noticeable adverse impacts on the natural environment, parkland, historic and archeological resources. The roadway will divide two large forest stands in a biodiversity area, fragmenting forest interior spaces and accelerating the invasion of non-native species. The roadway will cross the Oakley Cabin Trail and impact portions of the Newlin/Downs Mill archeological site (outside those core areas protected by the development of Alternate 7 Modified).

During development of the FEIS, the study team will conduct subsequent evaluation of means by which SHA can best mitigate the adverse impacts of Alternate 7



The current project mapping indicates that the Brookeville Bypass will cross Meadow Branch via a culvert. The DEIS indicates that selection of bridge structures and culverts will be made during the subsequent project design phase. Staff recommends that the Meadow Branch crossing be bridged to reduce impacts on hydrology and wildlife passage.

Other perspectives

Staff considered several other perspectives in weighing the pros and cons of the westem bypass alternates.

Network connectivity

The primary objective of the Brookeville Bypass is to remove MD 97 traffic, or north-south traffic, from the Town of Brookeville. Traffic currently traveling east-west into, or through, the Town of Brookeville uses Brookeville Road to and from the west and Brighton Dam Road to and from the east.

The 1980 Olney Master Plan classified Brookeville Road and Brighton Dam Road as primary residential roadways (both with the designation P-23). The 1980 Plan envisioned a relocation of a portion of P-23 slightly to the north. To the east of MD 97, P-23 was reassigned to Bordly Drive as part of the Abrams property subdivision approval in 1993. To the west of MD 97, Brookeville Road was reclassified as a Rustic Road in the 1996 Rustic Roads Master Plan. Brighton Dam Road is currently classified as an Interim Rustic Road.

Staff believes that bypass alternates which either provide a roundabout connection to the bypass at Brookeville Road (Alternates 7, 7 Modified, and 8A) or via existing Georgia Avenue (Alternate 8B) both meet the intent of the master plan and serve local network connectivity needs.

Citizen testimony has raised the concern that the different westem bypass alternates being considered could affect the desirability of Brookeville Road, Bordly Drive, and Brighton Dam Road as east-west cut-through routes. Staff recognizes the concern and concurs that the use of either rustic roads or primary residential roads by through traffic should be discouraged.

Staff finds that the effects of each western bypass alternative on east-west traffic will be minor, based on the level of connectivity retained in each option. The different connection options proposed in Alternates 7, 7 Modified, 8A, and 8B, have only minor effects on east-west travel time. For instance, the closure of a portion of existing Brookeville Road to vehicular traffic in Alternate 8A would increase the east-west travel distance by approximately one-fifth of a mile, or about one-half minute at 30 MPH. Similarly, the closure of a portion of Georgia Avenue in Alternates 7 and 7 Modified would increase travel distance for the motorist entering Brookeville from the north by about one-tenth of a mile, or about one-quarter of a minute at 30 MPH.



Rustic Road effects

Brookeville Road is a rustic road based both on its outstanding natural features and its historic value. The 1996 Rustic Roads Master Plan states that "the designation of this road as a rustic road is not to be used to affect in any way the Brookeville Bypass when that road is constructed". Staff believes that the differences in the effects of the different bypass alternatives should nonetheless be noted.

Each of the western bypass alternates has an adverse effect on the rustic nature of Brookeville Road, which is classified as a Rustic Road. Alternates 7, 7 Modified, and 8A both include a roundabout junction between Brookeville Road and the Brookeville Bypass, whereas in Alternate 8B the Brookeville Bypass crosses over Brookeville Road on a structure. Staff believes that neither Alternate 7 Modified nor Alternate 8B offers a clear advantage, as the roundabout construction would have a greater impact on the historic nature of the existing road alignment but the overpass would have a greater impact on the roadway viewshed.

Typical Section

Each of the bypass alternates was evaluated as an open-section (no curb-andgutter) and as a closed-section (curb-and-gutter) roadway, as shown in Exhibit 4. The basic cross-section includes one travel lane in each direction and a five-foot paved shoulder to accommodate bicycle traffic. Because the curb and gutter act as a means to redirect errant vehicles back onto the roadway, the closed-section option has a smaller footprint in terms of graded area than the open-section. Pedestrian accommodations such as sidewalks are not included because the bypass is intended to have no adjacent land use or future access points.

Because the closed-section option has a more narrow footprint than the opensection option, it also generally has lower environmental impacts as identified in Exhibit 2. However, the capital cost and stormwater management needs are greater with a closed-section roadway. Because the area adjacent to the roadway is generally parkland or other open area, staff concurs with the study team recommendation to select an open-section roadway design.

Treatment of Portions of Existing MD 97 to be Bypassed

The Brookeville Bypass will carry MD 97 around the Town of Brookeville, removing the need for SHA ownership and maintenance of those portions of existing MD 97 that will be bypassed. Staff concurs with the 1980 Olney Master Plan recommendation that the portion of existing MD 97 between the two bypass termini should not be included in the Master Plan of Highways, indicating that the functional classification is lower than primary residential roadway. SHA is coordinating with DPWT and the Town of Brookeville to develop ownership and maintenance agreements for these roadway segments.
September 13, 2002 M-NCPPC MD 97 DEIS Recommendations (cont'd)

Alternate 7 Modified also proposes closure of a portion of MD 97 between Reddy Branch and the northern bypass terminus. As the ownership and maintenance agreements are developed, the desirability of retaining this link as a bikeway will be evaluated. If the pavement and bridge structure are to be removed entirely, staff recommends applying reforestation and stream restoration techniques.

SMART GROWTH CONSISTENCY

As part of the Maryland Smart Growth and Neighborhood Conservation Act passed in October 1997, Montgomery County identified Prionty Funding Areas (PFA) where state investment in infrastructure is considered consistent with desired development patterns. By policy, all municipal corporations, such as the Town of Brookeville, are considered PFAs. The alignment for most of the Brookeville Bypass alternates, however, lies outside any PFA.

In 1999, the Maryland Department of Transportation, the Governor's office, and local elected officials agreed that the Brookeville Bypass could be considered consistent with Smart Growth policies if four conditions were met during design and construction:

- Under local ordinance, Montgomery County is to adopt, through appropriate enforceable action, restrictions that will prevent this bypass from allowing sprawl development. Any capacity a bypass might add to the road network cannot be used to allow development outside the current boundaries of the Town of Brookeville.
- Permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure no future access, widening, or connection to the bypass is possible.
- If for any reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass.
- Montgomery County, the Maryland Department of Transportation, and Howard County Government will work out a safe traffic calming point north of the bypass, which limits traffic capacity to the current capacity of MD 97 through Brookeville.

The first condition has been addressed by Montgomery County by incorporation into the Annual Growth Policy. Staff concurs with the State Highway Administration that the last condition is met through the establishment of roundabouts as the traffic control devices for bypass junctions.

The definition of permanent easement and the identification of the entity responsible for maintaining that easement has not yet been developed. SHA has been working with the Maryland Environmental Trust to develop appropriate interagency agreements to ensure that this Smart Growth criterion is met. Staff requests that this



September 13, 2002 M-NCPPC MD 97 DEIS Recommendations (cont'd)



V-B.4 July 19, 2003 Summary of Agency and SHA Field Review of MD 97

Memora	ndum			
TO:	Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering			
FROM:	Joseph R. Kresslein Project Manager Project Planning Division			
SUBJECT:	Project No. MO746B11 Agency and SHA Field Review of the MD 97/Brookeville study area.			
DATE:	July 19, 2002			
The purpose Planning Co requirements focused on MNCPPC paneeds were a	of the meeting was to meet with the Maryland National Capital Parks and ommission (MNCPPC) to discuss wetland mitigation and stream restoration is for the MD 97 Brookeville Bypass project. More specifically, the meeting the process required by MNCPPC to formally approve the use of the ark sites for mitigation/restoration purposes. In addition, parkland mitigation also on the agenda to be discussed.			
Those in atte	endance included the following:			
<u>ATTENDEI</u> Mr. Dan Ha Ms. Mary D Mr. Doug R Mr. Mike Za Ms. Shanno Mr. Brian B	ES rdy, MNCPPC olan, MNCPPC edmond, MNCPPC amore, MNCPPC n Rousey, SHA-PPD ernstein, KCI Technologies			
Brian Berns (ACOE) has land for w highlighting the stream r of how the approved b Wildlife Ser	Brian Bernstein explained to the group that the United States Army Corps of Engineers (ACOE) has required written confirmation from the MNCPPC approving the use of their land for wetland mitigation and stream restoration. He showed the group a map highlighting the approximate location within Reddy Branch Stream Valley Park of both the stream restoration and wetland mitigation areas. Brian further explained the process of how the mitigation sites were selected including that the sites had been verbally approved by representatives from MNCPPC, ACOE and the United States Fish and Wildlife Service.			
Doug Redn River Study	nond added that the MNCPPC is in the process of developing a Hawlings with the goal of identifying potential areas to conduct stream restoration and			

July 19, 2002 Summary of Agency and SHA Field Review of MD 97 (cont'd)

MD 97 Brookeville Rd Page 2

The attendees introduced themselves and Carmeletta Harris briefly reviewed the outstanding issues raised at the Selected Alternate Meeting with the Administrator. At the meeting, Mr. Dan Hardy from the M-NCPPC stated that Montgomery County would prefer to have a bridge structure rather than to provide box culverts, over Meadow Branch stream north of the M-NCPPC property reserved for transportation use. Dan also stated that having a structure rather than box culverts would minimize impacts to the stream meander. Mr. Prakash Dave from Bridge Hydraulics replied that a study had been performed to determine if a bridge or box culverts were needed at the Meadow Branch stream crossing. After the hydrological study was completed it was determined that two 11' x 9.5' size box culverts will be the most appropriate adequate solution at the Meadow Branch crossing and that a bridge was not needed. Mr. Mike Zamore from M-NCPPC asked if it was possible to have box culverts that would follow the path of the stream in order to minimize impacts to the stream. Mr. Prakash Dave answered that it is possible to have box culverts that would closely follow the stream flow but the maintenance costs would be higher because of the large debris that could get stuck trying to make its way through the box culverts. Mr. Dan Hardy requested copies of the hydrological studies so that his office could review the results and comment on them.

Mr. Dan Hardy inquired whether the bridge over the Reddy Branch Stream could be lengthened in order to minimize impacts to the floodplain. Ms. Danelle Bernard from the Office of Bridge Design responded that the structure over Reddy Branch will provide a horizontal clearance to be 25 feet on the south side and 10 feet on the north side. The vertical clearance would be 8.5 ft on the south side. This will meet the minimum requirements preferred by USFWS, DNR and ACOE, which consist of a minimum of an 8' vertical clearance with a 25 foot embankment on the south side for wildlife passage. She added that after the respective analyses had been performed it was determined that a bridge length of 75 feet was sufficient, but in order to comply with USFWS, DNR and ACOE requests, the bridge length was extended to 120 feet. Mr. Dan Hardy asked if it was possible to span the floodplain area. Mr. Prakash Dave answered that it was not necessary to span the whole floodplain and that was not standard practice, he added that a 120 feet long bridge was more than required by the different analyses performed. Mr. Prakash Dave also added that some of the analyses performed might change if the bridge upstream, on existing MD 97, would be removed. Ms. Carmeletta Harris said that there was still no decision made regarding the removal of the bridge on existing MD 97 at Brookeville Road. Mr. Dan Hardy requested copies of the analyses performed so that his office could review the results and comment on them.

A report was submitted by RK&K to Highway Hydraulics concerning possible SWM sites. Highway Hydraulics did not have any comments on the methodology to determine the approximate sizes or the possible locations of the ponds. It was noted by Ms. Karen Kahl from RK&K that the SWM Report had been submitted for Alternates 5C and 8B so the locations of the ponds for Alternate 7 Modified would have to be slightly modified from those for Alternate 8B. Mr. Dan Hardy requested a map of Alternate 7 Modified with the respective SWM pond locations, the bridge north of Brookeville Road at Reddy Branch Stream as well as the proposed connection of the Oakley Trail at the roundabout.

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Section VI. Comments and Coordination

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



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Maryland State Highway Administration

VI. <u>COMMENTS AND COORDINATION</u>

Coordination with environmental resource agencies, elected officials, organizations/associations, and the public is an important component of the MD 97 Brookeville Project. This section of the document includes a compilation of correspondence with the public, environmental review and regulatory agencies, and county and local planning boards, commissions and civic associations since the October 3, 2001 Combined Location/Design Public Hearing.

A. DEIS COMMENT PERIOD AND PUBLIC HEARING

A notice was published in the *Federal Register* announcing the availability of the DEIS and subsequently marking the start of the DEIS comment period. A formal notice was published in the newspapers and public service announcements were sent to radio stations serving the area to notify individuals of the Public Hearing to encourage participation. In addition to the advertisements, brochures were sent to those on the project mailing list. Copies of the DEIS were distributed to federal, state, and local agencies, libraries and citizens. Comments were requested concerning the DEIS and the proposed improvements. The close of the comment period was October 25, 2001.

The SHA and the USACOE jointly held a Combined Location/Design Public Hearing for this project in Brookeville on October 3, 2001 at the Rosa Parks Middle School. Mr. Charlie Watkins, District Engineer, SHA, presided. Representatives of SHA described SHA's highway development process and explained that the MD 97 Project is in the detailed study stage of the Project Planning phase. The history of the project, as well as the results of the engineering and environmental studies, the alternates under consideration, and coordination with other state and federal agencies and public involvement activities were described. An environmental overview of the project area was provided. Persons attending the public hearing were provided a copy of the Public Hearing brochure, which summarizes information related to this project and includes descriptions of the proposed improvement, and an environmental summary. The DEIS and display maps and renderings of the alternates were available for review prior to and at the public hearing. Representatives from SHA's Right-of-Way division were available to answer question regarding right-of-way acquisition procedures.

Approximately 140 people were in attendance at the Combined Location/Design Public Hearing. The hearing provided citizens an opportunity to present oral and written testimony on the DEIS. An official transcript was prepared of the Location/Design Public Hearing, and the hearing record contains the remarks of 22 citizen speakers. Copies of the transcript are available for review at SHA and at local libraries. During the course of the oral testimony, the majority of people expressed their support for a bypass. Of these, the majority supported Alternate 7. Three people expressed support for Alternate 8B. Two people stated that did not support any of the alternates. No one outwardly spoke in favor of the No-Build Alternate, and the majority of people were opposed to the No-Build Alternate. Eight people testified in opposition to Alternate 5C due to its impact to Brookeville Farms and its high cost. One person testified in support of Alternate 5C. A summary of the comments received during the **Public Hearing oral testimony and SHA responses** are located on **Pages VI-A-1 to VI-A-12**.

A total of 16 written comments were received during the DEIS Comment Period. Of these, six people expressed support for Alternate 8B. Four wrote in support of Alternate 7, and two people stated their support Alternate 5C. One person expressed support for a western alignment, and one stated there should be a ban on truck traffic through town. Two people were in favor of the No-Build Alternate. The actual written comment sheets and corresponding SHA responses start on Page VI-A-13.

B. AGENCY COORDINATION

The MD 97 Brookeville Project has been processed in accordance with the Maryland Streamlined Environmental and Regulatory Process involving coordination with federal and state resource agencies. This involved agency concurrence of the Alternates Retained for Detailed Study (ARDS) for the DEIS as discussed previously. It has also involved federal and state resource agency coordination and concurrence of the SHA Selected Alternate. A draft Selected Alternate and Conceptual Mitigation Package (SACM) was circulated for agency review and comment in February 2003 and the MD 97 Brookeville Project was presented at the March 2003 Interagency Review Meeting (IAR). Agency comments focused on the status of the draft Memorandum of Agreement (MOA) in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and a request for consideration of wildlife passage along the north side of Reddy Branch as discussed previously. The final SACM package responded to these comments and was distributed at the May 2003 IAR meeting for formal agency concurrence and comment.

As a result of this process, agency concurrence (without comment) of the SHA Selected Alternate and the conceptual mitigation proposed in the SACM Package was received from the FHWA, USACOE, USFWS, MDE, and the Metropolitan Washington Council of Government. Agency concurrence (with minor comments) was received from the USEPA, NPS and DNR. The USEPA and DNR expressed support of the reevaluation of the north-side wildlife passage; DNR offered continued coordination with SHA regarding mitigation designs. The National Park Service gave concurrence based on FHWA legal sufficiency. The Maryland Department of Planning also concurred, commenting that SHA's Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDI' also recommended that MDOT, SHA, and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works. In response, coordination is ongoing between SHA and MET and will be resolved in Final Design.

In addition to the Maryland Streamlined Environmental and Regulatory Process, coordination has also occurred with the federal ACHP regarding Section 106 of the National Historic Preservation Act of 1966, as amended. The ACHP has notified FHWA that the ACHP does not believe that their participation as a signature party to resolve adverse effects is needed. A summary of the Federal and State Environmental Review and Regulatory Agency comments on the DEIS starts on Page VI-B-1. The additional agency coordination letters and/or minutes that have occurred since the distribution of the DEIS start on Page VI-B-14. The Selected Alternate and Conceptual Mitigation Package starts on Page VI-B-37, with agency concurrence correspondence starting on Page VI-B-57. A meeting was held February 19, 2002 to verify that the MD 97 Brookeville alternates complied with the **Smart Growth** criteria designated for the project. Attendees included representatives from the Maryland State Highway Administration, Federal Highway Administration, Maryland Department of Transportation, Office of Smart Growth, and Maryland Department of Planning. The meeting minutes are located on **Pages VI-B-28 to VI-B-30**.

Upon review of the MD 97 Brookeville Project planning study, the Montgomery County Council and Planning Board made several recommendations regarding the selection of an alternate and subsequent project planning and design activities. This correspondence is located in Section V, Appendix B. Consultation has been ongoing with Maryland-National Capital Park and Planning Commission (M-NCPPC) regarding Section 4(f) use of Reddy Branch Stream Valley Park including approval of locations for wetland mitigation, stream restoration, reforestation, and storm water management requirements for the MD 97 Brookeville Project that are located within the park. M-NCPPC coordination also includes cultural resources, as portions of the park are located within the Brookeville Historic District, and M-NCPPC is an invited participant in the Section 106 process. Section V, Appendix B (Section 4(f) Evaluation) of the FEIS includes the formal consultation with M-NCPPC regarding permanent and temporary use of public parkland and associated mitigation.

C. FOCUS GROUP MEETINGS

The Focus Group was comprised of individuals within the study corridor, as recommended by county and local elected officials. The Focus Group meetings that occurred since the DEIS distribution are located on Pages VI-C-1 and VI-C-6.

D. GREATER OLNEY CIVIC ASSOCIATION CORRESPONDENCE

The Greater Olney Civic Association, whose mission is to oversee the overall welfare of Olney community, made recommendations to the Maryland State Highway Administration regarding the selection of an alternate. Correspondence from the Greater Olney Civic Association is located on Pages VI-D-1 and VI-D-3.

Section VI-A. DEIS Comment Period and Public Hearing

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive

Montgomery County, Maryland



Maryland State Highway Administration

A. DEIS COMMENT PERIOD AND PUBLIC HEARING

1. <u>Oral Testimony</u>

The following summarizes the verbal comments received at the Public Hearing and responses by the Project Team:

- Speaker 1: Richard Alan President of Commissioners and Resident 205 Market Street Brookeville, MD 20833
- Comment: Mr. Allan stated that the town of Brookeville's message is build a bypass now, locate it west of town, and take all due care to use whatever necessary resources available to mitigate socioeconomic, cultural and natural environmental impacts that might result. The bypass is crucial to the future of the town and its residents. Without the bypass, the town of Brookeville would be utterly consumed by commuter and truck traffic gridlock with all its safety and health implications. The town commissioners believe that Alternate 7 represents the preferred placement or location for the bypass. The Commissioners also specifically note their support of a roundabout at grade at Brookeville Road that would assure smooth east/west and northwest traffic flow.
- Response 1: Mr. Alan's support for Alternate 7 has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.
- Speaker 2: Robert Heritage Brookeville, MD 20833
- Comment: Mr. Heritage commented that he feels traffic congestion has grown worse in the 28 years he has lived in Brookeville. Many trucks are unable to make the corner turn going down MD 97 without going over the curb into High Street. He is a town commissioner, and is in complete agreement with President Alan. He stated that the No-Build Alternate should be considered a no-brainer.

Response 2: Mr. Heritage's support for Alternate 7 has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

Although the No-Build Alternate would not met the project needs stated above, it was carried forward for detailed study to provide a benchmark for comparison in the analysis of other alternates.

- Speaker 3: Clyde Unglesbee 20 High Street Brookeville, MD 20833
- Comment: Mr. Unglesbee stated that he agrees with Mr. Alan and Mr. Heritage. Alternate 7 is best solution for Brookeville Bypass – as soon as possible. Alternate 7 is least costly, least opposition, and less effect on homes. Concerned that the school buses have to back down Brookeville hill because an 18-wheeler is coming down, which a safety issue. Mr. Unglesbee also provided a chronological history of the project, stressing that planners in the 1950s saw a need for a bypass, and that it is time to stop studying and to put this project into a funding climate so that it can be built, so that future generations will not have to endure decades of further study.
- Response 3: Mr. Unglesbee's support for Alternate 7 has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.
- Speaker 4: Ralph Leslie Shady View Lane Brookeville, MD 20833
- Comment: Mr. Leslie stated that he is opposed to the No-Build Alternate, and supports any of the options except Alternate 5C, due to cost.

Response 4: Mr. Leslie's opposition to the No-Build Alternate and Alternate 5C has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

Although the No-Build Alternate would not met the project needs stated above, it was carried forward for detailed study to provide a benchmark for comparison in the analysis of other alternates. The estimated costs of the SHA Selected Alternate 7 Modified is 12.5 million dollars compared to 12.4 million for Alternate 7, and 34.5 million for Alternate 5C.

- Speaker 5: John Parrish 9009 Fairview Road Brookeville, MD 20833
- Comment: Mr. Parrish emphasized the importance of choosing an alignment that emphasizes forest protection, particularly that forest that is supposed to be protected within parklands. Mr. Parrish stated that several American Chestnuts occur on the south side of Brookeville Road on bluff, if not in the alignment, very close to it. Regarding the 4(f) evaluation, Mr. Parrish stated there are more impacts from Alternate 5C east of town than any of the western alternatives. He stated there are greater floodplain, parkland, stream crossings, and rare, threatened and endangered species impacts on the east side when compared to the west, and he encourages that environmental factors be given serious consideration when choosing final alternate. From an environmental and Section 4(f) standpoint, 5C would seem to be the alternate to choose. Of the western alignments, he prefers that Alternate 8B be chosen because it provides a larger and safer corridor for wildlife passage. He supports a bypass and hopes that something is built with as much balance with the environment as possible.
- Response 5: Mr. Parrish's support for the bypass has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

Mitigation for loss of vegetation would be addressed through a the Maryland Reforestation State Law. The SHA would coordinate with the M-NCPPC to identify viable areas for reforestation including areas within Reddy Branch Stream Valley Park. None of the Build Alternates would impact any endangered or threatened plant or animal species. The US Fish and Wildlife Service (USFWS) confirmed that no federally-listed or proposed for listing endangered or threatened species in the project area. There are two-watch list species, Shingle Oak and American Chestnut, located within the project area. In addition, DNR, Wildlife and Heritage Division reported no records for federal or state rare, threatened, or endangered plants or animals in the project area.

Alternate 8B was not selected in order to minimize impacts to the Newlin/Downs Mill Complex archaeological site and minimize adverse effects on the Brookeville Historic District. The SHA Selected Alternate 7 Modified includes a design recommendation for wildlife passage along Reddy Branch and have been concurred with by the regulatory resource agencies as explained in Section II of the FEIS. The Section 4(f) Evaluation (Section V) explains why SHA's Selected Alternate is the overall least impactive alternate and identifies the proposed measures to mitigate Section 4(f) impacts.

- Speaker 6: Karen Montgomery 211 Market Street Brookeville, MD 20833
- Comment: Ms. Montgomery stated that the vibration shakes her windows and foundation, and that the traffic has increased in the 22 years she has been a resident. Ms. Montgomery entered photos of accident victims into public record. In addition, she stated her support for Alternate 7.
- Response 6: Ms. Montgomery's support for Alternate 7 has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.
- Speaker 7: Mike Jamgotion 19617 Islander Street Olney, MD 20832
- Comments: Mr. Jamgotion provided comments on the No-Build Alternate, Alternates 7, 8A and 8B and their evaluation in the DEIS. He believes that SHA failed to meet high level

of detail required by the National Environmental Policy Act and that the Environmental Impact Statement should be revised.

Response 7: The No-Build Alternate, Alternate 7, Alternate 8A, Alternate 8B and Alternate 5C are all considered feasible alternatives under the National Environmental Policy Act laws, which require any transportation projects receiving federal funding to investigate all reasonable alternates that avoid or minimize impacts to environmental, natural and social economic resources (i.e., historic district, parks, streams, woodland, endangered species, environmental justice, etc...). In addition, the MD 97 Brookeville Project has been completed in accordance with the Maryland Streamlined Environmental and Regulatory Process that requires agency coordination and concurrence/comment for Purpose and Need, Alternates Retained for Detailed Study and the Selected Alternate and Mitigation Package as explained in Section II. Agency comments on the DEIS have been addressed as noted in Section VI-B.

As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. The modified alignment was presented at the January 2002 Inter Agency Review meeting. An agency field view occurred on September 20, 2002. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

- Speaker 8: Todd Vangelder 306 Market Street Brookeville, MD 20833
- Comments: Mr. Vangelder stated his opposition to the No-Build Alternate. He urged that the bypass be built quickly.
- Response 8: Mr. Vangelder's support for the bypass and opposition to the No-Build Alternate has been noted. Although the No-Build Alternate would not met the project needs stated above, it was carried forward for detailed study to provide a benchmark for comparison in the analysis of other alternates. The MD 97 Brookeville Project has been funded for Project Development at this time. Project design and construction will occur as funds become available.
- Speaker 9: Robert Crowl 19421 Rena Court Brookeville, MD 20833
- Comments: Mr. Crowl expressed endorsement of Alternate 7 on behalf of Keith Snyder, President of the Olney Village Civic Association, David Buvet, a resident of Rena

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Court, and the majority of the Olney Village Civic Association. It is their opinion that Alternate 7 will best address concerns regarding light and sound issues, minimize environmental impact, and serve the interest of the Olney/Brookeville communities.

- Response 9: Mr. Crowl's support of Alternate 7, on behalf of the Olney Village Civic Association has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation.
- Speaker 10: Martha Rockshaw 2710 Lubar Drive Brookeville Farms Brookeville, MD 20833
- Comments: Ms. Rockshaw stated her opposition to Alternate 5 due its high cost and its negative impact to her neighborhood, Brookville Farms.
- Response 10: Ms. Rockshaw's opposition to Alternate 5C has been noted. As a result of public and agency comments, Alternate 7 Modified is the SHA Selected Alternate. Alternate 5C was not selected because of substantially higher project cost, public opposition, and greater socio-economic, environmental, and cultural resource impacts. Table ES-1 provides a comparison of impacts for the projects alternates. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation.

The SHA Selected Alternate will not impact Brookeville Farms.

- Speaker 11: Ryan Rockshaw 2710 Lubar Drive Brookeville Farms Brookeville, MD 20833
- Comment: Mr. Rockshaw stated that he opposed to Alternate 5C for the following reasons: it would interfere with the school bus route for Brookeville Farms; he would have to go under two major bypasses to get to his friend's house in other sections of the neighborhood; there would be more pollution; it would go through animal habitats and forests, and lost people might venture into the neighborhood creating more traffic. If a bypass is necessary, Mr. Rockshaw supports Alternate 7 because it would

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interfere the least with community and historic sites, and it would produce fewer intersections.

Response 11: Mr. Rockshaw's opposition to Alternate 5C has been noted. As a result of public and agency comments the western, Alternate 7 alignment was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

> The SHA Selected Alternate is to the west of the Town of Brookeville and will not interfere with school bus access to Brookeville Farms. Access to the Town of Brookeville from the SHA Selected Alternate will be limited to two roundabouts, one at the southern tie-in with Georgia Avenue, and the other at Brookeville Road. See Section II for additional details. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

- Speaker 12: Dottie Atterback 2712 Lubar Drive Brookeville Farms Brookeville, MD20833
- Comments: Ms. Atterback stated her opposition to Alternate 5C because it would greatly impact Brookeville Farms by alienating Lubar Drive from the rest of the neighborhood. She stated that she doesn't want her children waiting for the school buses during rush hour, or an alternate that runs through the creek her children explore in. She stated she hopes SHA does not approve a plan that costs two times what Alternate 7 and 8 cost and be willing to displace five families. She stated please abolish Alternate 5C in favor of Alternate 7.
- Response 12: Ms. Atterback's opposition to Alternate 5C has been noted. See Response #10 and #11. Also, the SHA Selected Alternate will cross Reddy Branch to the west of Brookeville and design will include mitigation coordinated with resource agencies including stream restoration and creation of wetlands along Reddy Branch to the east of Brookeville. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation.

- Speaker 13: Michael Wieizcinski 2706 Lubar Drive Brookeville Farms Brookeville, MD 20833
- Comments: Mr. Wieizcinski opposes Alternate 5C for his following reasons: significant loss of forests area will occur, thereby allowing a view of the overpass structures; traffic traveling 40 to 50 miles an hour would be within 200 feet of our residence; noise levels would be extremely high; largest cumulative environmental impact; not cost effective from taxpayers perspective; and his quality of life will be lost.
- Response 13: Mr. Wieizcinski's opposition to Alternate 5C has been noted. As a result of public and agency comments, Alternate 7 Modified is the SHA Selected Alternate. Alternate 5C was not selected because of substantially higher project cost, public opposition, and greater socio-economic, environmental, and cultural resource impacts. Table ES-1 provides a comparison of impacts for the projects alternates. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation.
- Speaker 14: Adam Sachs 20300 Lubar Way Brookeville Farms Brookeville, MD 20833
- Comments: Mr. Sachs expressed his opposition to Alternate 5C due to the negative impact on Brookeville Farms and to its high cost.
- Response 14: Mr. Sachs' opposition to Alternate 5C has been noted. See Response #10.
- Speaker 15: Janet Bovey 19432 Rena Court Brookeville, MD 20833
- Comments: Ms. Bovey stated that there is a need for the bypass. Regarding Alternate 7, Ms Bovey stated that a western bypass would bring a great deal of noise and air pollution into many families' backyards. Should Alternate 7 be chosen, every possible measure and precaution should be taken to avoid negatively impacting citizens' welfare. The State of Maryland should provide a guarantee that the construction of sound barriers, aesthetically pleasing sound buffering landscaping and any other measures that will reduce if not eliminate noise and air pollution effects from the highway.
- Response 15: Ms. Bovey's support for the bypass has been noted. As a result of public and agency comments, the western Alternate 7 Modified alignment is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. Table ES-1 provides a comparison of impacts for the alternates considered for the project.

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None of the alternates would result in any violation of the state and national ambient air quality standards for carbon monoxide. The SHA noise policy cost per residence criteria is exceeded at all noise sensitive areas modeled. A final decision regarding noise abatement measures will be will occur during the design phase of the project. See Chapter IV.K (Air Quality) and IV.L (Noise Impact Assessment) for additional discussions. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation.

Speaker 16: John O'Loughlin 20521 Riggs Hill Way Brookeville Farms Brookeville, MD 20833

- Mr. O'Loughlin stated that there is a need for the bypass, but that it should be done in Comments: a way that does not encourage more traffic and sprawl north of town. He feels that the No-Build Alternate should no longer be considered. Mr. O'Loughlin stated that the eastern bypass should be rejected because although the idea has been discussed for 30 years, the state made no provisions for preserving right-of-way on the eastern side. Alternate 5C is being squeezed through Brookeville Farms and the only place to go is the very same woods that were preserved. It doesn't make sense to use protected forested land that the developer of Brookeville Farms wasn't allowed to use. Regarding the western bypasses, Mr. O'Loughlin referenced a March 1999 letter from Governor Glendening to Isaiah Legitt, who was at that time council president, that states that the county must not let the bypass encourage sprawl and no access, widening or connection to the bypass is allowed. Alternate 7 and 8A do not conform to this latter requirement because they both connect with Brookeville Road, where a roundabout will make it easier for east/west traffic to come through this part of the county. Of all the western options, Mr. O'Loughlin supports Alternate 8B because it conforms to the governor's prerequisites while still being cost effective, minimizes detrimental impacts, and does not invite additional east/west traffic.
- Response 16: Mr. O'Loughlin's support for Alternate 8B and his opposition to the No-Build Alternate and Alternates 5C, 7 and 8A have been noted. As a result of public and agency comments, the western Alternate 7 Modified alignment is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. Table ES-1 provides a comparison of impacts for the alternates considered for the project.

In order for the MD 97 Brookeville Project to proceed after the Smart Growth and Neighborhood legislation, the Smart Growth criteria developed by the Governor's office was incorporated into the early stages of project development. As a result, roundabouts were developed for the projects alternates as a method to calm traffic and limit traffic growth.

Section II provides descriptions of the project alternates including access and Smart Growth. The Maryland Department of Planning (MDP) has concurred with SHA

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selection of Alternate 7 Modified and commented that the Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP supports the Smart Growth criteria listed in the Executive Summary and has recommended that Maryland Department of Transportation, SHA and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works.

The Maryland Department of Planning (MDP) has concurred with the SHA selection of Alternate 7 Modified and commented that the Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP supports the Smart Growth criteria listed in the Executive Summary and has recommended that Maryland Department of Transportation, SHA and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works.

- Speaker 17: Russ Smith 20303 Lubar Way Brookeville Farms Brookeville, MD 20833
- Comments: Mr. Smith stated that he is opposed to Alternate 5C due to cost and impacts.

Response 17: Mr. Smith's opposition to Alternate 5C has been noted. See Response # 10 and #13.

- Speaker 18: Resa Rockshaw 2710 Lubar Drive Brookeville Farms Brookeville, MD 20833
- Comments: Ms. Rockshaw stated that she supports Alternate 7 and opposes Alternate 5C.
- Response 18: Ms. Rockshaw's support of Alternate 7 and her opposition to Alternate 5C has been noted. See Response #1, # 10, and #13.
- Speaker 19: Bill Wagner 210 Market Street Brookeville, MD 20833
- Comments: Mr. Wagner expressed his concerns and frustration regarding existing in-town traffic congestion and how unsafe it is. He stated that he is opposed to the No-Build Alternate and supports Alternate 7.

- Response 19: Mr. Wagner's support for Alternate 7 and his opposition to the No-Build Alternate have been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. Although the No-Build Alternate would not met the project needs stated above, it was carried forward for detailed study to provide a benchmark for comparison in the analysis of other alternates.
- Speaker 20: Randall Sands 20504 Riggs Hill Way Brookeville Farms Brookeville, MD 20833
- Comments: Mr. Sands does not support any alternative for the bypass at the present time. He stated that he understands that a solution such as a bypass is needed for the problems in the Town of Brookeville, but that the impact on the surrounding communities need to be considered as well. Mr. Sands feels that any decisions on a bypass should wait until after the Bordley Drive extension work is completed, so that real traffic data and patterns of traffic flow are known.
- Response 20: Mr. Sands' support for a transportation solution at a later date has been noted. The purpose of the Bordley Drive improvements is to provide vehicle east-west traffic movement for local users primarily from the expanding residential community it traverses and lessen local commuter traffic in the Town of Brookeville. The purpose of the MD 97 Brookeville Project is to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town as concluded in Section I. Section IV (Environmental Consequences) and Section V (Section 4(f) Evaluation) include discussions of resource impacts and appropriate mitigation. Please also refer to Response #7.
- Speaker 21: Chris Scanlon Chairperson, Brookeville Planning Commission 1212 Market Street Brookeville, MD 20833
- Comments: Mr. Scanlon stated that he supports the selection of one of the western bypass alignments. He commented on the need for the project due to traffic congestion, safety concerns, and the preservation of the historic nature of the town.

- Response 21: Mr. Scanlon's support of a western alignment has been noted. As a result of public and agency comments, Alternate 7 was initially identified as the SHA Preferred Alternate. Subsequent to the Public Hearing, further studies were developed regarding the Newlin/Downs Mill Complex archeological site located within the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. Alternate 7 Modified is the SHA Selected Alternate, which is expected to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.
- Speaker 22: Lynn Fields 4410 Brookeville Road Brookeville, MD 20833
- Comments: Ms. Fields expressed her support for Alternate 8B because it will bypass the town of Brookeville and give the town the result it wants by allowing north/south traffic on Route 97 to bypass the town by placing a roundabout north of Brookeville Road and a bridge over Brookeville Road; the character of the road will be preserved as much as possible, and further use of an east/west commuter route will not be unnecessarily encouraged. She stated that either Alternate 7 or 8A would meet the town's needs without placing a roundabout on Brookeville Road and encouraging further use of the road.
- Response 22: Ms. Fields' support for Alternate 8B is noted. Alternate 8B was not identified as SHA Selected Alternate because of higher cost, environmental impacts, and the impact to the view-shed of the historic district resulting from the grade separation over Brookeville Road. The elevated structure is within sight distance from the historic district; a concern expressed by many citizens of Brookeville. Cost for Alternate 8B is approximately \$5 million greater than Alternate 7. Table ES-1 provides a comparison of the alternates considered for the project and Section II describes the alternates including access and Smart Growth.

The Maryland Department of Planning (MDP) has concurred with the SHA selection of Alternate 7Modified and commented that the Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP supports the Smart Growth criteria listed in the Executive Summary and has recommended that Maryland Department of Transportation, SHA and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works.

STATE HIGHWAY ADMINISTRATION **QUESTIONS AND/ OR COMMENTS**

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> Locetion/Design Public Heering Wednesdey, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

	NAME TINOTHY HI	ANSCHIKACCAL HANGEN	DATE 10/ 7/01
PLEASE	ADDRESS 1962	5 Islanden St.	
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I/We wish to comment or inquire about the following aspects of this project:

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October 3, 2001 Location/Design Public Hearing



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Maryland Department of Transportation State Highway Administration

Governor John D. Porcari Secretary Parker F. Williams Administrator

Parris N. Glendening

November 5, 2001

Mr. and Mrs. Hansen 19625 Islander Street Olney MD 20832

Dear Mr. and Mrs. Hansen:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your comments supporting Alternate 7 and concerns about the project in general bave been noted.

The next step for this project will be the selection of a preferred alteroate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-5026 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

Rv Melissa Kosenak **Project Engineer Project Planning Division**

cc: Ms. Carmeletta Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

My telephone number is

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717 Street Address; 707 North Calvert Street . Boltimore, Maryland 21202

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Final Environmental Impact Statement

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> Location/Design Public Hearing Wednesday, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

PLEASE		JOHN HARTINGER SS 19620 ISLANDER		DATI	_DATE 10/3/2001	
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* Persons who have received a copy of this brochure through the mail are already on the project mailing list.

October 3. 2001 Location/Design Public Hearing

Several points & a recommendation :

. Since the migsten of this may at the bast interestere alignment regardary wetlands, environmental and weldlefe compact was an Eastern alignment. Subsequent reviews & redefinitions apparently have reduced the impacted areas on the Western side. also a major blamich on the State & County proces remaine that development on the eastern orde was encouraged & gerometted while the by land was under study. During process public bearings, public officials have stated that the aparis of Route 97 will war have a dust impact on increasing traffic. Most would strongly durages - it will influence troffin flow from Howard & Court country Thousand of olney vindents will be negatively imported by a worten alignment - noise - environmentel quality - loss Divitlents / will be. Your again is draged will developing a regrandle portion That due The questest good with the bost ngothers injust. Resulentary alway have been on second with patitions & testimony that a western algument is the least acceptable. If an alignment is deemed necessary - [a No-build with a straffitancy of the internation in brookenels Amains an optim] The one with the last regative impact should be related "alternate 50 - Eastern alymment would be mont any trible to Dany Hull / Brochamelle Hurle underles of the getterns · alternate 'I would be the least offernane mestern alyment

> · alternate SB is TOTALLY unacceptable & doubt le removed from consideration a bridge is all bear many negative impacts on those nearby constants who would enduce the structure - Optier alternate (57 is fair acypeiron

Parris N. Glendening

John D. Porcari

Parker F. Williams Administrator

Governo

Secretary



VI-A-15

Maryland Department of Transportation State Highway Administration

November 5, 2001

Mr. John Hartinger 19620 Islander Street Olney MD 20832

Dear Mr. Hartinger:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your comments supporting Alternate 5C as the most acceptable eastern alignment and Alternate 7 as the least offensive western alignment have been noted.

The purpose of the MD 97 Brockville project is to remove the increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the lustoric character of the town.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001.

The No-Build Alternate remains a valuable elignment throughout the Project Planning Process. It is also the SHA objective to minimally impact the environmental, social and natural resources within the project limits.

My lelephone number is

Maryland Reley Service for Impaired Heering or Speech 1-800-735-2258 Slatewide Toll Free

Malling Address: P.O. Box 717 + Bellimore, MD 21203-0717 Street Address: 707 North Calvert Street + Ballimore, Maryland 21202 Mr. John Hartinger Page Two

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-5026 or via email at charris@sba.state.md us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Melissa Kosenak Project Engineer Project Planning Division

cc: Ms. Carmeletta Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

2

Patricia R. Lane 4400 Brookeville Road Brookeville, MD 20833

October 24, 2001

Maryland Depart of Transportation State Highway Administration Office of Planning and Preliminary Engineering Mail Stop C-301 Box 717 Baltimore, MD 21203-0717

Re: MD 97 - Brookeville Transportation Study

Dear Sir/Madam:

As a resident of the Brookeville area, I thank you for this opportunity to comment on the proposed Brookeville bypass. While I do not live within the incorporated boundaries of the town, I do live in a location (Brookeville Road) that could be quite severely impacted by the decision made. For that reason, I am writing to express my strong request for you to examine closely the effects on Brookeville Road should you cboose any of the choices that include a roundabout that would give further access to Brookeville Road. Any form of greater access to Brookeville Road will increase the amount of traffic with serious consequences attached.

Brookeville Road is a rural, country road that is currently accommodating far too many cars on a daily basis than the road can logistically handle. The physical characteristics of the roadway make the overuse more significant. The road has no markings or lines delineating either the centerline or the edge of the road. This is a crucial note as the road does not have shoulders or readily available open areas that would permit motorists to pull off the road. Although the posted speed limit ranges from 30 miles/hour to 35 miles/hour, the speed limit is never followed or enforced. [This is not a pejorative comment on our law enforcement officers, but simply a fact.] Large farm equipment moving quite slowly use Brookeville Road on a daily basis – as do bikers, joggers, and horseback riders. Vehicular traffic has to coexist with much slower traffic, and that doesn't always end up with a peaceful coexistence. With the topography of the road as it is and with no shoulders, increasing the number of faster moving cars on the road will, undoubtedly, increase the odds of serious injuries and accidents exponentially.

An increase in the amount of traffic on Brookeville Road will also increase the number of wildlife/auto accidents. Brookeville Road is lined with wooded areas and

small stretches of open areas that would permit perfect causeways for wildlife to use to cross the street. The woods are heavily populated with deer, fox, and other wildlife. Due to the fact that there is little to no area that drivers can use to avoid collision with wildlife, the number of fatal accidents involving human/wildlife collisions will most certainly rise. This could place a heavy toll on safety for both humans and wildlife.

From an economic side, an increase in traffic on Brookeville Road could severely damage the property value of those homes that front the road. The increase could also affect the use of the properties, as safety on the road becomes a real concern. For instance, how does an individual transport his large equipment to another non-adjoining piece of his property? Is it prudent to keep horses or livestock next to a busy cut-through road? Is it safe to mow your own property that abuts the road when a large number of cars are whizzing by?

A review of the alternatives listed, apart from the no-action alternative, outline two alternatives that would not automatically increase the traffic on Brookeville Road while still accomplishing the goal to relieve the town of Brookeville from the North-South congestion problem. While Alternative 5 would be readily acceptable, the cost and displacement factors probably make that Alternative untenable. Alternative 8B, on the other hand, would satisfy the objectives of the residents of Brookeville Road. The selection of Alternative 8B would, therefore, satisfy both groups of residents living in the area.

From a personal view, we moved to Brookeville Road because of its rural nature and its slow pace. In the approximately seven years that we have lived here, we have witnessed an incredible growth in the amount of traffic on the road. To pick an alternative that would add to that growth would destroy the rural nature of this area. For the residents along Brookeville Road, our quality of life would be dramatically and seriously degraded. Our illusion of safety when we drive on the road on which we live would be destroyed. I can only urge you to consider all the alternatives and their effect on the surrounding area closely and to reject any alternative that would create a roundabout with access to Brookeville Road. Flease don't destroy the reason why most of us moved here in the first place.

Once again, I thank you for the opportunity to comment. Please feel free to contact me should you have any questions.

Sincerely, Patticia K Rall Patricia R. Lane

cc: Representative Connie Morella

Response to Commenter #3



Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 28, 2001

Ms. Patricia Lane 4400 Brookeville Road Brookeville MD 20833

Dear Ms. Lane:



VI-A-17

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 8B has been. Your concerns regarding the congestion on Brookeville Road have been note and for this project, roundabouts are included as a method to calm traffic flow by lowering the speed limit to 15 miles per hour at the roundabouts.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Canneletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sba.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By Melissa Kosenak Project Engineer **Project Planning Division**

cc: Ms. Carmeletta T. Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

My telephone number is _____

Maryland Relay Service for Impairod Hearing or Speech 1-800-735-2258 Statowide Toll Free Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717 Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Supplemental Response: Please refer to Speaker Response 22.

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STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> Location/Design Public Hearing Wednesday, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

	NAME NICHOLAS MORIARTY	DATE 10/6/0/
LEASE	ADDRESS 19213 WILLOW GROVE	ROAD
PRINT	CITY OLNEY STATE MO	ZIP

I/We wish to comment or inquire about the following aspects of this project:

lowens comment

- 1) <u>Af large trucks are a problem attey appen</u> <u>to be, A. would, suggest not allowing them</u> <u>to go thru. Brochweller, repardless of which</u> <u>optimiles closen</u>. <u>Although the focus of the meeting was MP</u> 97

for Montgomery County and the State, and the should be consider in my decession ... you are writhe best position to evaluate the larger

Please edd my/our neme(s) to the Malling List.

D Pleese datete my/our name(s) from the Mailing List

Persons who heve received e copy of this brochure through the mell are alreedy on the project mailing list.

October 3, 2001 Location/Design Public Hearing

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SHA

Maryland Department of Transportation State Highway Administration Parris N, Glandening Governor John D, Porcari Secretary Parker F, Williams Acministrator

November 5, 2001

Olney MD 20832 Dear Mr. Moriarty;

Mr. Nicholas Moriarty 19213 Willow Grove Road

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your comments supporting a truck ban through Brookeville as well as evaluating MD 97 as a part of the overall Montgomery County road system have been onced.

Response to Commenter #4

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-5026 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

B Melissa Kosenak

Project Engineer Project Planning Division

cc: Ms. Carmeletta Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

> My telephone number ie ______ Maryland Relay Service for impaired Hearing or Speech 1-800-735-2258 Stalowidd Toll Free Mailing Address: P.O. Box 717 • Baitimore, Mo 21203-0717 Sireet Address: 707 North Calvert Sireet • Baitimore, Maryland 21202

Supplemental Response: The SHA has decided to remove the existing MD 97 bridge over Reddy Branch. This, in conjunction with future access into Brookeville from the west being limited to the two proposed roundabouts, will likely deter truck traffic with the exception of local deliveries. In addition, completion of the Bordley Drive to MD 97 will provide an east-west connection for trucks needing to access the expanding residential development in the area.

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Commenter #5

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. M0746B11

> Location/Design Public Hearing Wednesdey, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

KOLING WASH DATE OC1. 3, 200 1 NAME ADDRESS 3415 Brockeville RP PLEASE PRINT CITY BROKEVILLE STATE MD ZIP 2083 FARM on Come of Broshewille Ed & Ecençin Ave. i/We wish to comment or inquire ebout the following aspects of this project: Johnwood New

Pleese add my/our name(s) to the Mailing List.

D Please delete my/our neme(s) from the Mailing List

* Persons who heve received a copy of this brochure through the mell are already on the project mailing list.

October 3, 2001 Location/Design Public Hearing

Response to Commenter #5



1

Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

October 25, 2001

Ms. Caroline Nash 3415 Brookeville Road Brookeville MD 20833

Dear Ms. Nash:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. As per your request, your name has been added to the project mailing list.

The SHA has reduced the impacts to the Nash property active agricultural land with the development of Alternate 7, Alternate 8A and Alternate 8B, over the previous Alternates 3 and Alternate 4 Modified. The SHA is committed to minimizing the environmental, cultural, and social resources impacted along the western alternates.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: <u>Melissa Kosenak</u> Melissa Kosenak Project Engineer Project Planning Division

My telephone number is

Maryland Relay Service for Impeired Hearing or Speech 1-800-735-2258 Statewids Toll Free Mailing Address: P.O. Box 717 • Baitimore, MD 21203-0717

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Comments of John O'Loughlin on DEIS for Brookeville Bypass

2

20521 Riggs Hill Way Brookeville, Maryland 20833 October 25, 2001

Vla Facsimile, E-Mall, and U.S. Mail

Ms. Carmeletta Harris Project Manager Maryland State Highway Administration Mailstop C-301 707 North Calvert Street Baltimore, MD 21202

Re: Brookcville Bypass Draft Environmental Impact Statement

Dear Ms. Harris:

I am submitting this letter in response to your invitation to comment on the Draft Environmental Impact Statement (DEIS) for the Maryland Route 97 Brookeville Bypass Transportation Study and the Location/Design Public Hearing. For the record, I have lived in Montgomery County most of my life and arn now a resident of the Brookeville Farms subdivision northeast of the Town of Brookeville. Although I arn the past President of the Brookeville Farms Homeowners Association, Inc., these comments are submitted on behalf of me and my family and do not necessarily reflect the views of the HOA or my neighbors.

As an initial statement, I believe that the record amply demonstrates that there is a need for a bypass to meet the stated objectives: to improve traffic operations and safety on MD 97 and reduce increasing traffic in the Town of Brookeville. Therefore, the "nobuild alternate" should not be selected. This notwithstanding, for reasons set forth more fully below, I continue to oppose the eastern alternate (Alternate 5C) as well as any western alternate that incorporates a connection of MD 97 with Brookeville Road (*i.e.*, Alternate 7 and Alternate 8A).

Clearly there is a need to build a bypass. The traffic problem is almost 50 years in the making and has grown exponentially in the last decade. The path MD 97 takes though Brookeville is woolly inadequate because the Town predates the invention of the automobile, and the Town's 18th Century planners certainly never contemplated the need to accommodate early 21st Century commuter traffic. But, in attempting to address the need to improve traffic flow and remove the onslaught of north-south traffic from the Town, we should do so in a way that does not attract additional traffic to the surrounding neighborhoods. More particularly, in solving the Town's traffic problem, we should not foist the traffic off on other communities and should not create conditions that invite more east-west commuters through the area. To that end, the proposed traffic calming measures at the north and south end of each bypass alternate appear to be a good idea. Physical limitations on the road's capacity and speed are essential in preventing or limiting future deterioration of the area from increased traffic because administrative or institutional controls have proven to be worthless. Indeed, Montgomery County's promise to restrict future growth north of the Town is an empty pledge. In the short time since then-Council President Leggell replied to Governor Glendening's letter outlining the Smart Growth conditions under which the project planning could continue,¹ the Planning Commission has granted final approval to nearly 100 new single-family lots in the vicinity of Sunshine, just a few miles north of the proposed Bypass. I am not saying that the density of the approved development is not in conformity with the existing zoning, and certainly those landowners are within their rights to develop the land (just as we did so before them). Rather, my point is that any road projects must include physical characteristics that restrain the number and speed of cars because we cannot rely on the assurances of politicians or on speed limit enforcement by police, who simply do not have the resources to regulate the speed.

The Governor's letter also contained an important condition limiting the circumstances under which planning for the Bypass could continue. The Governor imposed, and the County accepted, the following restriction:

Permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure no future access, widening or connection to the bypass is possible.

In my view, two of the western alternates (Alternate 7 and 8A) should be removed from further consideration. These two alternates do not conform to the requirement in Governor Glendening's letter that there be no connection to the Bypass because they connect with Brookeville Road. None of the preliminary designs for the Bypass showed any kind of intersection with Brookeville Road even though they showed some detail for how the Bypass would connect at the north and south ends. All of the preliminary designs – including all of those presented to Gov. Glendening and President Leggett – included an overpass at Brookeville Road rather than an intersection or roundabout. The first introduction of roundabouts was in 2000, more than a year <u>after</u> the Governor's letter. Thus, there is ho evidence in the record that the written agreement between those two elected officials contemplated any connection with Brookeville Road. Indeed, the passage quoted above makes no mention of a connection with Brookeville Road. If our elected officials had intended to exclude an intersection with Brookeville Road from the

¹ Letter from The Honorable Parris N. Glendening to The Honorable Isiah Leggett, March 5, 1999. President Leggett accepted the Governor's conditions in a reply letter dated March 9, 1999.

Comments of John O'Loughlin on DEIS for Brookeville Bypass

above restriction, they could have done so. They did not. Accordingly, any bypass that incorporates an intersection or roundabout with Brookeville Road fails to satisfy the condition and either (1) Montgomery County must pay for 100% of the cost of the Bypass or (2) the Bypass must not be built. Thus, Alternates 7 and 8A should receive n further consideration.

It has been suggested that the connection with Brookeville Road may not violate the Smart Growth conditions because it does not create a new connection since MD 97 currently connects with Brookeville Road. This flawed assertion overlooks two important points. First, once Bordly Drive and the Bypass are completed, there will be two ways to get from Brighton Dam Road to Brookeville. Road, thus effectively doublin the east-west road capacity through and around Brookeville. Second, the combination (Bordly Drive and the Bypass with a roundabout will make the east-west commute mucl easier than it is currently, thus attracting new commuters who may have been previousl deterred by the western end of Brighton Dam Road and the bottlenecks in the Town of Brookcville, as well as allowing all drivers to go faster. Therefore, it is simply not possible to state in good faith that a connection with Brookeville Road is consistent wit the Smart Growth conditions.

In addition to my opposition to Alternates 7 and 8A on the principles outlined above, I oppose any bypass that includes an intersection with Brookeville Road becauss of the real and present danger that such an intersection or roundabout could result in increased east-west traffic though our area. The Brookeville Bypass is supposed to address the north-south traffic on MD 97. It should not create an east-west traffic problem on other roads.

I also oppose Alternate 5C for obvious reasons. The most important of these ar (a) the taking of property and displacement of five of our neighbors, (b) the destruction the Brookeville Farms neighborhood, and (c) the enormous cost.

Below I address my specific concerns with the various alternatives and identify selected reasons where the DEIS is inadequate.

A. Alternate 5C - the eastern bypass

The eastern alternate, Alternate 5C, is so ridiculous that it warrants only a brief discussion. The configuration requires much more land, many bridges, and nearly tripl the cost. Moreover, Alternate 5C would require the displacement of five families in th Sunnymead subdivision, directly impact several properties in Brookeville Farms, and have an indirect impact on many other homes and families in Brookeville Farms.

As a taxpayer, I am appalled that this expensive alternate remains under consideration. The idea of a north-south bypass for Brookeville has been kicked aroun for nearly 30 ycars. Yet, neither the State nor the County made any effort to preserve t Comments of John O'Loughlin on DEIS for Brookeville Bypass

nght of way for the eastern alternative. All of the houses directly affected are less than 10 years old, some are only 2 years old, and one is actually under construction this very day. Even if the directly impacted families are fully compensated for their financial losses (at taxpayer expense), those of us remaining will have to live with the physical, aesthetic, and economic destruction of our neighborhood with no compensation whatsoever. Indeed, the DEIS indicates that even the homes immediately abutting the eastern right of way will not qualify for sound barriers according to the State's criteria because sound abatement is too expensive on a per-house basis.

The eastern alternate exemplifies how bankrupt the entire process for designing and building roads has become in this area. Just a few years ago we had over 300 acres of undeveloped land in what is now Brookeville Farms that could have easily accommodated both Bordly Drive and the Bypass while still allowing harmonious residential use. A large portion of Brookeville Farms was open field in the shadow of the PEPCO transmission lines and would have been perfectly suited for use as a right of way for both roads. Now, just like what was done with Bordly Drive, <u>after</u> the lots are laid out and houses are built, the State is trying to squeeze a highway in between our houses.

The proposed right of way for Alternate SC cuts right though a substantial forest conservation easement on land owned by the 64 homeowners in Brookeville Farms. This land was expressly set aside during devclopment, consistent with Maryland's forest conservation law, because of its value as a nature preserve supporting wildlife and the environment. As a consequence, the lots in Brookeville Farms were clustered in such a way as to minimize the clearing of existing forest. In addition, the developer was required to plant additional trees to compensate for any forest that was removed. All of the cost of this was passed on to the 64 families in Brookeville Farms. Now, the State is proposing to clear not only some of the newly planted trees, but also a substantial parcel of older forest that had been expressly protected. Thus, not only will the eastern alternate slice right through the heart of our neighborhood with an elevated highway, but it will ruin one of the significant natural features which drew many of us to the neighborhood. This is simply not the right way to perform land use and road planning. Notably, the right of way for the three western alternates is publicly owned and has been designated for future highway use for many years.

There are numerous examples of flaws in the DEIS with respect to Alternate 5C. Because I have been assured by so many officials and consultants that there is no reasonable expectation 5C will be built, I simply note the following in order to preserve the right to challenge the Final EIS in the future.

> The DEIS acknowledges that 5C would cause a "substantial increase" of 10dBA or more for several homes in Brookeville Farms. (DEIS p.IV-32.) Yet, sound abatement is presumptively too expensive on a per-house basis according to State criteria. (pp. IV-37 - 39.) For the western alternates, sound impact to residents of Dubarry, Rena, and Islander is one of the

Comments of John O'Loughlin on DEIS for Brookeville Bypass

Comments of John O'Loughlin on DEIS for Brookeville Bypass

reasons some people prefer the lower rights of way (Alternates 7 and 8 because they believe the grade-separated road (Alternate 8B) will have more of a noise impact on their neighborhood. This results in the inequitable situation where noise is used as a criteria for selecting betw the western alternates but is predetermined to not be a significant facto with respect to making accommodations for the western alternate.

- The DEIS pays brief attention to the Pleasant Hill Plantation ruins and cemetery. The cemetery is located approximately 33 feet from the edg the right of way, yet the DEIS recommends only that it be fenced durin construction and monitored (whatever that means). Not only will the eastern alternate make the cemetery effectively inaccessible to pedestri because of safety concerns, it will undoubtedly cause further deteriorat of the graves from vibration and pollution. Members of one of Maryland's prominent families are buried there. The DEIS simply provides inadequate consideration of the impact to this historic site.
- Figure IV-6 does not reflect the substantial forest conservation area wi Brookeville Farms that is protected by an easement and the rest of the document ignores that the right of way for the eastern right of way trav through this privately funded forest conservation area.
- B. Alternates 7 and 8A

1. The Connection With Brookeville Ruad Violates Smart Growth

Two of the western alternates, Alternates 7 and 8A, do not conform to the requirement in Governor Glendening's letter that there be no connection to the Bypas because they connect with Brookeville Road. Therefore, these alternates should be removed from further consideration. The roundabouts Brookeville Road are a terrible idea for several reasons. A roundabout at Brookeville Road will make it much easier easi-west traffic to come though this part of the County. Currently, residents of Clarksville and Columbia who work in Gaithersburg have to negotiate the windy port of Brighton Dam Road, deal with the 2-way stop in Brookeville, and then try to turn 1 outo Brookeville Road in the face of the onslaught of southbound cars on MD 97. Ex though the current use is too much, this configuration has served as a significant dete: to even more cars using this route and has somewhat limited the speed of those who c use it. The combination of Bordly Drive and the roundabout at Brookeville Road will eliminate all three of these obstacles and make tibs a seamless way for Howard Coun commuters to reach Gaithersburg and Interstate 270 via Brookeville Road, Muncaster Road, and Shady Grove Road.

This is bad not just for the families on Bordly Drive, this is bad for everyone i the area. The addition of better roads and the elimination of bottlenecks will increase overall east-west traffic in the area, which is bad for the Brookeville Road residents a well as the Brookeville Town residents when the commuters start trying to find shortcuts and cut-throughs to shave off the precious 5 minutes from their commute whenever there is a traffic jam or accident.

In addition, it is just a matter of time before the State or County starts improving the connection between Brookeville Road and Muncaster Road, and then the connection between Muncaster Road and Shady Grove Road. Once that is done, commuters will have a de facto parkway connecting Columbia to Gaithersburg cutting right through Northeast Montgoniery County and all of our neigbborhoods. That is clearly in none of our interest.

The DEIS is entirely inadequate with respect to Alternates 7 and 8A because the study area was deliberately limited to the immediate vicinity of Brookeville and expressly ignored environmental impacts to points east and west of Town, such as Clarksville and Zion. The study did not analyze secondary or cumulative impacts associated with Howard County based on an assumption that zoning in western Howard County will "not accommodate large-scale residential development." Evidently the author of that portion of the DEIS has not been to Clarksville in the last 10 years. The pace and density of development in and around Clarksville far outpaces that in northeast Montgomery County. Furthermore, the report acknowledges that MD Route 32 is planned for improvement north of Route 108, yet makes no assessment for potential population growth northeast of the study area. As described below, the Maryland Department of Transportation's (MDOT's) own statistics show that the rapid increase in residential developmert Y County. Yet, inexplicably, the DEIS ignores this evidence.

2. The DEIS for Alternates 7 and 8A is Deficient

A sample of the deficiencies in the DEIS with respect to Alternates 7 and 8A arc provided below:

Environmental Justice. The DEIS (p.IV-2) asserts that there is no unfair impact imposed by the right of way on concentrations of minority or historically disadvantaged populations. Because the study was limited exclusively to the right of way and the immediate vicinity of the Town of Brookeville, it gave no consideration to the impact of the Bypass on Zion. Zion is a small community just west of Brookeville at the intersection of Brookeville Road and Zion Road. Zion was founded by freed slaves and to this day is populated by their descendents. Any version of the Bypass that includes access to Brookeville Road must include an assessment of the impact to Zion inflicted by increased east-west traffic on Brookeville Road.

8

Commenter #6

Comments of John O'Loughlin on DEIS for Brookeville Bypass

7

 The DEIS does not even mention Oakley Cabin, a historic site associated with the Underground Railroad located on Brookeville Road just cast of the Town of Brookeville. Any version of the Bypass that includes access to Brookeville Road must include an assessment of the impact to Oakley Cabin inflicted by increased east-west traffic on Brookeville Road.

- The DEIS does not discuss the designation by Montgomery County of Brookeville Road as a Rural Rustic Road or of the Brighton Dam Road as Interim Rural Rustic Road. Any version of the Bypass that includes access to Brookeville Road must include an assessment of the impact inflicted by increased east-west traffic on Brookeville Road and Brighton Dam Road. Moreover, the assessment should include an evaluation of how an at-grade roundabout could be constructed in a manner consistent with the Rural Rustic Road designation.
- The DEIS states (p.IV-27) that the air quality analysis assumed an ambient temperature of 20°F and a composite 8-hour average of 35°F. Given that these figures do not represent reality anywhere in the mid-Atlantic United States, the report should include an explanation for why these defaults were used so that mere laypersons can understand the analysis.
- The DEIS reflects an air quality analysis conducted only on or near Rt. 97. The study did not analyze any receptors east of 200 Market Street or at any point west of town on Brookeville Road, including the village of Zion. Any version of the Bypass that includes access to Brookeville Road must include an assessment of the air quality impact to Zion and other points east and west of Brookeville.
- The DEIS asserts that there will be no appreciable population increase in zones 593 or 584, northeast and west of Brookeville. For the two zones, the DEIS states that there are fewer than 1000 homes with no appreciable increase from 1990 to 2020. Yet, the recent development of the Abrams, Dennit, Reitman, Childs properties alone have created nearly 200 new home sites between the late 1990s and 2004 or 2005. The DEIS should explain why it is reasonable to conclude that there will be no appreciable increase over 30 years when in just the past 6 or 7 there has been nearly a 10% increase in the number of new homes.

3. The DEIS Fails to Analyze East-West Traffic Impacts

The fatal flaw in the DEIS with respect to Alternates 7 and 8A is that it does not analyze east-west traffic at all. In fact, it almost appears as though the analysis was conducted prior to the time when the roundabouts at Brookeville Road were first concocted. For example, the DEIS states that the Bypass is "not anticipated to encourage Comments of John O'Loughlin on DEIS for Brookeville Bypass

secondary and cumulative development because the proposed roadway will limit access to two locations north and south of Brookeville." (DEIS p.IV-50, emphasis added.) The DEIS goes on to assert that secondary impacts are not expected to occur and that there are only minor cumulative effects within the study area. According to the DEIS, the basis for this conclusion is the stated project purpose and need (i.e., improving MD 97 though the Town) and "SHA's commitment to limited access." (DEIS pp. IV-73-74.) In specific reference to the condition of no connection placed on the project by the Governor, the DEIS states as follows:

> SHA's commitment to the four conditions... place unprecedented restrictions on future "loosening" of the project's initial purpose and need. Should a build alternate be selected, the placement of permanent casements along its alignment closes any future attempt to provide controlled access, widening or other connections to it. In addition, any capacity that the build alternate might add to the network cannot be used to allow development outside the boundaries of the Town of Brookeville. These conditions are an effort to successfully comply with Smart Growth requirements and at the same time meet the viable traffic concerns with existing MD 97 through the Historic Town of Brookeville.

(DEIS p. IV-74.) It is clear that the traffic analysis and assessment of indirect environmental impacts simply did not consider the effect of east-east traffic posed by a connection between the Bypass and Brookeville Road. Therefore, not only would Alternates 7 and 8A fail to satisfy the condition of no connection established by the Governor and agreed to by the County Council, the DEIS itself fails to comply with the requirement that it analyze all environmental impacts of the project because it consciously omits an analysis of east-west traffic caused hy a connection with Brookeville Road.

The East-West Traffic Impact Will Be Substantial

Having established above that the DEIS failed to address impacts caused by eastwest traffic, it will not be adequate for the State to simply assert that those impacts will be minimal. Our investigation of the east-west traffic patterns during the dehate about Bordly Drive demonstrated that the problem is real and growing, irrespective of the County's ambivalence. The traffic problem in the area has been growing exponentially and the addition of Bordly Drive will invite more commuter traffic. The following analysis is based on traffic counts obtained from Montgontery County's Department of Public Works and Transportation (DPWT) and MDOT.

Comments of John O'Loughlin on DEIS for Brookeville Bypass

- In 1972, the daily (7am-7pm) traffic on Brighton Dam Road west of Route 650 (New Hampshire Avenue) was 257 cars. Of that, 96 cars (37%) carne from or went to points east of Route 650. Since there are relatively few homes between Route 650 and the Howard County border at the Brighton Dam, it is reasonable to conclude that the vast majority of these cars come from Clarksville, Columbia, and other locations in Howard County.
- By 1986, the number of cars on Brighton Dam Road west of Route 650 had
 risen to 359 cars a day, an approximately 40% increase over 14 years. Of tha
 total, 189 cars went to or from Howard County. The Howard County traffic a
 that point represented 53% of the total traffic. More importantly, almost all
 of the increase in traffic on Brighton Dam Road was attributable to Howard
 County. The Brighton Dam total rose from 257 to 359, or 102 additional cars
 the Howard share rose from 96 to 189, or 93 additional cars.
- The 1996 figures reflect the explosion in development in Clarkesville and Columbia, coupled with the growth in jobs in Gaithersburg, Rockville, and Germantown. By 1996, traffic on Brighton Dam Road west of Route 650 hac increased to 1592 cars - a <u>350% increase</u> in 10 years. Of that total, 1196 car were from Howard County. That number is 75% of all east-west traffic on Brighton Dam Road west of Route 650.
- 1196 of the cars in the 1996 study were going to or from Howard County. That number is 75% of all east-west traffic on Brighton Dam Road west of Route 650. Moreover, a rush-hour study conducted on May 30, 1996, shower that from 7am to 9am, 218 cars were headed westbound on Brighton Dam Road west of Route 650 while 107 were headed eastbound. During the 4pm to 6pm period, the numbers were reversed, with 174 cars headed eastbound Brighton Dam Road and 74 headed westbound. These numbers show that by a 2 to 1 ratio, cars travel west in the morning and east in the evening, supporting our conclusion that the bulk of the traffic is caused by people who live in Howard County and work somewhere in Montgomery County.

In the debate about Bordly Drive, DPWT mischaracterized the traffic counts. Th County estimated traffic on Bordly Drive at approximately 2,500 cars per day in 2020.² The estimate is not worthy of serious consideration. The estimate of 2,500 cars per day for the year 2020 reflects only a 57% increase from the 1996 estimate of 1,592 cars. Thi increase is inconsistent with the empirical evidence showing a 350% increase in the 10 years from 1986 to 1996. (Please see Table 1, below.) How can traffic increase 350% in 10 years but be expected to increase by only 57% in the next 24 years <u>after</u> the road is improved? Comments of John O'Loughlin on DEIS for Brookeville Bypass

Table 1 - DPWT-MDOT Traffic Counts Brighton Dam Road Bordly Drive³

Year	Cars	Percent Increase
1972	.257	N/A
1986	359	40%
1996	1,592	350%
2020 estimated Bordly	2,500	57%

Moreover, the estimate does not appear to factor in the amount of additional traffic that will be attracted to this corridor once the improved road becomes well known. Worse still, it does not even acknowledge the potential impact of the substantial development already approved by the County for the area east of New Hampshire Ave. north of Brighton Dam (the Dennit Property of approximately 92 homes). The attraction of Bordly as a commuter route will only be exacerbated by a connection between the Bypass and Brookeville Road and the continued substantial development in the Clarksville-Columbia area.

The record demonstrates that the Town of Brookeville has dedicated itself to removing all traffic, both north-south and east-west, from its roads. Although I sympathize with their predicament, their "at-all-costs" approach is neither admirable nor fair. As it stands, any version of the Bypass will eliminate approximately 85% of the Town's traffic burden. With any of the three western alternates, the traffic is moved not to another neighborhood but to a parkland that has been set aside for that purpose. In contrast, the eastern alternate would simply move the traffic from their neighborhood into ours. Moreover, when Bordly Drive is completed, regardless of which Bypass alternate is sclected, Brookeville Farms will absorb via Bordly Drive most of the current east-west traffic. That is not good enough for the Town, however. They want the Bypass to connect to Brookeville Road to ensure that practically every east-west traveler opts to use Bordly and the Bypass to connect with Brookeville Road so that they avoid the Town entirely. By complying with their demands, the State and County will simply plant the seeds for this exact same problem to fester in Brookeville Farms. If the goal of the State is to improve east-west traffic, especially in the absence of an Intercounty Connector. then the State should properly plan to use nights of way that do not have homes on them (i.e., not Bordly Drive). Do not exploit the Bypass as an opportunity to slip in a critical

² Fiscal Year 1999 Capital Improvements Program Budget Request, Bordly Drive Extended – No. 509941, Jan. 10, 1998.

³ Figures are for Brighton Dam Road west of Route 650, New Hampshire Avenue, and are taken from Maryland State Highway Administration and Montgomery County Department of Public Works reports dated 3/15/72; 1/30/86; 5/30/96; and 10/2/96 (attached as Exhibit K). The 2020 estimate is for Bordly Drive and was provided by DPWT at the February 1998 public hearing. The 2,500 number also appears in the CIP budget request, but that document does not show that the estimate is for the year 2020.

12

Commenter #6

Comments of John O'Loughlin on DEIS for Brookeville Bypass

11

east-west link in the transportation network without proper analysis, public notice, and opportunity for comment.⁴

C. Alternate 8B

For all of the foregoing reasons, it appears that only Alternative 8B both conforms to the Smart Growth prerequisites and minimizes the likelihood of inviting a significant increase in east-west traffic. Alternate 8B is not without its faults. Most notably, the residents of Dubarry, Rena, and Islander are quite understandably concerned with the noise coming from an elevated bypass, which the bridge over Brookeville Road would require. From what I have been told, part of the reason the road is proposed to slope the way it does is to maintain a 50 mph design speed. What possible sense could it make to build a road segment less than one mile long with traffic calming measures at both ends yet with a design of 50 mph? Instead, Option 8B should have as low a grade as possible as it passes near the Dubarry and Rena residences and incline only as needed to accommodate the Brookeville Road overpass. As with the traffic circles, limiting the design speed is the type of physical constraint that is the only way to ensure that the Bypass retains a nodest speed and is not allowed in the future to deviate from the Smart Growth conditions placed on the project.

D. Conclusion

In cooclusion, ooly option 8B meets all of the Smart Growth criteria while being cost-effective, minimizing detrimental impacts, and not inviting additional east-west traffic. Alternate 8B should be modified to a lower grade and lower design speed, and all possible measures to minimize the noise and visual impact on the surrounding properties should be incorporated in the design and construction.

Supplemental Response: Please refer to Speaker Response #16.

I appreciate the opportunity to comment on the proposal and the DEIS. I am available during the day at 202-682-7050 if you would like to discuss any aspect of my comments.

Comments of John O'Loughlin on DEIS for Brookeville Bypass

Respectfully submitted,

John B. O'Loughlin, Jr.

⁴ I also note for the record that the State has made no effort to reach out to Zion or to the Brookeville Farms HOA. During my tenure as President, my repeated requests to be added to the mailing list and working group went ignored, and I was only invited to one working group session after making a fuss. To this day, the HOA is not listed in any of the State's records as a stakeholder.

Response to Commenter #6

SHA

Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 30, 2001

Mr. John B. O'Loughlin, Jr. 20521 Riggs Hill Way Brookeville MD 20833

Dear Mr. O'Loughlin:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 8B and your opposition to the No-Build Alternate and Alternates 5C, 7 and 8A have been noted.

In order for the MD 97 Brookeville Transportation Project to continue to proceed after the Smart Growth and Neighborhood legislation, this project study needs to address the Smart Growth criteria developed by the Governor's office. The at-grade or grade-separated connection at Brookeville Road is still being evaluated along with each of the alternatives. For this project, roundabouts are designed into the alternatives as a method to calm traffic and limit traffic growth. Also, Alternate 7 and Alternate 8B were developed to not create any new access to Brookeville Road

The No-Build Alternate, Alternate 7, Alternate 8A, Alternate 8B and Alternate 5C are all considered feasible alternates under the National Environmental Protection Agency (NEPA) laws, which require any transportation projects receiving federal funding to investigate all reasonable alternates that avoid or minimize impacts to environmental, natural and social economic resources (i.e., historic districts, parks, streams, woodland, endangered species environmental justice, etc...)

Your concerns regarding Smart Growth, Environmental Justice, and traffic will be addressed in the Final Environmental Impact Statement (FEIS).

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, continued coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

My telephone number is _____

Marytand Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Saltimore, MD 21203-0717 Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 Mr. John B. O'Loughlin, Jr. Page Two

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

Melissa Kosena Project Engioeer **Project Planning Division**

cc: Ms. Carmeletta T. Harris, Project Manager, State Highway Administration Ms. Shannon Rousey, Eovironmental Manager, State Highway Administration

Supplemental Response: Please refer to Response 16 to Mr. O'Loughlin presented previously in this section.

Response to Commenter #7

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. M0746B11

> Location/Design Public Hearing Wednesdey, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

 NAME
 PAM
 SACHS

 PLEASE
 ADDRESS
 20300
 LUBAR

 PRINT
 CITY
 BROOKSVILLE
 STATE

My family and I are adamantly opposed to the East Bypass, Alternate 5C.

Prior to purchasing our home in Brookeville Farms, we did our homework and visited the Parks and Planning Office. The words they used to describe our backyard were "conservation zone," "reforestation zone," and "wetland." We happily signed the papers.

As a Brookeville Farms resident, I am deeply saddened by the possibility of losing the very quality of life we moved to Brookeville for in the first place, specifically a private wooded lot with minimal traffic noise.

As a taxpayer, I would ask the State Highway Administration to dismiss the \$34MM, 2+ mile 5C Alternative that demands the relocation of 5 new residences and 1 new business. Of course, we will need to add a couple dozen or so residential displacements to that list, including my own. My neighbors and my family would move from Brookeville rather than come home every night to a 2-lane shouldered bypass straddling our property lines.

We moved from Mootgomery Village to Brookeville Farms last year in part to escape the sirens, motorcycles and constant traffic. We moved to Brookeville Farms so that our 7year old son could play in our backyard unthreatened by speeding cars. We love our new Brookeville neighborhood and siocerely hope that its peace and integrity will be maintained and preserved.

Thank you for your consideration.

October 3, 2001 Location/Design Public Hearing

Please add my/our name(s) to the Mailing List.

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* Persons who have received a copy of this brochure through the mell ere alreedy on the project melling list.



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Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 14, 2001

Mr. Adam Sachs 20300 Lubar Way Brookeville MD 20833

Dear Mr. Sachs:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your opposition to Alternate 5C as well as your concerns about the conservation areas have been noted.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also considered in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engincering

Melissa Kosenak

Project Engineer Project Planning Division

cc: Ms. Carmeletta Harris, Project Manager, State Highway Administration Ms. Shannon Rousey, Environmental Manager, State Highway Administration

My telephone number is

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free Mailing Address: P.O. Box 717 • Baltimore, MO 21203-0717 Street Address: 707 North Calvert Street • Baltimore, Meryland 21202

Supplemental Response: Please refer to Response 10 to Speaker 10 presented previously in this section.

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Final

Environmental Impact Statement
Response to Commenter #8

October 8, 2001

Maryland Department of Transportation State Highway Administration Office of Planning and Preliminary Engineering Mail Stop C-301 Box 717 Baltimore, Md. 21203-0717

Regarding: Md. 97 Brookeville Transportation Project Project No. M0746B11

Dear Sirs:

I wish to add the following comments to those which were given by others on October 3, 2001.

As Chairman of the Longwood Advisory Committee I have , in the past, given much oral and written testimony concerning the critical need to preserve the Longwood Recreation Center as a full-service facility to serve generations to come (in the greater Olney/Brookeville area). There was never a questi as to the need of a By-Pass. The Longwood Advisory Committee has always concurred with the need for the Brookeville By-Pass it just had trouble with past proposed locations.

I would like to add my support to "proposed Alternate 7". This route appears to meet most of the needs that have been raised over the many years this project has been under discussion.

I would like to add two more very important justification to build the By-Pass and to build it so that it does not eliminate any part of the Longwood Recreation Center property:

1. In the event of a national emergency requiring the evacuation of the Olney area or necessitating the trucking of water, food, supplies, etc. into the Olney area, Route 97 is the only major north/south corridor in which to accomplish suc actions.

2. In the event of a terrorist action in the Olney are it would be imperative to have all of the land area of the present Longwood Center available for helicopter landings; bus staging area for military equipment; etc.

I hope these comments are of assistance.

Sincerely,

. Innaili

Bén J. Santaiti, Chairman Emeritus Longwood Recreation Center Advisory Committee 3508 Falling Green Road Olney, Md. 20832



Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

October 26, 2001

Mr. Ben J. Santaiti, Chairman Emeritus Longwood Recreational Center Advisory Committee 3508 Falling Green Road Olney MD 20832

Dear Mr. Santaiti:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your comments supporting proposed Alternate 7 have been noted.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

Melissa Kosenak

Project Engineer Project Planning Division

cc: Ms. Carmeletta Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental manager, State Highway Administration

> My lelephone number is ______ Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Beilimore, MD 21203-0717 Street Address: 707 North Calvert Street • Ballimore, Maryland 21202

Supplemental Response: The SHA Selected Alternate 7 Modified would utilize the M-NCPPC's land reserved for transportation use and not impact the Longwood Community Center property.

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Response to Commenter #9

Commenter #9

STATE HIGHWAY ADMINISTRATION **QUESTIONS AND/ OR COMMENTS**

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> .Location/Design Public Hearing Wednesday, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

NAME LEITH SPEIDEN DATE 10-16-01 ADDRESS 19217 MOUNT HIREY PLEASE RO 1,2 PRINT CITY BROOKEVILLE STATE MD ZIP_ 20833 I/We wish to comment or inquire about the following espects of this project: THE RT 108 +0 RT 28 TRAFFIC BETWEEN YERY OL LEADY CON JESTED IT CAN TAKE

To 30 MINUTES DURING RUSH GOING ON RETWEEN RTIDE 244 BEEN Δ TRAFFIC CTUNN FROM NORTHER INCREASED TRAFFIC A HUGE TRAFFIC THERE 1. SAULE BETWEEN RTION TO RT 28 2 I I WOULD THE "NO BUILD NATION UNTIL

THE. RTIOS TO ET28 VIA RT 27 SOLVED THANK YOU FOR YOUR TIME

Please add my/our name(s) to the Mailing List.

Please delete my/our name(s) from the Mailing List

* Persons who have received a copy of this brochure through the mail are already on the project mailing list.



Maryland Department of Transportation State Highway Administration

Parns N. Glendening Governo John D. Porcari Sacretary Parker F. Williams Administrator

November 29, 2001

Mr. Leith Speiden 19217 Mount Airy Road Brookeville MD 20833

Dear Mr. Speiden:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for the No-Build Alternate has been noted. Traffic issues between MD 108 and MD 28 are currently being studied.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, continued coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Melissa Kosenak Project Engineer **Project Planning Division**

Ms. Carmeletta T. Harris, Project Manager, State Highway Administration CC: Ms. Shannon Rousey, Environmental Manager, State Highway Administration

My telephone number is

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Frea

Mailing Addrese: P.O. Box 717 • Baltimors, MO 21203-0717 Street Addrass: 707 North Calvert Street . Baltimors, Maryland 21202

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October 3, 2001 Location/Design Public Hearing

STATE HIGHWAY ADMINISTRATION **QUESTIONS AND/ OR COMMENTS**

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> Location/Design Public Hearing Wednesday, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Oiney MD 20832

PLEASE ADDRESS 4324 Lacdo Hall Orive PRINT CITY Olney STATE MD ZIP 20832
I/We wish to comment or inquire about the following aspects of this project:
I'm not sure if the recommendation process includes (or
how it should include) input from the local residents. In any
<u>case I carefully read the (excellent if i may add) brochure</u>
and as a result of comparing the options thought
that option <u>SB</u> seens a good choice
Some of the smaller "secondary" rouds for cyclists.

Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secratory Parker F. Williams

Administrator

October 25, 2001

Response to Commenter #10

Mr. Gil Tadmor 4324 Leedo Hall Drive Olney MD 20832

Dear Mr. Tadmor:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 8B has been noted and will be considered during our selection of a preferred alternate.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Director Melissa Kosenak Project Engineer Project Planning Division

Ms. Carmeletta Harris, Project Manager, State Highway Administration CCL Mr. Darrell Sacks, Environmental Manager, State Highway Administration

My lelephone number is _

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Please add my/our name(s) to the Malling List.

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October 3, 2001 Location/Design Public Hearing

Supplemental Response: Please refer to Speaker Response #22.

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October 3, 2001

Tastimony at Public Hearing on October 3,2001, before Maryland Stata Highway Administration Reference to: Location/Dasign Study for Brookeville Bypase

Hy name is Clyde W. Unglesbee and I live at 20 Higb Street, Brookavilla. Hsving lived here eince 1948, and having served thirty yeare as a Towm Commissioner for Brookeville, I feel eminently qualified to address the deeparata oeed for a bypass of this gem of a historic town located here on the northern tip of Montgomery County.

The purpose of the study δ this hearing, as printed in the brochure announcing this location/design hearing is well stated, and I quote -- "The purpose of the study is to remova the increasing traffic volumes frum the town - and improve traffic operations δ safaty on existing Maryland 97, and preserve the historic character of the Town."

I beliave a vary important point needs to be made here and now. On Page #2 of SHA's brochure thara is a eaction under "Project History" which etates that in January 1995 e project planning atudy wae initiated. I submit that from a SHA perspective this timing is technically accurate. However, I wish to spend a few minutes in summarizing and expanding the picture of the historical significance on what has brought us even this far. You saa, eimply steted, I am concerned that more recent errivale of some of tha community residante may have a tandency to viaw this as a need that hese recently daveloped in that six years or so. And so I am convinced that there is a need to more fully documant the long struggle end would therefore attempt to take you briefly on a cbrooologicsI journey that bas finally brought us to this evening and this heariny.

I respectfully request that you indulge me now as we put this issue on ra-wind as we briafly look at an early occurace somatime during the "50's. Plaasa believe me, this will be relative as I would like to begin by guoting an excerpt from a letter written by Nr. Richard Kimmel to Doug Duncan, Nontgomery County Executive, bearing a date of April 1999. I guote --

"While driving through the Village of Brookeville, paesiog Salem Methodist Church, the one-room school I ettended, and other historic landmarks, I was

saddened that the highway situation has not been resolved. The planners in the 1950's saw the oeed for a bypass. Road reservations were astablished across the front of the Longwood property I owned at that time. When thay axpired I falt eo strongly that the time was right for alleviating the traffic that was then creating have and hazards io the quaint town of Brookayille, that I donated the ground to the State. Yes, to encourage prompt devalopment of the bypass, the parcel designated for road reservation was transfarred to the State for the eum of \$1.00!"

Now - let us move guickly to 1966. At that time the Olney Chamber of Commerca was in its infancy - just two years old - and as a representative of the Chamber I was personally engaged in assisting in the creation of the very first Olney Nester Plan this in the year 1966 [35 years ego]:

Now faat forward again -- In one of SHA's brochures, June 8, 2000, there is an acknowledgmeot that the approved and adopted Mester Plan for Olney in 1980 does indeed show a proposed location of Maryland Rt. 97 <u>bypassing Brockeville on the West side</u>. As a matter of fact, I have a ootation in my files that in July 2000 I called a Park & Planning reprasentative and got a verbal confirmation of this, plue the fact that the dama information was indeed show on the 1966 Olney Master Plan.

Now I would like to propell you on to another step oo this chronological journey. As a mattar of racord there is on fila a letter directed to Mr. Sieda Caltrider, SHA Administrator, bearlog date of December 15, 1983, and the subject matter was a written - 2 -

request made at that time to SHA by the Brookeville Towm Commissiooars, and I quote a significant excerpt from this official document:

"The Town Commissioners and citizens of the community are extremely concernad that this growth in traffic seriously jeopardizee the safety of residente and motorists alike. Additionally, the traffic is posing a real threat to the hietoric fabric of Bruckeville, a Town lieted on the National Register of Bistoric Places and of importance in the State's as well oa the Nation's history."

I will not belabor tha point of quoting the entire reguest, except to say we asked that funds be identified to plan, devalop and execute euch a new road, while pointing out that the bypass had indeed been incorporated into the Olney Maeter Plan.

Incidentally, in the "Olney Courier-Gazette" dsted December 21,1983, there was a significant articla raferriog to the Town's reguest to SHA for action on a bypags (reported by "Mick Byron" as an aditorial in the Gazatte during that era.) My only reason for this reference is to underecore and emphasize that there has been public knowledge concerning the increasing need for action to deal with some of the traffic problems that have only become more hazardous with each passing yeer of the past couple of decades.

I don't believe that I did mention that Nr. Caltrider did respond somewhat in Fabruary 1984 by statiog that "A Hd. 97 Bypaes of Brookevilla was not on the current elected officials priority list then, and the SHA therefore is not in a position to consider the planning studies requested."

Hoving on a bit -- From this 1983 affort¹ nothing much happened for a few years. But on December 30, 1988, there was a press release made public thet informed the community that the Brookeville Commissioners had made and released e dramatic video tape of the town's traffic conditions, and this tape was made available to the political community from the Governor's office on down, including SNA'e management teem.

Following up these events, the first recorded public forum was brought before the community at large and was convened and cheired by the then President of the Montgomery County Council, Nichaal ("Mike") Gudio. And so it was according to the records that the vary first public community effort was made by convening this assembly in the Brookeville Academy on November 1, 1989. (As I remamber, the attandees wars nearly literally hanging from the proverbial celling).

I appreciate your patience up to this point, and I hope this begins to lift thase various pieces of action up and let the record show that for many years this struggie has been being played out - and remind those who may not be aware that the concero, the study, did not just begin in this community in January 1995.

And my friends, here we are these many years later - some of us having suffered through inumerable meetings, focus groups, town hall meetinge, and all of this input including tha emergence of the Governor's new Smart Growth Policy in 1999 which temporarily derailed any progress that had been made - but now, hopefully we are back on course and on the verge of officially witneasing eome action on this - the location and design phose. This is progreas? My, I certainly hope so, but oo the time line basis I presumably will be over 100 years old and extremely doubtful of ever personally experiancing the exhilaration of actually finding the Brookeville bypaes in use as a reality. Be that as it may, let us get on with correcting this maesive problem for the benefit of succeeding ganarations!

There is one more thought to be raised. In 1994 (during Brockeville's Bicentennial calebration, SHA did conduct a traffic count showing then there were 6,500 vebicles per day

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Response to Commenter #11



3

Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 29, 2001

Mr. Clyde W. Unglesbee 20 High Street Brookeville MD 20833

Dear Mr. Unglesbee:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 7 has been noted, as well as the residents of Brookeville foresight in highlighting the need for a bypass on MD 97 over the years. The SHA will continue to move forward in the planning process to identify a preferred bypass, which will address safety and the concerns of both the motorists and the residents.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, continued coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By:

Mclissa Kosenak Project Engineer Project Planning Division

cc: Ms. Carmeletta T. Harris, Project Manager, State Highway Administration Ms. Shannon Rousey, Environmental Manager, State Highway Administration

My telephone number is _

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statowide Toll Free Mailing Address: P.O. Box 717 · Baltimore, MD 21203-0717 Street Address: 707 North Calvert Street . Baltimore, Maryland 21202

Supplemental Response: Please refer to Response 19 to Speaker 19 presented previously in this section. Currently, there is no funding established for design and construction of the MD 97 Brookeville Project.

3

Final Environmental Impact Statement

passing through town, and now here in this brochure there is a traffic count done in 1995 (i year later) that states the couot theo at θ , 500 per day north of town and 9,000 south of town with a projection presumably basad on the "No Build" option that in year 2020 these sumbers would continue to mushroom to 17,000 north and 18,000 south of town -- pure gridlock -- i.e. death by choking!

-3-

You surely must racognize that even now pedeetrians in Brookavilie and those of us attempting to exit our drivaways or crose tha street find it nearly impocaible to proceed safely, except out of the kindness of some very courteous and understanding motorists who permit us some iimited accees.

I do supposs though that now I must go on record as to which option I consider to be my #1 choica. My wife and I do support Aiternate #7 as being the most likely and appropriate in moving this iseus off daad cooter and into the decisive column. We believe it will provide much of the raifaf so vigorously sought, and aiso is estimated to be among tha least costly of ail optiona. It appaars that Altaroete #7 along with #8A & 8B do not require any reaidectiai or commerciai diaplacemente whereas Alternate #5 requires 5 residentiai and ona commerciai property displacamente - at a projectad cost of thirty-two million plus.

And so with this final effort to close, I would hope and even bag to realize that the diacussions, the studies, and any political or other posturing would all caase - and pleasa - let us mova with "post haeta" - exercise every meane of effort to provide this much maaded raiief to the thousands of daily commutars, as well as this effort to give ue "Brookevilliane" our town back!

Lat me close with this poignant incident, one which I believe rather drematically portrays some peaked measure of frustration that many, many folks are experiencing daily. Just last waek batwaan 5:30 - 6 p.m. I was working in my yard as the daily traffic caivacade agonizingly slowly made its way in a atop 6 go moda northward (as far as I could See at ieast to Goldmine Road, the fine wee solid.) All of a sudden I haard a voice from ona of the "etop & go" vahiciaa cali my name and commented - "Hi, Clyda, who ara aii of these people I spand every afternoon with - and I don't know anybody!" My response? - An acknowledgment that I heard her and a "shrug of my shoulders!" I rast my case!

thei Unglessee

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. MO746B11

> Location/Design Public Hearing Wednesday, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

	NAME <u>ROBERT H. VAN DAUFE</u> DATE <u>10-3-9</u> PLEASE ADDRESS <u>3044 HOLIDAY DAIVE</u> PRINT CITY <u>BROOMEN/HLE</u> STATE <u>MD</u> ZIP <u>20637</u>
	INVE wish to comment or inquire about the following aspects of this project: LAN IN FAVON OF A BILDONGUILLE BYPASS AND L MAY NOD 'SO AND THE HONDARDS OF NOUTE 97 DAILY USERS !!
	SHONT & SWEET
Г	PS I WOULD PREFER #1. "5 č # 2.7"
L_	

Please add my/our name(s) to the Malling List.

October 3, 2001 Location/Design Public Hearing

Please delete my/our name(s) from the Mailing List

* Persons who have received a copy of this brochure through the mall are already on the project malling list.

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Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

October 26, 2001

Response to Commenter #12

Mr. Rohert H. Van Druff 3024 Holiday Drive Brookeville MD 20833

Dear Mr. Van Druff:

Thank you for your interest in the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Brookeville bypass Alternate 5C or Alternate 7 have been noted.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-5026 or via email at charris@sha.state.md.us

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By Melissa Kosenak Project Engineer **Project Planning Division**

cc: File

Ms. Carmeletta Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

My telephone number is ____

Meryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Slatewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717 Street Address: 707 North Calvert Street • Beltimore, Maryland 21202

Supplemental Response: Please refer to Response 13 to Speaker 13 presented previously in this section.

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Final Environmental Impact Statement

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Please delete my/our name(s) from the Mailing List

' Persons who have received a copy of this brochure through the mail are already on the project mailing list.

October 3, 2001 Location/Design Public Hearing

Response to Commenter #13

October 26, 2001



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Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governo John D. Porcari Secretary Parker F. Williams Administrato

Mr. Weinrich 21110 Georgia Avenue Brookeville MD 20833

Dear Mr. Weinrich:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. As per your request, your name has been added to the project mailing list and your support for the No-Build has been noted.

The purpose of this study is to remove the increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town. The need for this project takes into consideration the future traffic along MD 97 (Georgia Avenue) and safety as well.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

1764 By:

Melissa Kosenak Project Engineer Project Planning Division

My telephone number is

Maryland Relay Service for Impaired Heaning or Speech 1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 · Ballimore, MD 21203-0717 Street Address: 707 North Calvert Street . Baltimore, Maryland 21202

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Response to Commenter #14

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

MO746B11 LOCATION/DESIGN PUBLIC HEARING MD 97 (BROOKEVILLE) FROM GQLD MINE ROAD TO NORTH OF HOLIDAY DRIVE

WEDNESDAY, OCTOBER 3, 2001, 5:30 P.M. - 9:00 P.M. ROSA PARK MIDDLE SCHOOL 19200 OLNEY MILL ROAD OLNEY, MD 20832

MIPMINSM DATE NAME 162401 PLEASE ADDRESS 1 🗆 Ubric Drive PRINT ZIP CITY MD STATE 2.08 I/We wish to comment or inquire about the following aspects of this project: tami KATIMAN the. MIN talim Alternative against

because it is the costry, would require moving funitue from their hornes, and would follow a becautifue wooded wet land.

Ne recommend alternate B!



Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 29, 2001

Ms. Leslie Wiercinski 2706 Lubar Drive Brookeville MD 20833

Dear Ms. Wiercinski:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 8B has been noted.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Melissa Kosenak Project Engineer **Project Planning Division**

cc: Ms. Carmeletta T. Harris, Project Manager, State Highway Administration Ms. Shannon Rousey, Environmental Manager, State Highway Administration

Please add my/our name(s) to the Mailing Llst.

Please delete my/our name(s) from the Malling List.

 Persons who have received a copy of this brochure through the mail are already on the project Malling List My telephone number is _

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free Mailing Address: P.O. Box 717 • Satilimore, MD 21203-0717 Street Address: 707 North Caivert Street • Ballimore, Maryland 21202

Supplemental Response: Please refer to supplemental response to Commenter # 10 presented previously in this section.

N

Comments

Coordination

Response to Commenter #15

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

MO746BII LOCATION/DESIGN PUBLIC HÉARING MD 97 (BROOKEVILLE) FROM GOLD MINE ROAD TO NORTH OF HOLIDAY DRIVE

WEDNESDAY. OCTOBER 3, 2001, 5:30 P.M. – 9:00 P.M. ROSA PARK MIDDLE SCHOOL 19200 OLNEY MILL ROAD OLNEY, MD 20832

PLEASE PRINT NAME Michael WIERCINSICI DATE 10/23/01 ADDRESS 2706 LUBAR DIZIUE CITY BABOKEVILLE STATE MD ZIP 20833

We wish to comment or inquire about the following aspects of this project:

D ALTERNATE SHOLLN NOT BE FLUITER CONSIDERE BECQUSE : A NOT CONNATIBLE WITH THE BRUKESULLE FARMS NEWHENRICOD B. NOISE LEVELS WILL BE GATREMELY WINHIN ZOU'OF RESIDENCE - & ELEVATED C. ALWIMENT IS WUTHIN A MNCP PC NO-BUILD FORGETED DISTREAM VALLEY - NOT PRACTICE D. HUHEST CUMULATIVE EWIDIWALGUNT GOOD PULNING INPACTS AT HIGHEST CAUSTINE TWILL OST 3) RECOMMEND ALTERNATE OB BECHISE : Effective BYPASSES (unit TRAFFIC AROWS BLOUKEVILLE BUS DOES NOT INPLUT BROUCEULLE ROAD WITH HULTER TRAFFIC WULLANE. SEEMS TO SUPPORT THE RUSTIC ROAS DESUDATION PROUVEULLE ROAD WIS THE SPIRIT OF SMART GROWTH" BY NOT ENCOURNE ENG ASDITIONAL TRAFFIC ON DAAT DUAD ALSO WOULD TEND TO DISCOURTEE MAPPIC THROUGH BROOKEVILLE FARE AN SOUN TO BE CONSTRUCTED FOTENSION OF BORDLEY MALIE.

SHA

Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 29, 2001

Mr. Michael Wiercinski 2706 Lubar Drive Brookeville MD 20833

Dear Mr. Wiereinski:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 8B has been noted.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, continued coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Melissa Kosenak **Project Engineer Project Planning Division**

cc: Ms. Canneletta T. Harris, Project Manager, State Highway Administration Mr. Darrell Sacks, Environmental Manager, State Highway Administration

Please add my/our name(s) to the Malling List.

Please delete my/our name(s) from the Mailing List.

 Persons who have received a copy of this brochure through the mail are already on the project Mailing List My lelephone number is ______ Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free Mailing Address: P.O. Box 717 • Bailimore, MO 21203-0717 Street Address: 707 North Calvert Street • Bailimore, Maryland 21202

Supplemental Response: Please refer to Response 16 to Speaker 16 presented previously in this section.

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2

Final Environmental Impact Statement

Response to Commenter #16

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/ OR COMMENTS

MD 97 BROOKEVILLE TRANSPORTATION PROJECT PROJECT NO. M0746B11

> Location/Design Public Heering Wednesdey, October 3, 2001 5:30 P.M.

Rosa M. Parks Middle School 19200 Olney Mill Road Olney MD 20832

		NAME J. Mills Williams DATE October 3, 2001
	PLEASE	ADDRESS 18904 Old Dellimore Road
	PRINT	CITY Anosteville STATE HD ZIP 20F33
	I/We wish	to comment or inquire about the following espects of this project:
	My ur	itten comments with report to the Project.
		Alternate 1 (no build) should be dropped from consideration;
		a by page IS NERDED.
	<u> </u>	ATTERNATE SC should NOT be considered. IT is
		Too expansive and dismapts Too many homes /busines.
	/	HITERHATE & H is Not desirable because it has Too
		Many rounda boats;
	/	Alternate 7 is okay However, the Arookevilla
		Road rounda bout will lead to many accidents and
		make Brookevillo Road a much used road.
1 C	<u> </u>	Alternate ER is the 4-st alternative. (2
_ [Tam	against houndahouts because I consider Them
2	Ja fel	y hozards. There will be many accidents of
	egde.	roundobout.
		. Well be denin

Please edd my/our name(s) to the Mailing List.

Piease delete my/our name(s) from the Mailing List

* Persons who heve received e copy of this brochure through the mails are alreedy on the project mailing list.

SHA

2

Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams

Administrator

November 5, 2001

Mr. J. Mills Williams 18904 Old Baltimorc Road Brookeville MD 20833

Dear Mr. Williams:

Thank you for your comments regarding the MD 97 Brookeville Project. The State 1 Highway Administration (SHA) encourages public involvement and appreciates your comments. Your comments supporting Alternate 8B have been noted.

The purpose of the proposed roundabouts is to slow down the flow of traffic. The roundabouts, designed for a speed of 15 miles per hour, will be capable of accommodating tractor-trailers as well as school buses.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002 with final location approval expected by the summer of 2002. During this process, the selection of the preferred alternate will require continued coordination with the federal, state and local government agencies; in addition to, the citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, December 3, 2001.

Again, thank you for your interest in the MD 97 Brookcville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-5026 or via email at charris@Bha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

By: Melissa Kosenak

Project Engineer Project Planning Division

My telephone number is

Maryland Relay Service for Impaired Heering or Speech 1-800-735-2258 Stetewide Toil Free Mailing Address: P.O. Box 717 • Beltimore, MD 21203-0717 Street Address: 707 North Celvert Street • Caltimore, Maryland 21202

October 3, 2001 Location/Design Public Hearing

Supplemental Response: Please refer to Response 16 to Speaker 16 presented previously in this section.

Section VI-B. Agency Coordination

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



4

Maryland State Highway Administration

B. AGENCY COORDINATION

FEDERAL AND STATE ENVIRONMENTAL REVIEW AND REGULATORY AGENCIES COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Agency/Date	Comments	Response Location
U.S. Environmental	Rated the proposed action as "EC"; Environmental Concerns (wildlife passage and waterways at planned crossings), and the impact statement as "1" adequate information.	
December 6, 2001	Concerned about potential impacts of project to wildlife passage and waterways at planned crossings. Appreciates thorough consideration during design to bridge span and height for Meadow Branch and Reddy Branch, to allow for wildlife passage and protection of stream resources. Would like to see a comparison of alternate bridge designs and associated impacts at future time in planning process.	See response on Page VI-B-4 and Section IV: J-2a
	Requested a more definitive justification of the selection of 1970 as the time frame start for SCEA.	Section IV: O-1b
	Wetlands SCEA section needs additional paragraphs to discuss potential project impacts or protection mechanisms and relate these to other past/future impacts in study area.	Section IV: O-4a(3c)
Maryland Department of Natural Resources October 22, 2001	Requested comparison of potential impacts for crossing of Brookeville Road just west of MD 97 (the long bridge over both the stream and existing road versus the traffic circle at Brookeville Road with shorter bridge over stream). Include forest clearing, and volume and area of fill. Hope to see additional information on the potential impacts from road construction to vegetation and wildlife. Suggested giving careful consideration to the use of bridges to optimize wildlife passage and minimize traffic conflicts with wildlife, as well as to maximize the protection of aquatic waterways and resources.	See response on Page VI-B-4 and Section IV: J-2a
	Recommended fitting the section of the road that leads into the Town of Brookeville with some type of traffic calming device to limit the traffic that goes through the Town.	Section V: B
	Recommended having pedestrian bridges leading to and from town and walkways along side the new road.	Section ES-5
	Recommended introducing Environmental Sensitive Design elements to the new road (no curb and gutter, narrower road widths, innovative SWM designs).	See response to comment #3
Maryland Department of Planning November 19, 2001	Suggested that the area surrounding the new road contains endangered species. Questioned whether there were plans to establish the new buffer around the road to include native plant species.	Section III: J-4 / IV: J-3&4
	Section III, Page 8, part b. Future, typo regarding PFAs in the fourth paragraph.	Section III: A-3b
	Section IV, page 26, part 3. Conformity with Regional Air Quality planning, bypass improvement may not have been tested in the air quality conformity analysis. Suggested that SHA contact WCOG.	See response to comment #6
	Maryland Historical Trust stated that their finding of consistency is contingent upon the applicant's completion of the review process required under Section 106 of the National Historic Preservation Act (included in MDP Letter).	Section VI-C-3

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III 1650 Arch Street Philadelphia, Pennsylvania 19103-2029

December 6, 2001

Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering Maryland State Highway Administration 707 North Calvert Street Baltimore, Maryland 21202

RE: MD 97 - Brookeville Project from South of Gold Mine Road to North of Holiday Drive, Montgomery County, MD Draft Environmental Impact Statement

Dear Ms. Simpson:

1

The Environmental Protection Agency (EPA) has received the Draft Environmental Impact Statement (DEIS) for the MD 97 - Brookeville Project dated August 2001. In accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), Section 309 of the Clean Air Act and Section 404 of the Clean Water Act, EPA has reviewed this document.

Based on our review of the DEIS, EPA has rated the environmental impacts of the action as "EC" Environmental Concerns and the adequacy of the impact statement as "1" Adequate Information. A copy of EPA's ranking system is enclosed for your reference. EPA remains concerned about potential impacts of the project to wildlife passage and waterways at planned crossings. The Agency appreciates thorough consideration during design to bridge span and height for Meadow Branch and Reddy Branch, to allow for wildlife passage and protection of stream resources. The Agency hopes to see comparison of alternate bridge designs and associated impacts at a future time in the project planning process.

Thank you for the opportunity to review and comment on this document. The Agency looks forward to continued cooperation in the evaluation of impact and protection of natural resources. If you have any questions, feel free to contact Barbara Rudnick at (215) 814-3322.

Thomas A. Slenkamp, Acting Director Office of Environmental Programs

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for the EPA fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment,

Response to USEPA

Comment #1

The MD 97 Brookeville Project has been processed in accordance with the Maryland Streamlined Environmental and Regulatory Process involving coordination with federal and state resource agencies. This involved agency concurrence of the Alternates Retained for Detailed Study presented in the DEIS as discussed previously. It has since involved federal and state resource agency coordination and concurrence of SHA's Selected Alternate. A draft SACM package was circulated for agency review and comment in February 2003 and the MD 97 Brookeville Project was presented at the March 2003 IAR. Agency comments focused on the status of the draft MOA in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and a request for consideration of wildlife passage along the north side of Reddy Branch. The draft SACM package recommended the south side of Reddy Branch for wildlife passage based on non-surveyed contour mapping. In response to USACOE and USFWS comments for a north side passage, additional evaluations were made by SHA. It was concluded that the north side might be possible however a final design will need to await accurate ground surveys as part of project design. The design goal will be the agreed eight-foot vertical and 25-foot horizontal clearance on one side, preferably along the north side of Reddy Branch. Should topographic conditions not allow for adequate clearance along the north side, south side passage will be pursued by SHA as part of final design.

The final SACM package responded to these comments and was distributed at the May 2003 IAR meeting for formal concurrence and comment by the participating agencies. As a result of this process, agency concurrence (without comment) of SHA's Selected Alternate and the conceptual mitigation proposed in the SACM Package was received from the FHWA, USACOE, USFWS and the Metropolitan Washington Council of Government. Agency concurrence (with minor comments) was received from the USEPA and DNR. Both agencies expressed support of the reevaluation of the north-side wildlife passage and DNR offered continued coordination with SHA regarding mitigation designs. Section VI-B of this FEIS includes the March, 2003 IAR meeting minutes and signed agency concurrence forms resulting from completion of the SACM component of the Maryland Streamlined Environmental and Regulatory Process. Section IV-J-2 of this FEIS has also been revised accordingly regarding terrestrial wildlife mitigation.



is N. Glendening Governor

aleen Kennedy-Townsend Lt. Governor Maryland Department of Natural Resources ENVIRONMENTAL REVIEW Tawes State Office Building, B-3 Annapolis, Maryland 21401 J. Charles Fox Secretary

Karen M. White Deputy Secretary

October 22, 2001

Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering Mailstop C-301 Maryland State Highway Administration 707 North Calvert Street Baltimore, Maryland 21202

Dear Ms. Simpson:

2.

The Maryland Department of Natural Resources (DNR) has conducted a review of the Draft Environmental Impact Statement/Section 4(f) Evaluation (DEIS) for the MD 97 - Brookville Project from South of Gold Mine Road to North of Holiday Drive (Project No. MO746B11, Montgomery County). The Department participated in a number of meetings and site visits for this project over the past several years. In general, the information in the DEIS document reflects the information exchanged at these meetings well. We have the following comments on the draft document:

- 1. A number of important natural resource concepts are addressed in the discussion sections on potential impacts to various vegetation and wildlife resources ("Environmental Consequences; Vegetation and Wildlife"; pages IV-21 to IV-25). The overall scope of the concepts presented in this section are impressive, and we commend the efforts made by the preparers of the document to put this section together. For a project that includes potential new road alignments such as this, it is especially important to discuss the potential impacts of forest habitat fragmentation and the expansion of forest edge habitat. Both of these subjects, as well as several other important natural resource concepts, were expertly addressed. We hope to see similar information on the varied potential impacts from road construction to vegetation and wildlife in future environmental documents.
 - In the presentation of "Secondary and Cumulative Effects Time Frame" (b.) on page IV-43, the wording of the last two sentences should be edited to more definitively justify the selection of 1970 for the time frame start. As the section currently reads, "several past events, which affect Brookeville, occurred in the early 1970's...Therefore, the cumulative effects analysis will address events dating back to 1970". Lacking in this current wording is an explanation of why the several circa 1970 events are more significant than other events occurring earlier and later, and why the

Telephone: (410) 260-8330 DNR TTY for the Deaf: (410) 260-8835 Cynthia D. Simpson October 22, 2001 Page 2

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5.

circa 1970 events serve as defining events for the Brookeville area in reference to selecting the Secondary and Cumulative Effects Time Frame.

3. On page IV-59, there is a discussion section entitled, "Potential Cumulative Effects - Wetlands" (3c) in the Secondary and Cumulative Effects Analysis (SCEA). This discussion section does not match well with the other nearby sections discussing potential cumulative effects on other natural resources. The other sections typically reference and discuss the potential impacts that will occur with this transportation project, including in several cases the quantitative range of potential impacts that could result from the project under the various build alternates. The other sections also relate potential impacts from this project with other past and future impacts of the same type within the SCEA boundary, including a statement on likely mechanisms that will act to minimize future impacts. While the subject section on wetlands does include a brief discussion of historic wetland losses within the SCEA boundary, it does not discuss the subject transportation project and does not clearly reference future impacts or protection mechanisms. It appears that the wetlands section on potential cumulative effects may have lost a paragraph during editing or was never completed. It seems to be in need of one or more additional paragraphs to discuss potential impacts from this project and to relate these potential impacts to other past and future impacts in the study area.

We believe that the alternate methods under study for crossing Brookeville Road just to the west of MD 97 may have a wide range of impacts which differ significantly from each other. This applies specifically to the long bridge over both the stream and existing road versus the traffic circle at Brookeville Road with a shorter bridge over the stream. Forest clearing and volume and area of fill are categories that we would expect to differ significantly. We did not notice any discussion of impact comparison between these potential alternates in the DEIS. A discussion of this issue should be considered for inclusion in the DEIS. If this analysis will be conducted later and cannot be included in the current DEIS document, then it will still be important to carefully document the comparison of potential impacts for these crossing alternates when that analysis does occur.

We support the intent, as described in the current DEIS, to consider bridge designs during further project planning stages for crossing the stream channels that are perpendicular to the roadway alignment alternates. If bridge designs are found to be feasible, we will strongly advocate their use to protect aquatic resources and stream channels, as well as to promote safe wildlife passage opportunities. Given the presence of nearby housing developments, multiple roadways, farm fields and forested riparian corridors, the wildlife issues associated with this study area are quite complex. It is expected that populations of deer, racoon, and several other mammals are relatively large in the project area and also that there are likely to be existing factors which hinder the free movements of these species. Conflicts between wildlife movements and roadway use will affect driver safety as well as the health of the wildlife populations. It is advisable to carefully consider the use of bridges to optimize wildlife passage and minimize traffic conflicts with wildlife, as well as to maximize the protection of the waterways and aquatic resources. Cynthia D. Simpson October 22, 2001 Page 3

We appreciate the attention that has been given in the draft document to natural resource assessment and protection. We advocate and support your continued efforts to optimize protection of natural resources during future planning phases for this project. If you have any questions concerning these comments, you may contact Greg Golden of my staff at 410-260-8334.

Sincerely,

Ray C. Dintomor . J.

Ray C. Dintaman, Jr., Director Environmental Review Unit

cc: Caryn Brookman, FHWA Denise Rigney, EPA George Harrison, COE Paul Wettlaufer, COE Bob Zepp, USFWS Cindy Nethen, MDE Elder Ghigiarelli, MDE John Nichols, NMFS Beth Cole, MHT David Whitaker, MDP

Response to DNR

Comment #1

FEIS Page IV-42, Section IV-O-1b, second paragraph has been revised to read:

"Land use data was a key element in determining the time frame for the Brookeville SCEA. Readily available land use data included mapping from 1973, 1990, and 1997. Prior to 1970, land use data was limited. In addition, several events that affected Brookeville occurred in the early 1970's including accelerated urbanization in Olney and the construction of a sewer pumping station in Brookeville, which supported the development of larger subdivisions. Therefore, 1970 was selected as the starting point for the SCEA."

Comment #2

FEIS Page IV-60, Section IV-4.a.3c, the following paragraph has been added:

Total impacts for all five Build Alternates would vary from 0.10 acre to 0.21 acre. SHA's Selected Alternate would impact four wetlands including two palustrine forested wetlands, impacted for a total of 0.03 acres, one palustrine emergent wetland, impacted for 0.06 acre, and one palustrine scrub-shrub wetland, impacted for 0.03 acres. Alternate 5C and Alternate 8B would have the potential for the greatest impacts (between 0.15 to 0.21 acre). Palustrine forested wetland impacts would account for approximately half of Alternate 5C impacts. Palustrine emergent impacts would be the same (0.06 acre) for Alternate 7, Alternate 8A, and Alternate 8B. Alternate 8B would have at least twice as many palustrine scrub-shrub impacts compared to the other Build Alternates.

Comment #3 and Comment #4

See response to USEPA Comment #1 on Page V-B-4:

Also, SHA has recently decided to remove the existing structure over Reddy Branch Stream in conjunction with the closing of this portion of MD 97. The Meadow Branch crossing currently proposed is a two-cell culvert. One cell culvert during low base flows will be designated for wildlife passage. Minor alignment shifts to avoid or minimize impacts to sensitive habitats would be considered during final design. Stormwater management designed to direct water to the median for bio-retention and infiltration would minimize the potential for environmental contamination or sedimentation of sensitive habitats. Bridging wetlands and stream valleys, or designing environmentally sensitive culverts can minimize the effects of habitat fragmentation.

The incidence of wildlife collisions with vehicles could be reduced by restricting or inhibiting wildlife access to the highway, or by enabling motorists to avoid collisions. These measures could include combinations of fencing, one-way gates, passageways, reflectors, lighting, etc. The associated loss of wildlife caused by alternates may be mitigated by the enhancement of the wildlife habitat through reforestation including vegetation with high wildlife food value (mast producing trees, seed, or berry producing shrubs, etc.), and plants which will provide cover for wildlife.



Parris N. Glendening Governor Kathleon Kennedy Townsend Lt. Governor

Roy W. Kienitz Secretary Ronald N. Young Deputy Secretary

November 19, 2001

Mr. Douglas H. Simmons Director State Highway Administration Maryland Department of Transportation P.O. Box 717 Baltimore, MD 21203-0717

REVIEW AND RECOMMENDATION

State Application	Identifier:	MD20010907-0999
Description:	Draft Environm	nental Impact Statement Section 4(f) Evaluation: MD-97 Brookeville Project - From South
	of Gold Mine I	Road to North of Holiday Drive
Applicant:	Maryland Depa	artment of Transportation
Location: Montgomery County - To		County - Town of Brookeville
Approving Auth	ority: U.S. I	Department of Transportation

Recommendation: Endorsement With Qualifying Comments and Contingent Upon Certain Actions

Dear Mr. Simmons:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 14.24.04, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Departments of <u>Housing and Community Development including the Maryland</u> <u>Historical Trust, Environment, Natural Resources, Business and Economic Development, Montgomery County</u>, and the <u>Maryland</u> <u>Department of Planning</u>. As of this date, the <u>Maryland Department of the Environment</u> has not submitted comments. This endorsement is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.

The Maryland Departments of <u>Business and Economic Development</u>, <u>Natural Resources</u>; and <u>Montgomery County</u> found this project to be consistent with their plans, programs, and objectives.

The Maryland Department of Planning found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments discussed below.

The Maryland Department of <u>Housing and Community Development including the Maryland Historical Trust</u> stated that their finding(s) of consistency is/are contingent upon the applicant taking the action(s) summarized below.

301 West Preston Street • Suite 1101 • Baltimore, Maryland 21201-2305 Tel: 410.767.4500 • Fax: 410.767.4480 • Toll Free: 1.800.767.6272 • TTY Users: Maryland Relay Internet: www.mdp.state.md.us Mr. Douglas H. Sinnmons November 19, 2001 Page 2

MDP Comments:

We have provided comments on the project at earlier milestone stages, through the Maryland's Streamlined Environmental and Regulatory Process, including annotations on the updated alternatives retained for detailed study. These comments are included in Section VI of the DEIS. However, we are providing below some justifications of the alternative that we think is the most suitable along with some specific remarks on DEIS. We look forward to continuing to work with you and the affected local jurisdictions to ensure that the project meets the 1999 agreement criteria and complies with the 1997 PFA law.

Among all proposed alternatives, alternative 8b seems to be the one that meets the 1999 agreement criteria because:

- It does not provide access points to the bypass that could trigger future secondary growth in areas west of the bypass. It also avoids pressure to expand Brookeville road.
- It has minimal residential displacement as well as little environmental damage.
- It provides traffic calming devices on both ends of the bypass to address the issue of future vehicle pressure.

Additional Specific Comments on DEIS

• Since this is an historical development area, the section north of the road that leads into town should be fitted with some type of traffic calming device to limit the traffic that goes through the town of Brookeville if the new portion of MD-97 should reach its carrying capacity.

Depending on which alternative is used it would be a good idea to have pedestrian bridges leading to and from town over or under this new roadway. Also is there any consideration of walkways alongside of the new road?

In order to keep this new road as environmentally friendly as possible, we recommend that Environmentally Sensitive Design (ESD) elements be introduced. This could come in the form of no curb and gutter and narrower road widths. Also innovative designs concerning storm water management should be implemented due to the increase in impervious cover associated with this new construction.

This area has been shown to have no known endangered species present, however in the areas surrounding the new road there are known endangered species. Are there any plans to establish this new buffer around the road to include native species of plants?

In Section III, Page 8, part **b.** Future, there is a typo in the fourth paragraph. The sentence should read: "The majority of the previously proposed MD 97 Brookeville Project's bypass alternatives were <u>outside</u> (not within) the PFA."

In Section IV, page 26, part 3. Conformity with Regional Air Quality planning, it is stated, "this project conforms to the SIP as it originates from a conforming TIP and transportation plan." However, in the 2001 Washington Metropolitan Region Transportation Improvement Plan, the Brookeville project is listed as a <u>study</u> and not as a specific highway improvement project. Therefore, the bypass improvement may not have been tested in the air quality conformity analysis. SHA should contact WCOG regarding this matter.

Summary of Comments:

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The Maryland Historical Trust stated that their finding of consistency is contingent upon the applicant's completion of the review process required under Section 106 of the National Historic Preservation Act

Mr. Douglas H. Simmons November 19, 2001 Page 3

7

Any statement of consideration given to the comments should be submitted to the approving authority, with a copy to the State Clearinghouse. Additionally, the State Application Identifier Number <u>must</u> be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the recommendation cannot be accommodated by the approving authority.

Please remember, you must comply with all applicable state and local laws and regulations. If you have any questions about the comments contained in this letter or how to proceed, please contact the State Clearinghouse at (410) 767-4490. Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known. Any substitutions of this form <u>must</u> include the State Application Identifier Number. This will ensure that our files are complete.

We appreciate your attention to the intergovernmental review process and look forward to your continued cooperation. If you need to contact a staff person, please call 410-767-4490.

Sincerely,

hinda C. Marey man

Linda C. Janey, J.D. Director, Clearinghouse & Plan Review Unit

LCJ:AM:okk Enclosures (* indicates with attachments) cc: Kathryn Orosz - DHCD Joane Mueller - MDE Ray Dintaman - DNR James Gring - DBED Scott Reilly - MTGM Joe Tassone - MDPC Gil Wagner - MDPM

VI-B-11

Response to MDP

Comment #1

See FEIS Page V-6, Section V-B: "The alternates and typical sections considered were developed in 1999 in response to the October 1997 Smart Growth and Neighborhood Conservation Act, which was intended to control growth and urban sprawl. In compliance with the Smart Growth criteria, roundabouts would be included at the northern and southern termini of these alternates to control traffic flow and to help limit the capacity of the new roadway. The roundabouts would be landscaped as "gateways" to historic Brookeville. Proposed speed limits and access restrictions will enable future design to be consistent with Brookeville's small town setting. By incorporating these "traffic-calming" features into the currently proposed roadway alignments, sprawl growth near Brookeville will be discouraged, while relieving traffic problems within the historic town."

Comment #2

In early 1998, concerns over encouraging sprawl development delayed studies of a bypass around Brookeville and other towns across the state when they were determined to be inconsistent with the Smart Growth and Neighborhood Conservation Act. The MD 97 Brookeville Project was then placed on hold and a Smart Growth Working Group was formed to address the concerns regarding the Town of Brookeville and the prevention of sprawl development along the proposed alternates. As a result of the Smart Growth Working Group, In-Town improvements were then investigated. The improvements consisted of the following: a truck origin and destination study; a traffic light at Brighton Dam Road; a roundabout at Brighton Dam Road, Gold Mine Road and Brookeville Road; and pedestrian (sidewalks and crossing) improvements. The Smart Growth Working Group concluded that pedestrian sidewalks and pedestrian crossings should be further investigated. At the time, the Town of Brookeville investigated various funding options, which would allow for pedestrian sidewalks and pedestrian crossings.

As discussed in Section VI-C (Cultural Resources) and Section V (Section 4(f) Evaluation), the SHA Selected Alternate 7 Modified will include a pedestrian and bicycle trail within the footprint of the new roadway. M-NCPPC staff requested a continuation of the man-made Oakley Cabin Trail to the west of east into Brookeville outside of the footprint area including a pedestrian bridge or culvert extension at Brookeville Road. As explained in SHA's August 13, 2003 letter to M-NCPPC included in Section VI-B, this would, in effect, create additional Section 106 adverse effects and Section 4(f) use of the Brookeville Historic District and public parkland, and by federal law, are precluded by SHA and FHWA interpretation of the Section 4(f) legislation.

Alternate 7 Modified has an open typical section, which consists of two 11-foot lanes and two ten - foot shoulders (five feet paved for bicycle compatibility and five feet graded).

Comment #3

The typical section described above includes Environmentally Sensitive Design elements including the MDP recommendations of no curb and gutter and narrower road width. FEIS, Section IV-G (Page IV-20) includes discussions of surface water mitigation including stormwater management.

Comment #4

FEIS Section III-J.3 and Section IV-J.3 were revised to read the following:

"According to the USFWS, no federally listed or proposed endangered or threatened species are known to exist in the project area. In correspondence, DNR, Wildlife and Heritage Division reported no records for federal or state rare, threatened, or endangered plants or animals within the project area, however, there are several small American chestnut (Castanea dentata) trees within the western portion of the study area. This species is listed as a state rare or uncommon plant species by DNR. However, based on coordination with DNR, only large mature flowering chestnut trees are typically monitored. It is common to find small chestnut trees throughout portions of Montgomery County. The majority of these trees succumb to the chestnut blight before becoming mature and reaching a flowering stage."

Reforestation efforts along the new right-of-way have an opportunity to consider use of native plants. This effort will be coordinated with SHA and M-NCPPC.

Comment #5

FEIS Page III-18, Section III-A.3b was revised accordingly.

Future land use in the State of Maryland is guided by the October 1997 "Smart Growth Neighborhood Conservation Initiatives." The intent is to direct state funding for growth-related projects to areas designated by local jurisdictions as Priority Funding Areas (PFAs). PFAs are existing communities and other locally designated areas as determined by local jurisdictions in accordance with "smart growth" guidelines.

Comment #6

FEIS Section IV-K-3 includes discussions of the Air Quality including conformity with regional air quality analysis. As explained in SHA's response to Comment 7 below, coordination has been ongoing with the Metropolitan Washington Council of Governments (MWCOG) since the circulation of the DEIS. MWCOG has concurred with the SHA Selected Alternate 7 Modified.

Comment #7

The MD 97 Brookeville Project has been processed in accordance with the Maryland Streamlined Environmental and Regulatory Process including coordination with the MHT. Section II.B, Section III.B and Section V (Section 4(f) Evaluation) includes MHT coordination.

On July 3, 2003, the MDP concurred with the final SACM, commenting that the SHA Selected Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD 97 Brookeville Project. MDP also recommended that MDOT, SHA, and MDP discuss the steps necessary for submittal of this project to the State Board of Public Works. Section VI of this FEIS includes the March, 2003 IAR meeting minutes and signed agency concurrence forms resulting from completion of the SACM component of the Maryland Streamlined Environmental and Regulatory Process.

VI. Comments and Coordination

MEMORANDUM

TO:	Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering
	State Highway Administration
FROM:	Wanda J. Brocato Project Planning Division State Highway Administration
DATE:	January 18, 2002

SUBJECT: Interagency Review Meeting Follow-up

The following projects and/or topics presented at the January 16 Interagency Review (IAR) Meeting require follow-up coordination with the review agencies:

Project Presentations

MD 97 (Brookeville) - Courtesy Presentation of Recommended Alternative

- US Army Corps of Engineers (COE) (Paul Wettlaufer) and Department of Natural Resources (DNR) (Greg Golden) inquired about a large tree located in the millrace, whether it was classified as a significant tree (perhaps a Cherry tree), and if we had done a tree survey. State Highway Administration (SHA) (Darrell Sacks) indicated that a significant tree survey was done and SHA (Shannon Rousey) will look this to see if this particular tree was researched and will get back with Paul and Greg.
- COE (Paul Wettlaufer) asked if we could do a number count of the trees (Shingle Oaks) and included in the FONSI. SHA (Darrell) stated that we could do this for the Selected Alternative and will ask the consultant to do it once we have a selected alternative. DNR (Greg Golden) suggested that we include an estimate of the trees as a summary, and not do a detailed count. Greg suggested that it would also be a useful tool to show that SHA avoided Shingle Oaks.
- COE (Paul Wettlaufer) stated that they are okay with both Alternative 7 or 8. However, if Alternative 7 is selected he wants US Fish and Wildlife Service (USFWS) (Bill Schultz) to have input. Bill will review the underpass for wildlife passage (deer, etc.) specifically, the underclearance of any bridges. Also, for Alternative 7, Paul asked that we make the bridge long enough and high enough for a wildlife passage (i.e., 10-foot under clearance over benches on both sides of Reddy Branch). SHA should enhance the riparian buffer along the stream. SHA (Carmen Harris) will follow-up on these matters.

Ms. Cynthia D. Simpson Page 2

 COE (Paul Wettlaufer) discussed a list of his recommendations (submitted to SHA) in order for COE to issue a permit. (He had previously listed similar concerns in a letter to SHA in 2000.)
SHA (Carmen Harris and Shannon Rousey) will address these issues. SHA (Cheryl Jordan) was also given this list and will supply Paul with plans for stream mitigation for his review.

The next Interagency Review Meeting will be on Wednesday, February 20.

If you have any questions about this, please contact me at (410) 545-8569.

WJB

cc:

Mr. Joseph Finkle Mr. Bruce Grey Ms. Carmen Harris Ms. Susie Jacobs Ms. Cheryl Jordon Mr. Joseph Kresslein Ms. Gay Olsen Ms. Cathy Rice Ms. Shannon Rousey Mr. Darrell Sacks Mr. Robert Sanders Mr. Douglas Simmons Mr. Donald Sparklin Mr. Jim Wynn

SHA

CONSULTANT

Ms. Noreen Kirkpatrick (G&O)

AGENCIES

Mr. Mohammed Ayub (MDE) Mr. Phillip Bello (FHWA) Mr. Harvey Bloom (BMC) Mr. David Boellner (MDE) Ms. Caryn Brookman (FHWA) Mr. Rich Bulavinetz (COE) Ms. Elizabeth Cole (MHT) Mr. Bob Cooper (MDE) Mr. Joseph DaVia (COE) Mr. Steve Elinsky (COE) Mr. Elder Ghigiarelli (MDE) Mr. Greg Golden (DNR) Mr. J. Hamilton (MDE) Mr. Steve Harman (COE) Ms. Fatimah Hasan (MDOT) Ms. Susan Hinton (NPS) Ms. Lisa Hoerger (DNR-CBCAC) Mr. Larry Hughes (DNR) Ms. Mary Huie (FHWA) Mr. John Hurt (MDE) Mr. Dan Johnson (FHWA) Mr. Ron Kirby (MWCOG) Mr. Roland Limpert (DNR) Ms. Dawn McCleary (DNR-CBCAC) Mr. Sean McKewen (MDE)

Ms. Cynthia D. Simpson Page 3

cc:

AGENCIES (Continued) Ms. Jennifer Moyer (COE) Ms. Cindy Nethen (MDE) Mr. John Nichols (NMF) Mr. Robert Pennington (USFWS) Ms. Denise Rigney (EPA) Ms. Barbara Rudnick (EPA) Mr. Bill Schultz (USFWS) Mr. Scott Smith (DNR) Ms. Jamie Stark (EPA) Ms. Esther J. Strawder (FHWA) Mr. David Sutherland (USFWS) Mr. Paul Wettlaufer (COE) Ms. Denise Winslow (FHWA) Mr. David Whitaker (MDP) Ms. Cynthia Wilkerson (NPS) Ms. Bihui Xu (MDP) Mr. Robert Zepp (USFWS)

BROOKEVILLE BYPASS – CONCEPTUAL MITIGATION MEETING MINUTES

Project: MD 97 Brookeville Bypass Project

Subject: Conceptual Mitigation Meeting

Date: February 8, 2002

Location: Longwood Community Center

Attendees: Mr. Paul Wettlaufer, United States Army Corps of Engineers Mr. Bill Schultz, United States Fish and Wildlife Service Mr. Brian Bernstein, KCI Technologies, Inc.

The following issues were discussed as part of a site visit to the MD 97 study area on February 8, 2002. Attendees included Mr. Paul Wettlaufer from the United States Army Corp of Engineers (ACOE), Mr. Bill Schultz from the United States Fish and Wildlife Service (USFWS) and Mr. Brian Bernstein from KCI Technologies, Inc. (KCI). The group met in the field to discuss various conceptual mitigation issues associated with the bypass project. The first set of issues (in italics) are those raised by the ACOE as part of SHA Interagency Review Meeting on January 16, 2002. Responses to these issues are described immediately below each issue.

ACOE Mitigation Requirements

1. Need a bench for wildlife on each side of the stream at the crossing of Reddy Branch. The bridge will have 9-foot under clearance. It would be desirable to acquire some replacement parkland here to maintain a riparian wildlife corridor. Also, to reestablish a riparian corridor, need to remove pavement on the portion of MD 97 in the floodplain which is being abandoned. (The historic bridge can remain).

Response 1. Based on discussions with both Mr. Wettlaufer and Mr. Schultz, the 9-foot underclearence is to be measured from top of stream bank to the bottom of the bridge. In addition, the bench should be at least 4 feet wide along each side of the stream. The concept of acquiring replacement parkland to maintain a wildlife corridor was also discussed. Mr. Bernstein mentioned that he would discuss this further with the Maryland State Highway Administration. The removal of pavement is already shown as an option for both Alternative 7 and 8B. 2. Need to discuss a dry cell for critter passage at the culvert for Meadow Branch. This 240-foot culvert would eliminate several meanders, reducing the stream reach by approx. 85 feet, and increasing the gradient of the stream through the culvert. Concerns are head cutting, fish passage, flooding, reduction in groundwater recharge/discharge functions, loss of 240 feet of benthic invertebrate and fish habitat, obstruction of the riparian wildlife corridor, reduction in nutrient retention and sediment retention functions by the filling of one acre of floodplain, and culvert obstruction by woody debris. Possible mitigation measures include wetland and floodplain restoration or creation, removal of existing culverts, stormwater retrofits in the Olney Mills subdivision upstream, stream stabilization /restoration/reforestation, acquisition of replacement parkland along Reddy Branch, and construction of a longer bridge over Reddy Branch.

Response 2. The group walked along Meadow Branch from its confluence with Reddy Branch, as well as throughout the Meadow Branch watershed. There were no obvious stormwater management retrofit opportunities identified. The most likely stream restoration opportunities are as follows:

physical restoration opportunities (grading, bioengineering, etc.) are limited to an area immediately upstream and downstream of where the culvert would be placed. Including the width of the culvert, the total restoration area is approximately 600 to 700 linear feet.

other restoration opportunities may involve plantings, including the placement of willow and dogwood cuttings along various open sections of Meadow Branch. Likely areas are especially obvious along the lower end of the Meadow Branch watershed (from Olney Mill Road downstream to Brookeville Road).

Mr. Wettlaufer stated that if this mitigation was approved by Maryland Nation Capital Parks and Planning Commission (MNCPPC), it would meet the ACOE's mitigation requirements. Mr. Schultz concurred as well.

3. Are retaining walls going in on Alt. 7, closed section? These helped minimize impacts to Shingle Oak. Let's get a better handle on how many shingle oak are actually impacted.

Response 3. Brian Bernstein described where the shingle oaks are located including other areas within the study area. He also mentioned that SHA will request KCI to determine the numbers of shingle oaks to be impacted by the selected alternative.

4. Mitigation for loss of 700 feet of stream at the south end of the project.

Response 4. This area in question is the unnamed ephemeral channel that begins along the north end of the ballfields at Longwood Community Center and extends in a northwesterly direction until it's confluence with Meadow Branch. The group walked the channel to better understand the source of hydrology and how much of the channel would be impacted from any of the western alignments (at this part of the study area, all three western alternatives share the same alignment).

Since the majority of the channel is likely to be impacted from the bypass, there are minimal restoration efforts that can be proposed for this area. Depending on the limit of disturbance, only one area was identified that may be considered further. This area is immediately downstream of the outfall extending from the ballfields. Likely mitigation would include creating a basin to slow the flow extending from the outfall. The feasibility of this will depend on determining the actual impact associated with the alignment. This determination could not be based on the existing flagging present on site but instead would require that the actual limit of disturbance be flagged instead.

Other Issues

Mr. Bernstein showed both the ACOE and USFWS a potential wetland mitigation site along Brighton Dam Road. The area is an open field, totaling approximately 1.25 acres, and is immediately adjacent to Reddy Branch. A section of stream along the field is highly eroded. Mr. Bernstein proposed the idea of stabilizing the streambanks while at that the same time creating a small floodplain wetland. The wetland would ideally provide some flood flow alteration as well as other functions and values impacted during the construction of the selected alternative. Both Mr. Wettlaufer and Mr. Schultz agreed the mitigation opportunities were valid and should be pursued.

The group discussed the fact that all the potential mitigation discussed is in parkland owned by MNCPPC and that their final approval of the mitigation efforts would be needed. Mr. Bernstein stated that he was in the process of organizing a meeting with MNCPPC to review the potential mitigation opportunities.

Mr. Bernstein also asked what level of detail the ACOE and USFWS would require as part of the conceptual mitigation for the Final Environmental Impact Statement (FEIS) and permitting. Mr. Wettlaufer stated that a letter from the landowner (in this case, MNCPPC) agreeing to the mitigation on their land would suffice. In addition, a general description of what was proposed including a description of each area would be needed. No formal design plans are required as part of the conceptual mitigation package for the FEIS.

We believe that the above accurately reflects what transpired at this meeting. However, we will appreciate comments involving a difference in understanding of what occurred. Unless we are notified in writing to the contrary within ten days after receipt, we will assume that all in attendance concur in the accuracy of this transcription.

Cc: All Attendees Shannon Rousey, SHA Carmen Harris, SHA Cheryl Jordon, SHA

MARYLAND ENVIRONMENTAL TRUST

March 18, 2002

Mr. Douglas Simmons, Director Office of Planning and Preliminary Engineering State Highway Administration, PO Box 717 Baltimore, MD 21203-0717

Dear Mr. Simmons:

Thank you for your letter of February 22nd regarding the MD 97 Brookeville bypass project. The Board of Trustees of the Maryland Environmental Trust considered your request at its March meeting and offers some changes to the easement along the bypass to make possible achievement of the objective of ensuring denial of access to it.

When we first reviewed the proposal last summer, we were concerned that the objective sought could be defeated by the merger doctrine, which holds that a recorded owner of property cannot hold an easement in the same property. Accordingly, we asked the Office of the Attorney General to advise us.

The response is attached. It advises that there is a merger issue, since the Department of Transportation and the MET are both agencies of the State, which will hold title to the roadway. Although there are no cases in Maryland addressing whether the common law merger doctrine applies to State agencies, she concludes that MET does not have the power to sue another State agency, and therefore could not enforce an easement against another State agency in a court.

Therefore, we suggest the following changes to the Letter of Commitment and Memorandum of Understanding:

(1) It should allow MET to assign or co-hold the easement with another land trust that is not an instrumentality of the State, in order to ensure the permanency of the easement.

(2) The easement should be on a strip of land *in private ownership* that is *outside* the right of way for the roadway. This could be achieved by acquisition of a narrow easement outside the right-of-way and granting it to MET with a "no access" provision. This would enable MET and/or a co-holder of the easement to enforce the easement against anyone seeking to cross it to obtain access or connection to the roadway even if SHA should agree to grant access.

100 COMMUNITY PLACE INTELOOR CRUWNSVILLE, MID 21032-2023 (410)514-7900 FAX (410) 514-7910

The Board of Trustees has approved the approach described above. Please call me (410-514-7903) or Jim Highsaw of our staff (410-514-7909) if you have any questions.

Sincerely, Besniter 0 John Bernstein

Director

Cc: Carmeletta Harris

MARYLAND ENVIRONMENTAL TRUST

Memorandum

RE:	Brookeville Bypass Easement and Merger Issues
DATE:	August 27, 2001
VIA:	John Bernstein JB
FROM:	Shzun Fenlon, OAG
TO:	MET Board of Trustees

The Board requested the opinion of the Attorney General on the question of whether an MET easement on SHA lands could be effective or enforceable. Here is my answer; note that this is not an opinion of the Attorney General.

I believe the answer can be broken down in to two parts, a discussion about merger and a reminder about the inability of MET to sue other state agencies. I view the merger discussion as going to the issue of whether an easement is effective. The inability of MET to sue other agencies means that an easement is unenforceable, even if it effective. For purposes of this answer, remember that MET is a state agency. <u>59 Opinions of the Attorney General 601. 602 (1974)</u> (stating "the Maryland Environmental Trust is a state agency"); <u>76 Opinions of the Attorney General (May 31, 1991)</u> (MET is fiscally dependant and supervised by the State).

As you know, the merger doctrine is well established in Maryland. <u>Orfanos Contractors v. Schaefer, 582 A.2d 547, 85 Md. App.</u> <u>123</u> (a recorded owner of property cannot hold an easement in the same property). However, there are no cases in Maryland addressing whether the common law doctrine applies to state agencies. In <u>Guy v. State, 438</u> <u>A.2d 1250, 1252-53 (1979)</u>, a Delaware court concluded that an easement to one agency of Delaware merged into the fee simple interest later acquired by another state agency. The state of Delaware argued that the fee simple interest of the Department of Natural Resources should not have extinguished the "daylighting" easement held by the Delaware Highway Department. However, the court rejected the argument, reasoning that the state agencies act for the benefit of the citizens of Delaware. There are a number of other arguments, which may or may not be persuasive to a court, including:

 the common law doctrine of merger should not affect a state agency;
if the parties, especially two state agencies, initially intend a document to be effective notwithstanding the possible effect of merger, then it should be effective, because merger is a doctrine to interpret the intent of parties and it should not be made into a restraint on alienation; and

3. if the General Assembly mandates an easement from one state agency to another, then that should override the common law doctrine.

As you know, I've long believed that this issue has good enough arguments on each side that I cannot predict what a Maryland appellate court would decide. However, I do believe that MET has a better argument in the circumstance where MET will be receiving an easement from a state agency (versus when a state agency later acquires the fee simple interest on a property already encumbered with an easement).

Assuming that an easement is not merged and remains effective between two state agencies, the next question is whether one agency (MET) can sue another one. The answer is simple. MET does not have the power to sue another state agency. <u>57 Opinions of the Attorney General</u> <u>352 (1972)</u>; therefore, even if an easement is not merged, MET cannot enforce an easement against another state agency in a court.

Aside from the merger issue and the inability to sue another state agency, there are some important practical considerations. First, as long as SHA will own the property, the easement will operate like an MOU between two state agencies. In this sense, if SHA ever violates the terms of the easement, MET can argue within the political system that another state agency is violating its agreement. The argument would never go to court, but the easement would give MET an opportunity to persuade the right people in the Executive and Legislative branches.

2. The Board also asked if land owners adjoining a state highway had a statutory right to access to the highway. I have never heard of any such provision, but I will ask an AAG at SHA about this concept. If I am not satisfied with the answer from SHA, I will research it myself.



Maryland Department of Transportation State Highway Administration

FCFIVED

Parris N. Glendening Governor

John D. Porcari Secretary Parker F. Williams

Administrator

RECEIVED

DEC U 6 2002

MEMORANDUM

TO:	Ms. Cynthia D. Simpson Deputy Director	Ans'd
	Office of Planning and Preliminary Engin	eering
FROM:	Joseph R. Kresslein JK Assistant Division Chief Project Planning Division	J
DATE:	December 3, 2002	
SUBJECT:	Project No. MO746B11 MD 97 Brookeville Study Montgomery County, Maryland	

RE: Agency and SHA Field Review

The purpose of the meeting, held on September 20, was to review the new alignment for Alternate 7 Modified, the SHA recommended alternate, and discuss those areas where avoidance or minimization options such as bridges or other structures are proposed. The field review also provided the opportunity for SHA design divisions to comment on issues associated with the mitigation commitments that will become stipulations' in the Section 404 permit.

Those in attendance included the following:

<u>ATTENDEES</u>

Mr. Max Azizi, Federal Highway Administration (FHWA) Ms. Mary Barse, SHA-Project Planning Division (SHA-PPD) Mr. Brian Bernstein KCI Technologies (KCI) Mr. Stephen Ches, SHA-Office of Highway Design (SHA-OHD) Mr. Prakash Dave, SHA-Office of Bridge Design (SHA-OBD) Mr. Dan Hardy, Maryland National Capital Park & Planning Commission (MNCPPC) Ms. Carmen Harris, SHA- Project Planning Division (SHA-PPD) Mr. Don Hoey, SHA-Environmental Programs Division (SHA-EPD) Mr. Steve Hurt, McCormick Taylor & Associates for Maryland Department of the Environment Ms. Denise King, Federal Highway Administration (FHWA)

My telephone number is

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717 Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 Ms. Cynthia D. Simpson MD 97 Brookeville Study Page Two

Mr. Ruel Manuel, SHA- Project Planning Division (SHA-PPD) Mr. Andy Parker, AD Marble (ADM) Ms. Shannon Rousey, SHA- Project Planning Division (SHA-PPD) Ms. Barbara Rudnick, US Environmental Protection Agency (EPA) Mr. Bill Schultz, US Fish & Wildlife (USFWS) Dr. Jim Sorensen, Maryland National Capital Park & Planning Commission (MNCPPC) Ms. Rita Suffness, SHA-Project Planning Division (SHA-PPD)

Shannon Rousey began the meeting with introductions. Carmen Harris provided an overview of Alternate 7 Modified for those who did not attend the August interagency meeting. Shannon then asked if there were any questions/comments or areas of concern that needed to be addressed prior to starting the field portion of the meeting. No questions were asked.

The group decided to start the field walk at the Newlin's Mill archeological site to allow some in attendance to leave after reviewing the site. Dr. Sorensen and Mary Barse gave an overview of the archeological site, discussing the features that were present and the significance of those features. Mary pointed out the proposed location of Alternate 7 Modified, in comparison to original Alternate 7, which directly impacted the site. It was mentioned that the archeological site is well preserved and intact. Dr. Sorensen gave a brief history of the Newlin's Mill and Oakley Cabin. Mary provided an overview of the Mill race system and how it worked. This concluded the archeological portion of the field review. At this point, Denise King and Max Azizi of FHWA, Dr. Sorensen, Mary Barse and Rita Suffness departed and the rest of the group continued on the field review.

Brian Bernstein led the group across Brookeville Road to look at the area of MD 97 that will be closed to traffic. Discussions ensued over the plans for the Reddy Branch bridge on MD 97 near the Brookeville Road intersection. Carmen Harris noted that the bridge is not historic and there have not been any decisions on whether or not the bridge will be removed. Steve Ches suggested that the bridge could stay for future pedestrian use. This area has been subject to flooding in the past, and Don Hoey suggested that if hydraulically sound, the bridge and roadway (including embankment) could be removed and could serve as floodplain mitigation. It was also noted that an existing bridge on Brookeville Road over Reddy Branch, upstream of the bridge over MD 97, is also likely to contribute to flooding within the area. At a prior Interagency Review Meeting, both DNR and US Army Corps of Engineers (ACOE) mentioned that they would prefer some of the impervious roadway surface removed and replaced with natural surfaces. SHA agreed to further consider the request as a mitigation option.

The next site visited was the proposed location of the bridge over Reddy Branch. Dan Hardy noted that MNCPPC would like to see the bridge extended to allow for wildlife passage, with a natural surface under the bridge. Dan also mentioned that MNCPPC would also like to see the area beneath the bridge accommodate pedestrian and bicyclist passage, as well. Bill Schultz had no objection to an extended bridge, and questioned why there is a sag in the vertical alignment
Ms. Cynthia D. Simpson MD 97 Brookeville Study Page Three

profile where the stream is located. A reduction in floodplain impacts was cited, along with geometric considerations regarding the tie-in points. Bill requested additional information regarding the justification for the tie-in points. The height of the bridge was discussed, and it was suggested that a longer bridge with a pier be considered. Prakash Dave mentioned that for every foot the bridge is raised, it would make the bridge four (4) feet longer. Both Prakash Dave and Don Hoey had mentioned that with a longer bridge, the pier may need to be placed in the middle of the stream, increasing the potential for impacts to the stream, and would require more scour protection. Bill Schultz then suggested a combination of a bridge and culverts. Dan Hardy suggested that a series of dry-cell culverts could be used for wildlife into the culverts. Dan replied that he did not think it would be a problem. A discussion of the range of bridge options and clearances continued among the group. Dan Hardy suggested several shorter span bridges, citing that the cost would most likely be lower with the several short span bridges. Bill suggested a shorter span bridge with culverts. Prakash expressed concern with the suggestion of a 20-foot box culvert, but suggested that two 10-foot boxes may be possible.

Originally, Bill Schultz requested 9 feet of underclearance beneath the bridge and a 25-foot bank on each side. He ultimately agreed to a 25-foot embankment on one side with an 8-foot underclearance on that same side of the stream, but requested additional information from SHA regarding previous studies on wildlife passages and requirements before rendering a final decision. In a meeting held after the field review the Office of Bridge Design agreed that SHA could accommodate an 8.5-foot underclearance and the 25-foot embankment on one side of the stream to address the USFWS request. A follow-up meeting with the MD 97 team and SHA's Bridge Design Division is scheduled for November 27.

The field review then moved to the proposed Meadow Branch crossing. Dan Hardy had mentioned that at the Planning Board meeting the night before, Montgomery County was in favor of a bridge over Meadow Branch. In previous conversations it was mentioned that the ACOE recommended a dry cell culvert, while the SHA design included two dry cell culverts at this location. Prakash Dave indicated that this would be further evaluated and that a follow-up meeting would be scheduled with MNCPPC. Brian provided an overview of mitigation options that have been discussed with MNCPPC, USFWS, ACOE and DNR. Stream restoration was a major mitigation topic, since so many areas of the stream were degraded. Brian identified areas that were good candidates for the restoration, such as areas south of Brookeville Road in Meadow Branch and in Reddy Branch in the area adjacent to the field off of Brighton Dam Road. He also noted that the limits of the stream restoration could change based on further studies. Ms. Cynthia D. Simpson MD 97 Brookeville Study Page Four

cc:

Brian Bernstein, Shannon Rousey, Barbara Rudnick, Steve Hurt and Bill Schultz continued to a proposed wetland mitigation location near Brighton Dam Road. At the site, which is an open field, Brian explained that MNCPPC owned the property and had verbally expressed their preference for SHA creating wetland mitigation and stream restoration in the area. Everyone agreed that it would be a suitable location for the mitigation. SHA will continue coordination with MNCPPC regarding mitigation throughout the planning process.

Attendees Ms. Danelle Bernard, SHA-OBD Mr. Ken Briggs, SHA-OHD Ms. Elizabeth Cole, MHT Mr. Earle Freedman, SHA-OBD Mr. Elder Ghigiarelli, MDE Mr. Greg Golden, DNR Ms. Karen Kahl, RKK Ms. Jamaica Kennon, SHA-PPD Mr. Joseph R. Kresslein, SHA-PPD Mr. Joseph R. Kresslein, SHA-PPD Mr. Kirk McClelland, SHA-OHD Mr. John Nichols, USMFS Mr. Bob Simpson, Montgomery County Ms. Cynthia Wilkerson, NPS Ms. Bihui Xu, MDP





Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor

John D. Porcari Secretary

Parker F. Williams Administrator

MEMORANDUM

- TO: Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering
- FROM: Carmeletta T. Harris Project Engineer & Project Planning Division

Jamaica Kermer for

- DATE: February 19, 2002
- SUBJECT: MO746B11 MD 97 Brookeville Project Montgomery County
- RE: January 17, 2002 Smart Growth Meeting

The meeting began with brief introductions. The following people were in attendance:

NAME	ORGANIZATION	PHONE	EMAIL
John Frece	Office of Smart Growth	4109745292	Jfrece@gov.state.md.us
Bruce Grey	SHA-PPD	4105458540	Bgrey@sha.state.md.us
Don Halligan	MDOT	4108651294	Dhalligan@mdot.state.md.us
Dan Hardy	M-NCPPC	3014954530	Dan.hardy@mncppc-mc.org
Carmen Harris	SHA-PPD	4105458522	Charris@sha.state.md.us
Melissa Kosenak	SHA-PPD	410545816	Mkosenak@sha.state.md.us
Joe Kresslein	SHA-PPD	4105458550	Jkresslein@sha.state.md.us
Rich Kuzmyak	Office of Smart Growth	4107672631	Rkuzmyak@gov.state.md.us
Shannon Rousey	SHA-PPD	4105452864	Srousey@sha.state.md.us
Cynthia Simpson	SHA-PPD	4105458500	Csimpson@sha.state.md.us
Ed Strocko	MDOT	4108651307	Estrocko@mdot.state.md.us
Denise Winslow	FHWA	4109624342	Denise.winslow@fhwa.dot.gov
Jim Wynn	SHA-PPD	4105458520	Jwynn@sha.state.md.us
Bihui Xu	MDP	4107859528	Bxu@mdp.state.md.us
			-

The purpose of the meeting was to verify that the MD 97 Brookeville alternates complied with the Smart Growth criteria designated for this project.

My telephone number is ____

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Carmen Harris began by reviewing the Smart Growth Criteria designated for the MD 97 Brookeville Project and how they have been addressed. The criteria are as follows:

- "Under local ordinance, the county is to adopt, through appropriate enforceable action, restrictions that will prevent the bypass from allowing sprawl development. Any capacity a bypass might add to the network cannot be used to allow development outside the current boundaries of the Town of Brookeville." Montgomery County has amended their Annual Growth Policy to discourage growth along the alternates.
- 2) "A permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure that no future access, widening, or connection to the bypass is possible." SHA currently drafting a Letter of Agreement for MET."
- "If for any reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass."
 - Hopefully will not need to be addressed.
- "Montgomery County, the Maryland department of transportation and Howard County Governments must work out a safe traffic calming point north of the bypass to limit future traffic tot he current capacity of MD 97 through Brookeville." Accomplished with the design of roundabouts north of Brookeville.

Ms. Harris then summarized the citizen comments including testimony given at the October 3rd Location/Design Public Hearing. Citizen testimony and comments supported both alternates 7 and 8B.

Ms. Harris then reviewed the alternates. She explained that at the December 13th Team Meeting, the Team agreed to drop alternates 5C and 8A from consideration for several reasons, including cost, environmental impacts, and socio-economic impacts. Therefore, at this point, we are carrying both alternate 7 and alternate 8B. The COE is agreeable to either alternate 7 or 8B.

Ms. Harris stated that the purpose of this meeting was to get input from the Maryland Department of Planning (MDP), the Governor's Office of Smart Growth and MDOT verifying that both alternates 7 and 8B complied with the Smart Growth criteria set forth for this project.

Ms. Xu stated that MDP supported alternate 8B because they did not think that alternate 7 complied with the Smart Growth Criteria. In addition, she commented that MDP had concerns about potential high speeds on the bypass. Posted speed of the bypass would be between 35 mph and 40 mph for any of the alternates.

Rich Kuzmyak stated that he did not think that any of the proposed alternates would cause an increase in speed along the bypass.

John Frece stated that the Governor's Office of Smart Growth agrees that all four alternates comply with Smart Growth. Mr. Frece also stated that Condition #3, "If for any

MD 97 Brookeville Smart Growth Meeting January 17, 2002 Page 3

reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass" would be very difficult to enforce. He suggested putting on paper how this condition would be enforced.

Mr. Kuzmyak stated that from a transportation standpoint, alternate 7 makes the most sense and could potentially better calm traffic than alternate 8B. Ms. Harris stated that alternate 7 cuts the Mill Race in half whereas alternate 8B could cross over the Mill Race.

Ms. Xu stated that she would support traffic calming measures such as narrower lane widths along the bypass. She also reiterated her position that although alternate 7 is relocating the access to Brookeville, that it is a still an access to Brookeville, therefore she does not believe that it complies with the Smart Growth criteria for this project.

Other issues associated with alternate 7 include the disruption to the rural and rustic nature of Brookeville Road that a roundabout would create. As well as the potential increase in east west traffic along Brookeville Road.

Dan Hardy stated that preliminarily, he would support alternate 7, however, he wanted to know more about the impacts to the Mill Race before he would formally give a preference.

SHA staff will prepare a cost estimate for Phase II Archeology.

Denise Winslow stated that at this time, FHWA legal was leaning toward alternate 7 due to the visual impacts to the historic district caused by alternate 8B. However, FHWA has not yet had the opportunity to review issues related to the Mill Race.

The team agreed to look into a revised alternate 7 that would be located further from Islander Street and have less impact on the Mill Race.

The team agreed that neither a four-way stop nor a fly over ramp were reasonable. The team also agreed that the bypass should not allow for future widening of MD 97 either north or south of the study area.

Ms. Xu stated that she would revisit the alternate with her staff in light of the Governor's Office of Smart Growth verifying that all four alternates comply with the Smart growth criteria set forth for this project.

FOLLOW UP ITEMS:

SHA will look into a revised alternate 7 that would be located further from Islander Street and have less impact on the Mill Race.

SHA will prepare a cost estimate for Phase II Archeology.



Robert L. Ehrlich, Jr., Governor Michael S. Steele, Lt. Governor Robert L. Flanagan, Secretary Neil J. Pedersen, Acting Administrator

MEMORANDUM:

TO:	Ms. Cynthia D. Simpson Deputy Director Office of Planning and
	Preliminary Engineering
FROM:	Carmeletta T. Harris Project Manager Project Planning Division

DATE: March 25, 2003

- SUBJECT: MD 97 Brookeville Project Montgomery County Project No. MO746B11
- RE: Meeting with USCOE, USF&WS, MDE to discuss mitigation at Reddy Branch.

A meeting was held on Wednesday, March 19, 2003 in the Project Planning Conference Room. The purpose of the meeting was to discuss mitigation requirements, and the proposed structure over Reddy Branch with the resource agency representatives for the MD 97 Brookeville project. More specifically, the meeting focused on comments made at the Interagency Review Agency regarding wildlife passage mitigation.

Those in attendance included the following:

Mr. Nick Blendy, SHA-PPD Ms. Danelle Bernard, SHA-Bridge Design Mr. Joe DaVia, Army COE Ms. Carmeletta Harris, SHA-PPD Mr. Steve Hurt, consultant for MDE Ms. Karen Kahl, RK&K (via conference call) Mr. Bill Schultz, USF&WS Mr. Alvaro Sifuentes, SHA-PPD Mr. Paul Wettlaufer, Army COE Mr. Jim Wynn, SHA-PPD

> My telephone number/toll-tree number is _______ Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toil Free

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MD 97 Brookeville Project In-House Agency meeting Page 2

Carmeletta Harris explained to the group the status of the proposed bridge design focusing on the Comparison of Alternate 7M with Different Grades matrix that was distributed (See Attachment). SHA's recommended design at Reddy Branch stream is the 0.8% grade that allows for a horizontal clearance of 25' and a vertical clearance of 8.5' for wildlife passage on the south side of the structure and a horizontal clearance of 10' on the north side of the Reddy Branch stream structure. Paul Wettlaufer of the US Army Corps pf Engineers (ACOE) and Bill Schultz of the USF&WS had earlier commented that both were under the impression that the desired vertical clearance was on the north side of the alignment. Carmen explained that the 8' clearance on the south side of the bridge was discussed at the September 2002 agency field view and thought that SHA had received verbal approval by representatives from the agencies.

Karen Kahl via conference call, explained that an 8'vertical clearance on the north side of the structure at Reddy Branch Stream would not be able to be achieved using the 0.8% grade that was developed to minimize overall impacts and costs. Discussions regarding engineering criteria and drainage associated with roadway tie-ins including the roundabout, balancing earthwork, and the potential for additional impacts to the nearby wetland and the archaeological site.

Jim Wynn offered that SHA and RK&K would evaluate the vertical clearance on the north side of the structure at Reddy Branch. Karen reminded everyone that the conceptual engineering is based on 2 foot contour mapping and this needs to be considered. It was agreed that an engineering comparison of reduced grades and possibly shift of the structure would occur, in addition, Karen would provide an analysis sheet that would include the environmental impacts.

Additional items discussed included the potential for reducing the slope of the stream embankment along the south side of Reddy Branch to encourage deer passage to paths of least resistance rather than any consideration of fencing or ditching that could impact the historic setting. If the results from the study show that the northern clearance cannot be achieved, the flattening of the slopes of the stream embankment along the south side would be use as mitigation and would be included in the SHA Selected Alternate and Conceptual Mitigation Package.

It was also agreed that the removal of the existing MD 97 Bridge near Reddy Branch would benefit wildlife passage along both sides of the Reddy Branch stream and should be consistent with MNCPPC's overall plans for the area. The ACOE would still like to have MNCPPC agreement on proposed mitigation. Nick Blendy indicated that this is ongoing for wetland mitigation and stream restoration, and possibly the wildlife passage issue depending on the timing and outcome of RK&K's bridge elevation comparison. MD 97 Brookeville Project In-House Agency meeting Page 3

Carmen requested that RK&K provide preliminary results by March 27th. It was also agreed that SHA would contact the agencies to discuss the results of the findings with respect to the north side evaluation of the proposed Reddy Branch Stream structure. As appropriate, this information would be incorporated into the final SHA Selected Alternate and Conceptual Mitigation Package in April.

cc: File w/incoming

Attendees

Mr. Bruce Grey, Deputy Division Chief, State Highway Administration

Ms. Susie Ridenour, Division Chief, Environmental Programs Division, State Highway Administration

Mr. James Wynn, Assistant Division Chief, State Highway Administration

.



Robert L. Ehrfleh, Jr. Governor Michael S. Steele, Ll. Governor Robert L. Flanagan, Secretary Nell J. Pedersen, Acting Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION

MEMORANDUM

- TO: Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering
- FROM: Wanda J. Brocato Project Planning Division
- DATE: March 28, 2003
- SUBJECT: Interagency Review Meeting Follow-up

The following projects and/or topics presented at the March 19 Interagency Review (IAR) Meeting require follow-up coordination with the review agencies:

Project Presentations

MD 97 Brookeville - Selected Alternative/Conceptual Mitigation

- Federal Highway Administration (FHWA) (Denise King) needs to ask ACHP if they want to be a participant in the MOA. State Highway Administration (SHA) (Carmen Harris/Nick Blendy) will send Denise an information package for the ACHP.
- U.S. Army Corps of Engineers (COE) (Paul Wettlaufer) will concur with this package, but will need a letter from MNCPPC approving exact locations of mitigation on their property before the COE would issue a permit. U.S. Fish and Wildlifé Service (USFWS) (Bill Schultz) will also need a copy of the letter from MNCPPC approving exact locations of mitigation on their property. SHA (Carmen Harris/Nick Blendy) will follow-up on this matter.
- COE (Paul Wettlaufer) requested that the wildlife bench be put on the north side, not the south side. USFWS (Bill Schultz) supported this and indicated that this could affect his submitted concurrence. SHA (Carmen Harris) will take another look at this matter and get back with the agencies.

My telephone number/toll-free number is Maryland Itelay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Hume 410.545.0300 • www.marylandroads.com Ms. Cynthia D. Simpson Page 2

If you have any questions about this, please contact me at (410) 545-8569.

WJB

cc:

SHA Mr. Nick Blendy Mr. Joseph Finkle Mr. Bruce Grey Ms. Carmen Harris Ms. Susie Jacobs Mr. Joseph Kresslein Ms. Gay Olsen Ms. Sue Rajan Ms. Cathy Rice Mr. Darrell Sacks Mr. Robert Sanders Mr. Douglas Simmons Mr. Donald Sparklin Ms. Lorraine Strow Mr. Jim Wynn

AGENCIES

Mr. Mohammed Ayub (MDE) Mr. Phillip Bello (FHWA) Mr. Harvey Bloom (BMC) Mr. David Boellner (MDE) Ms. Caryn Brookman (FHWA) Mr. Rich Bulavinetz (COE) Ms. Elizabeth Cole (MHT) Mr. Bob Cooper (MDE) Mr. Joseph DaVia (COE) Mr. Joseph DaVia (COE) Mr. Steve Elinsky (COE) Mr. Elder Ghigiarelli (MDE) Mr. Greg Golden (DNR) Mr. J. Hamilton (MDE) Mr. Steve Harman (COE) Ms. Fatimah Hasan (MDOT) Ms. Cynthia D. Simpson Page 3

cc: (Continued)

CONSULTANT

Ms. Noreen Kirkpatrick (G&O)

AGENCIES Ms. Susan Hinton (NPS) Ms. Lisa Hoerger (DNR-CBCAC) Mr. Larry Hughes (DNR) Ms. Mary Huie (FHWA) Mr. Steve Hurt (MDE) Mr. Dan Johnson (FHWA) Ms. Denise King (FHWA) Mr. Ron Kirby (MWCOG) Mr. Roland Limpert (DNR) Ms. Dawn McCleary (DNR-CBCAC) Mr. Sean McKewen (MDE) Ms. Jennifer Moyer (COE) Ms. Cindy Nethen (MDE) Mr. John Nichols (NMF) Mr. Robert Pennington (USFWS) Mr. David Reynolds (NPS) Ms. Denise Rigney (EPA) Ms. Barbara Rudnick (EPA) Mr. Bill Schultz (USFWS) Mr. Scott Smith (DNR) Ms. Jamie Stark (EPA) Ms. Esther J. Strawder (FHWA) Mr. David Sutherland (USFWS) Mr. Paul Wettlaufer (COE) Mr. David Whitaker (MDP) Ms. Bihui Xu (MDP)

Mr. Robert Zepp (USFWS)



MD 97 BROOKEVILLE Transportation Study

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Attachment 2- May 1, 2003 MNCPPC correspondence to SHA Attachment 3- March 19, 2003 meeting minutes-March 21, 2003 Memorandum Attachment 4- USF&WS concurrence of draft SACM package

May 20, 2003

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PURPOSE AND NEED

The purpose and need for this project is to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

Existing Conditions

Brookeville is a unique town because of its relatively unaltered period architecture; it's pristine and tranquil setting and its tie to our country's history. Currently, Brookeville's quaint, curving streets and enveloping trees distinguish the area from the modern and encroaching development of areas such as Olney. Brookeville residents are concerned that the resulting traffic volume increases will alter the historic character of their town.

MD 97 is an arterial highway serving the east Montgomery County corridor and central Maryland from Washington, D.C. and the Capital Beltway to I-70 in Howard County. MD 97 is functioning as a major north-south commuter route between the employment areas in and surrounding Washington, D.C. and the residential communities north of Brookeville, including upper Montgomery County, Howard, and Frederick counties.



In Brookeville, MD 97 has a sharp "dog-leg" bend in its horizontal alignment accompanied by sharp curves in its vertical alignment. The resulting geometrics are substandard in design. North of the study area, MD 97 is a two-lane roadway with 11 to 12 foot lane widths, with 0 to 5 foot shoulders and right-of-way widths of 40 feet. However, less than one mile south of the study area (southern project limit, see Figure 1) traffic demand has necessitated the improvement of MD 97 to a multi-lane divided roadway from Olney to Washington, D.C. No access controls are in place.

Traffic

Average Daily Traffic

Average Daily Traffic (ADT) volume along the MD 97 study section for 1995 was approximately 9,000 vehicles per day (VPD) south of Brookeville and 8,500 VPD north of Brookeville. Trucks account for 5% of the traffic volume. The forecasted ADT for the design year 2020 is approximately 18,000 VPD south of Brookeville and 17,000 VPD north of Brookeville.

Level of Service

Based on 1996 traffic data, MD 97 currently operates at a Level of Service (LOS) "C" north of Brookeville and "D" south of Brookeville under current traffic conditions. In the design year of 2020 the roadway will operate at a LOS "D" north of Brookeville and "E" south of Brookeville.

The "T" intersection operates at a LOS "D" which indicates long queues of vehicles waiting in turn to pass through the intersection. The LOS, together with the "stop" controlled intersection, results in the degradation of Brookeville's historic character and small town ambiance as the vehicles waiting in queue contribute to both noise and air pollution. Several structures that contribute to the historic integrity of the town are situated very close to the roadway. Air pollution is a potential source of deterioration to the exterior of several structures. In addition, vibrations from the passing traffic endanger the integrity of these structures.

Accident History

The accident history from 1991 to 1993 in the project area shows a total of 25 reported accidents. The total average accident rate for the study area was 140.1 accidents for every one hundred million vehicle miles of travel (acc/100mvm). This accident rate is approximately 27% lower than the statewide average rate of 192.5 acc/mvm for all similarly designed highways now under state maintenance.

Approximately 33% of all accidents resulted from rear end collisions, 25% from collisions with fixed objects, and 10% from collisions with parked cars. None of these rates are significantly higher than the statewide average rate for each type of collision. Of the total number of accidents, 52% involved personal injuries and 48% involved some property damage. There were no fatal accidents within the study area. Approximately

60% of all of the accidents reported were the result of excessive speed or a failure to reduce speed. The rear end accidents and failure to reduce speed are certainly contributed to the stop condition along MD 97.

ALTERNATES PUBLIC WORKSHOP

The Maryland State Highway Administration (SHA) held an Alternates Public Workshop on June 8, 2000 at the Rosa M. Parks Middle School. The purpose of the workshop was to inform the public that the project had been re-initiated, to present the compliance criteria that is consistent with the intent of the Smart Growth legislation, to reintroduce the public to the alternates previously presented and to gather public input on new alternates that were developed. The SHA presented concepts for public comment and representatives from SHA, the Town of Olney, and Montgomery County received comments and answered questions asked by those in attendance. Approximately 117 people attended the Public Workshop.

Following the Alternates Public Workshop, SHA, in coordination with the Federal Highway Administration (FHWA), reviewed both citizen and agency comments to determine which alternates should be studied in detail and which alternates should be eliminated.

ALTERNATES RETAINED FOR DETAILED STUDY

Based on comments received from Federal and State agencies, alternates were identified for detailed study. The Alternates Retained for Detailed Study (ARDS) were developed in more detail and presented in the Draft Environmental Impact Statement (DEIS) circulated in Summer 2001. The alternates are described below. In addition to these alternates, SHA agreed to modify the existing roadway profile for MD 97 just north of Holiday Drive to improve the intersection sight distance for vehicles exiting Holiday Drive. By slightly raising the grade of MD 97 through a short sag curve, the motorist will have a longer sight distance and the approaching vehicles will not disappear from the line of sight. This improvement will be included with all of the alternates, as well as the No-Build.

Alternate 1: No-Build

Under Alternate 1 (the No-Build Alternate), the existing two-lane, undivided roadway would remain with shoulder widths ranging from zero to four feet from Gold Mine Road to 100 feet south of the intersection with Market Street. A small portion of MD 97 between the intersections of Market Street and Brookeville Road is currently a 25-foot, closed section roadway with a small sidewalk along the northbound roadway extending from 200 feet south of the T-intersection to 150 feet north of the T-intersection. Sidewalks are on both sides of Market Street from the T-intersection up to the eastern town limits.

Minor improvements would be made to MD 97 as part of regular maintenance and safety operations; however, routine maintenance operations would not measurably affect the roadway capacity or relieve the roadway's congestion. The quality of life for the Town of Brookeville would not be enhanced by the selection of the No-Build Alternate because commuter through traffic would continue to deteriorate the Town of Brookeville.

Alternate 1 does not address the Purpose and Need of the project, which is to remove the continually increasing traffic volumes from the Town of Brookeville, improve traffic operations and safety on existing MD 97, and preserve the historic character of the town.

Alternate 5C: Eastern Bypass

Alternate 5C provides a 2.12-mile long bypass for commuter traffic on the east side of Brookeville. Existing MD 97 through town would be used predominantly for local, intown traffic. Figure 2 in the appendix shows that this alignment departs from existing MD 97 in a northeasterly direction near Gold Mine Road and then turns to the north approaching Brighton Dam Road and Reddy Branch. It crosses over both of these at a point where the Reddy Branch is parallel to Brighton Dam, a location suggested by the Corp of Engineers (COE) and United States Fish and Wildlife Service (USFWS). Alternate 5C continues north, crossing over Lubar Drive and proposed Bordly Drive, and passes underneath the PEPCO transmission lines. It turns northwest and rejoins existing MD 97 north of the proposed Bordly Drive in the vicinity of the Hawlings River Steam Valley Park.

Alternate 5C is consistent with the Smart Growth criteria, because roundabouts will be added to the southern and northern termini as part of the detailed studies. Alternate 5C, however, is not compatible with local comprehensive planning in that both the 1994 Brookeville Comprehensive Plan and the 1980 Olney Master Plan include an alignment to the west of Brookeville. Alternate 5C addresses the Purpose and Need of the project, but requires the most right-of-way acquisitions from properties because residential development occurs east of the Town of Brookeville, Alternate 5C would result in one business and five residential relocations south of Brighton Dam Road.

Although Alternate 5C avoids right-of-way impacts to the Brookeville Historic District, it has an adverse impact to the viewshed of the District. It has the least amount of impacts to the Reddy Branch Stream Valley Park but is the only alignment that impacts the Hawlings River Stream Valley Park (1.8 acres). Alternate 5C is the lengthiest alternate and the most expensive, costing approximately \$34 million.

Alternate 7: Western Bypass

Alternate 7 provides a 0.72-mile long bypass for commuter traffic on the west side of Brookeville. Existing MD 97 through town would be used predominantly for local, intown traffic. Figure 3 in the appendix shows this proposed alignment. Alternate 7 departs from existing MD 97 just south of the Longwood Community Center and heads in a northwesterly direction. It passes through a roundabout located near the northern edge of the Longwood Community Center. The roundabout provides access to existing

MD 97 and the Town of Brookeville. Access to Brookeville would be via the northeast side of the roundabout. Alternate 7 exits from the roundabout in a northwesterly direction and continues through the Maryland National Capital Park and Planning Commission (MNCPPC) property, which is reserved for transportation use (near Dubarry Drive and Rena Court), and through the Reddy Branch Stream Valley Park. It crosses Brookeville Road west of existing MD 97 at a roundabout and then continues in a northeast direction. The roundabout at Brookeville Road has four legs, two for the bypass and two for Brookeville Road. The alternate connects to existing MD 97 north of the intersection with Brookeville Road. The portion of existing MD 97 between this new connection and the Reddy Branch bridge would be closed. It has not been determined if the MD 97 bridge over Reddy Branch Stream will be removed in conjunction with the closing of this portion of MD 97. The Maryland Historical Trust (MHT) determined that this bridge was not National Register Eligible in 1998. Consequently, southbound motorists destined for the Town of Brookeville must pass through the roundabout at Brookeville.

Alternate 7 is the least expensive alternate with an estimated cost of \$12 million. Alternate 7 addresses the Purpose and Need of the project. It also requires the least amount of right-of-way from properties.

Alternate 8A: At-Grade Western Bypass

Alternate 8A provides a 0.95-mile long bypass for commuter traffic on the west side of Brookeville (west of Alternate 7). Existing MD 97 through town would be used predominantly for local, in-town traffic. Alternate 8A, shown on Figure 5 in the appendix, begins in the same location as Alternate 7. Alternate 8A departs from existing MD 97 just south of the Longwood Community Center and heads in a northwesterly direction. It passes through a roundabout located near the northern edge of the Longwood Community Center. The roundabout provides access to existing MD 97 and the Town of Brookeville. Alternate 8A continues northwest through the MNCPPC transportation easement property and through the Reddy Branch Stream Valley Park. Alternate 8A crosses Brookeville Road approximately 900 feet west of existing MD 97 at a three-leg roundabout (two for the bypass and one for Brookeville Road to/from the west).

Alternate 8A continues northeast (from the Brookeville Road roundabout) and connects to another roundabout located north of the Brookeville Road roundabout. This northern three-legged roundabout connects to existing MD 97 from the north, the bypass from the southwest, and the in-town portion of MD 97 from the southeast.

Existing Brookeville Road from south of the roundabout to its intersection with MD 97 would be closed. It has not been determined whether the structure on Brookeville Road over Meadow Branch will be removed in conjunction with the closing of this portion of Brookeville Road. Additional evaluation will be completed in consultation with the local jurisdiction in detailed design. Consequently, eastbound motorists on Brookeville Road destined for the Town of Brookeville must pass through the northern roundabout.

The estimated cost for Alternate 8A is \$18 million. Alternate 8A also addresses the Purpose and Need of the project.

Alternate 8B: Grade-Separated Western Bypass

Alternate 8B would follow a similar alignment to Alternate 8A between the Longwood Community Center and Brookeville Road. The alignment crosses Brookeville Road on a curved bridge. Figure 6 shows the alignment of Alternate 8B. Access to MD 97 and Brookeville Historic District via Brookeville Road would remain unchanged. Similar to Alternate 8A, the alignment continues northeast and connects to a three-legged roundabout located north of Brookeville Road. This northern three-legged roundabout connects to existing MD 97 from the north, the bypass from the southwest, and the intown portion of MD 97 from the southeast.

The estimated cost for Alternate 8B is \$18 million. Alternate 8B addresses the Purpose and Need of the project.

COMBINED LOCATION/DESIGN PUBLIC HEARING

The SHA held a Combined Location/Design Public Hearing on October 3, 2001 at the Rosa M. Parks Middle School. The purpose of the Combined Location/Design public hearing was to present the results of the engineering and environmental studies completed for the MD 97 Brookeville project and to provide an opportunity for interested individuals, association, citizen groups or government agencies to offer verbal or written comments. Twenty-three people provided public testimony and seventeen people provided written comments. Out of the forty total public comments (oral and written comments) sixty-eight percent supported a build alternate of some type. Thirty-nine percent of the Public Hearing speakers supported Alternate 7 (Western Bypass) and nine percent supported Alternate 8B (Grade Separated Western Bypass). There was no support for Alternate 5C (Eastern Bypass). No one supported Alternate 8A (At-Grade Western Bypass).

Of the seventeen written comments received, thirty five percent supported Alternate 8B (Grade Separated Western Bypass), thirty percent supported Alternate 7 (Western Bypass) and twelve percent supported Alternate 5C (Eastern Bypass). There was no support for Alternate 8A (At-Grade Western Bypass).

Following the Combined Location/Design Public Hearing further studies were developed regarding the Newlin Downs Mill Complex archeological site located in the historic district south of Brookeville Road. As a result of the Phase II archeological findings, Alternate 7 Modified was developed to minimize impacts to the archeological site. The SHA Selected Alternate is Alternate 7 Modified and is described on page 10.

ALTERNATES NOT SELECTED

<u> Alternate I – No Build</u>

Alternate 1 (No-Build) was not selected because it does not satisfy the purpose and need. Minor improvements for normal traffic maintenance and safety operations will not improve the degrading roadway capacity. The quality of life for the Town of Brookeville would not be enhanced by the selection of the No-Build Alternate because commuter through traffic would continue to deteriorate the quality of life in the historic Town of Brookeville.

<u>Alternate 5C – Eastern Bypass</u>

Alternate 5C was not selected because of substantially higher project cost, lack of public support, and greater stream, wetland and prime farmland soil impacts. Alternate 5C is the only alternate that impacts two public parks (Hawlings River Stream Valley and Reddy Branch). Alternate 5C bisects Reddy Branch Park east of Brookeville. Alternate 5C also lacks compatibility with the local Comprehensive Plans and is the only Alternate that will result in both residential relocations (5) and a business displacement (1). The cost of Alternate 5C, \$34 million, nearly doubles the \$18 M cost of the most expensive western alignment Alternate 8B and is more than twice the estimated \$12.5 million cost of the Selected Alternate 7 Modified. Only three (out of 40) comments received at the Combined Location/Design Public Hearing expressed support for Alternate 5C with approximately 20 of the 40 total public comments indicating opposition to Alternate 5C.

<u>Alternate 7 – Western Bypass</u>

Alternate 7 was not selected because it resulted in the greatest impact to the Brookeville Historic District (2.2 acres compared to 1.66 acres for Alternate 7 Modified) and the Newlin/Downs Mill Complex archeological site. An element of the Purpose and Need for the project is to preserve the historic character of the town.

Alternate 8A - At-Grade Western Bypass

Alternate 8A was not selected because of the lack of public support. There was no support for Alternate 8A at the Combined Location/Design Public Hearing. Alternate 8A also serves the same function as Alternate 7 by removing the traffic flow from the Town of Brookeville and removing the traffic out of the Town of Brookeville. Alternate 8A was also not selected because it is more expensive (about \$1.5 million) than Alternate 7 Modified despite comparable environmental impacts.

Alternate 8B - Grade Separated Western Bypass

Alternate 8B was also not selected because of higher cost, environmental impacts, including the impact to the view-shed of the historic district resulting from the grade separation over Brookeville Road and increased noise in the Town of Brookeville. The

elevated structure is within sight distance from the historic district; a concern expressed by many citizens of Brookeville. In addition, the estimated \$18.5 million cost of Alternate 8B was approximately \$5.8 million greater than Alternate 7 and about \$5.5 million greater than the Selected Alternate 7 Modified.

DESCRIPTION OF SHA-SELECTED ALTERNATE

The SHA Selected Alternate is Alternate 7 Modified, with points of access occurring at roundabouts at Brookeville Road and the southern termini just north of Gold Mine Road. Alternate 7 Modified is similar to Alternate 7 (see Figure 3) except that Alternate 7 Modified is shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Stream Valley Park between the roundabout located at Brookeville Road and the area north of Dubarry Drive (see Figure 4). A retaining wall will be placed on the south side of Brookeville Road, east of the roundabout to further minimize impacts to the Mill Complex wheel race platform due to the close proximity of the proposed alignment.

Alternate 7 Modified continues in a northeasterly direction crossing Brookeville Road west of existing MD 97 at a roundabout and then continues to the northeast. The roundabout at Brookeville Road has four legs, two legs for the bypass (through traffic) and two legs for access westbound and eastbound on Brookeville Road. The alternate connects to existing MD 97 north of the roundabout at Brookeville Road. A portion of existing MD 97 north of Brookeville Road would be closed. It has not been determined whether the MD 97 existing structure over Reddy Branch Stream will be removed in conjunction with the closing of this portion of MD 97. Consequently, southbound motorists destined for the Town of Brookeville must pass through the roundabout at Brookeville Road to access existing MD 97 in town.

Alternate 7 Modified has a design speed of 40 miles per hour. Alternate 7 Modified has an open typical section, which consists of two 11' lanes, two 10' shoulders (5' paved for bicycle compatibility and 5' graded). Open and closed roadway sections were evaluated for the DEIS Build Alternates. The SHA has selected the open section for Alternate 7 Modified (see Figure 7) because existing MD 97 is an open section and this is consistent with both the northern and southern tie ins with existing MD 97 (see Figures 8 and 9).

Alternate 7 Modified has an estimated cost of \$12.5 million (see Table ES-1)

In addition to these alternates, SHA agreed to modify the existing roadway profile for MD 97 just north of Holiday Drive to improve the intersection sight distance for vehicles exiting Holiday Drive. By slightly raising the grade of MD 97 through a short sag curve, the motorist will have a longer sight distance and the approaching vehicles will not disappear from the line of sight (see Figure 4).

SMART GROWTH CRITERIA

The Alternate 7 Modified alignment for the proposed MD 97 Brookeville project lies outside the county defined Priority Funding Areas (PFA) under Maryland's Smart

only 0.12 ac of impacted wetlands. Although the \$12.5 million dollar cost is slightly higher than Alternate 7, Alternate 7 Modified was developed to minimize impacts to the historic Newlin/Downs Mill archaeological site, as explained previously.

Based on these findings, it can be concluded that the SHA selected Alternate 7 Modified is the least environmentally damaging practical alternate of those identified in the DEIS. Please refer to appended Table ES-1 for a summary of the following impacts:

Natural Environmental

Wetlands and 100-year floodplains are associated with Meadow Branch, Reddy Branch, and tributaries of Hawlings River. These streams, in the Hawlings River sub-watershed of the Patuxent River watershed, are Use IV waters (Recreational Trout) and may require an in-stream work restriction from March 1 to May 31. Each build alternate would impact less than one-quarter acre of wetlands. Alternate 7 Modified (SHA Selected Alternate) would cross two streams, Meadow Branch and Reddy Branch with impacts of approximately 1,339 linear feet. Alternate 7 Modified would impact 3.2 acres of floodplain. The MDE has recommended that all stream channels be maintained.

There are no known state or federally listed threatened or endangered species identified within the study area. The shingle oak (*Quercus imbricaria*) has been identified to the west of the Town of Brookeville and south of Brookeville Road. The shingle oak tree is considered uncommon in Maryland and is on the Maryland Department of Natural Resource's (DNR) "watch list" as a candidate for listing as a state threatened species. Based on preliminary field views, it is estimated that approximately 20 smaller diameter shingle oak trees would be impacted by Alternate 7 Modified. SHA will continue to coordinate with DNR and, as necessary during final design and construction, attempt to avoid larger species and include shingle oaks as part of reforestation mitigation.

Wildlife Passage

Based on comments from the agencies, the proposed structure over Reddy Branch Stream near the roundabout located on Brookeville Road (as shown on Figure 4 in the appendix) will be designed to accommodate wildlife passage. This bridge alignment will meet the minimum requirements preferred by USFWS, DNR, COE, and MNCPPC which consisted of a minimum of an 8-foot vertical clearance with a 25-foot embankment on the same side. Based on non-surveyed contour mapping, SHA recommended the south side for wildlife passage in the draft Selected Alternate and Conceptual Mitigation Package dated February 2003. In response to COE and USFWS comments at the March 19, 2003 IAR, additional evaluations were made for the north side passage. It was concluded that the north side may be possible however a final decision will need to await accurate ground surveys as part of project design. The design goal will be the agreed to 8 ft. vertical and 25 ft. horizontal clearance on one side, preferably along the north side of Reddy Branch. The COE has also suggested that SHA also consider a south side sloped pathway towards the stream to establish a path of least resistance for deer passage along the south side. Should topographic conditions not allow for adequate clearance along the

north side, the south side passage will be pursued by SHA as part of final project design. In the interim, coordination will continue with the resource agencies.

Publicly Owned Parks and Recreation Areas

Three publicly owned public parks are located within the study limits: Hawlings River Park, Reddy Branch Stream Valley Park, and the Longwood Community Center. Although the Longwood Community Center is a publicly owned recreational facility subject to the 4(f) criteria, the portion of the property that will be impacted by the alternates was reserved for transportation use when the recreational facility was initially planned and therefore is not provided protection under Section 4(f) of the Department of Transportation Act of 1966.

During the development of the alternates, SHA agreed to avoid impacts to the Longwood Community Center ball fields in the southwest corner of the southern roundabout. There was also an agreement to provide guardrail and screening or fencing to protect both vehicles and children. All of the build alternates would impact the Reddy Branch Park. However, Alternate 5C also impacted the Hawlings River Stream Valley Park. Alternate 7 Modified the SHA Selected Alternate, impacts 5.62 acres of Reddy Branch Park.

Historic Resources

Standing Structures

The Town of Brookeville is listed on the National Register of Historic Places as a historic district. Coordination with the MHT indicates that each of the five build alternates would have an adverse effect on the Brookeville Historic District. Alternate 5C would not require any right-of-way from the Brookeville Historic District. Alternate 7, Alternate 7 Modified, Alternate 8A, and Alternate 8B would impact approximately 2.2 acres, 1.66 acres, 1.84 acres, and 2.0 acres of right-of-way, respectively, within the Brookeville Historic District including crossings of the half-mile long man-made Oakley Cabin Trail which runs along an old mill race to the south of Brookeville Road.

A Section 106 Memorandum of Agreement (MOA) has been drafted to address the adverse effects of Alternate 7 Modified. It describes mitigation, including design of a landscape plan, the development and placement of an interpretative sign at the Newlin/Downs Mill Complex and ensuring the continuity of the man-made Oakley Cabin Trail in the design of Alternate 7 Modified.

The National Register Eligible Bordley's Choice is located just north of the Brookeville Historic District. Coordination with the MHT indicated that Alternate 5C has no adverse effect on the Bordley's Choice historic site. MHT has also concurred that Alternate 7, Alternate 7 Modified, Alternate 8A, and Alternate 8B would have no adverse effect on Bordley's Choice.

Archeological Sites

Two archeological sites have been identified within the project area. The Newlin/Downs Mill Complex (18MO368) at the intersection of Brookeville Road and MD 97 (2 acres) and two domestic structures (18MO460) near Longwood Community Center. A Phase II archeological study was required to evaluate their significance and was completed on July 8, 2002.

Site 18MO460 is the remains of a 19th and 20th century domestic occupation associated with the historic village of Brookeville. Phase II evaluation of the site was conducted in March and April 2002. These investigations determined that 18MO460 does not qualify for inclusion on the National Register of Historic Places. Concurrence in these findings by the MHT was received on November 6, 2002.

Site 18MO368 is the remains of the 18th - 19th century Newlin/Downs Mill complex containing numerous architectural features and artifact deposits related to the mill as well as the miller's residence and a millrace system, and as such could contribute important information concerning the industrial economy and community planning in the Maryland Piedmont during a time period characterized by agrarian intensification and internal improvement (1780 –1860). Direct impacts were anticipated with Alternates 7, Alternate 7 Modified, Alternate 8A, Alternate 8B, as the linear site could not be avoided by any of these four proposed western alternates. The MHT concurred that Phase II evaluation of 18MO368 was warranted to conclusively determine its eligibility to the National Register of Historic Places if any alternate were selected.

Phase II evaluation of the site was conducted in March and April 2002. These investigations determined that Site 18MO368 is significant both individually and as a contributing resource to the Brookeville Historic District.

Under Alternate 7 Modified, approximately 5% of Site 18MO368 will be impacted, the mill race system will be affected, but not the identified features and significant archaeological deposits of the site associated with the mill and miller's house. Approximately 700 linear feet of the mill race system will be impacted by Alternate 7 Modified. Phase III data recovery is recommended if the site cannot be avoided during design of Alternate 7 Modified.

On November 6, 2002 the MHT concurred with SHA's eligibility evaluations for the archeological sites and confirmed the adverse effect determination on Site 18MO368. MHT also concurred that the site can be mitigated through data recovery. Section 4(f) does not apply as MHT's concurrence includes agreement that the site does not warrant preservation in place.

<u>Socio-Economic</u>

The existing land use in the project area is a combination of residential, agricultural, and parkland. There are no anticipated land use changes as the result of this project. In addition, the relocation of MD 97 is identified in the 1980 Olney Comprehensive Plan and the 1994 Brookeville Comprehensive Plan.

Alternate 7, Alternate 7 Modified, Alternate 8A, and Alternate 8B would not require any residential or commercial displacements. Alternate 5C would require five residential relocations and one business displacement.

Minimization Measures

Alternate 7 Modified (refer to Figures 8 and 9 in the Appendix).

Impacts to the resources were reduced by adjusting the horizontal and vertical alignments as well as the cross section elements.

Alignment shifts: At the southern end of the alignment, between Sta. 12+00 and 16+00, the roundabout was shifted to the northwest and the approach radius from the south was decreased to 300 feet. This adjustment reduced impacts to the Longwood Community Center's ball fields.

Between Sta. 17+00 and Sta. 27+00, the degree of curve was increased to $4^{\circ}00^{\circ}$ (approximately 1,432-foot radius) and the alignment was shifted slightly to the east to split the distance between the residential community and the historic district. This shift would reduce the noise and visual impacts to the houses on Rena Court and Dubarry Drive and reduce the wetland impacts.

The horizontal alignment was shifted to the west between the MNCPPC property and the roundabout to reduce impacts to the archeological site.

Vertically, the roadway profile was lowered between Sta. 18+00 and Sta. 32+00 so the roadway will be lower than the houses along Rena Court and Dubarry Drive, which will improve the view from these houses. This change will also reduce the amount of fill needed for the roadway.

In addition, the roadway profile was raised between Sta. 32+00 and Sta. 38+00 to reduce the amount of cut to the hillside and raised between Sta. 41+00 and Sta. 46+00 to obtain adequate vertical clearance for animal passage.

Cross section adjustments: The following table lists cross section adjustments, primarily slope reductions and the use of retaining walls where necessary, to reduce fill/cut requirements in order to minimize impacts to adjacent features:

Alternate	Station	Cross Section Adjustments	Avoidance/Minimization
Alternate 7 Medified	Sta 24+00 to	3:1 Slopes	Reduce Fill / Reduce Impact to ROW, Streams,
/ Wouthed	2775011		wetrailds, i toouplains, woodrailds and i arriands
Alternate	Sta 27+50 to	2:1 Slopes	Reduce Fill / Reduce Impact to ROW, Streams,
7 Modified	31+00 RT		Floodplains, Woodlands, Parkland, Shingle Oaks
			and Historic District
Alternate	Sta 28+00 to	3:1/2:1 Slopes	Reduce Fill/Cut / Reduce Impact to ROW, Streams,
7 Modified	32+00 LT		Wetlands, Floodplains, Woodlands, Parkland,
			Shingle Oaks and Historic District
Alternate	Sta 38+00 to	2:1/3:1 Slopes	Reduce Cut / Reduce Impact to ROW, Streams,
7 Modified	40+00 LT		Wetlands, Floodplains, Woodlands, Parkland and
			Historic District
Alternate	Sta 38+50 to	2:1/3:1 Slopes	Reduce Fill / Reduce Impact to ROW, Floodplains,
7 Modified	44+00 RT		Woodlands,
			Parkland and Historic District

Alternate 7 Modified – Open Section Adjustments

MITIGATION

Noise

The Noise Sensitive Areas (NSA) includes residences along Rena Court, Islander Street, Dubarry Drive and Goldmine Road as well as one area within the Town of Brookeville. Sound mitigation for these areas is not reasonable because the cost exceeds the cost per residence criteria. SHA's Noise Policy states that the cost per residence must be at or below \$50,000 to qualify for noise mitigation and each of the NSA's will exceed \$50,000, therefore noise mitigation is not considered reasonable.

Stream Restoration and Wetland Mitigation

Alternate 7 Modified will impact 0.12 acres of wetlands and 1,339 linear feet of streams. During the summer of 2002, SHA met with state and federal resource officials to discuss stream restoration as well as wetland and parkland mitigation. Potential areas for stream restoration and wetland mitigation within Reddy Branch Park were evaluated by representatives of the resource agencies and MNCPPC. Written approval from MNCPPC to use Reddy Branch Park for stream restoration and wetland mitigation was received by SHA on May 1, 2003 (Attachment 2). Approved stream restoration locations include upstream and downstream of where Alternate 7 Modified crosses Meadow Branch and along a section of Reddy Branch adjacent to Brighton Dam Road. Stream restoration techniques are likely to include riparian buffer plantings and grading and stabilization of eroded stream banks. SHA will continue to work closely with the agencies and MNCPPC in the development of the detailed stream restoration and wetland mitigation design.

Public Parkland/Section 4(f)

Selected Alternate 7 Modified will impact 5.62 acres of Reddy Branch Park. MNCPPC is the park owner and agency with jurisdiction over the Reddy Branch Park. Coordination has occurred with park officials throughout the planning process and will continue as part of the Section 4(f) process. At a May 5, 2003 meeting between SHA and MNCPPC staff, potential parkland replacement lands were identified to address Section 4(f) impacts associated with the Selected Alternate.

At the meeting, storm water management ponds within the park were also preliminarily approved, and reforestation opportunities and cultural resource mitigation within Reddy Branch Park were discussed. It was agreed to discuss a joint agency Memorandum of Understanding outlining mitigation as part of the Section 4(f) Evaluation procedures.

Historical/Archeological

In compliance with 36CFR800, a draft MOA is being processed for Alternate 7 Modified (Attachment 1). MNCPPC is an invited participant in the Section 106 process. The Federal Highway Administration (FHWA) has forwarded the draft MOA to the Advisory Council on Historic Preservation (ACHP).

Newlin/Downs Mill Complex (18MO368)

SHA shall develop and implement a data recovery plan to mitigate impacts to the Newlin/Downs Mill Complex 18MO368, in consultation with the MD SHPO. This is addressed in the April 17, 2003 SHA correspondence to FHWA (Attachment 1).

Public and Agency Coordination

On November 13, 2002 the Study Team presented the Recommended Alternate 7 Modified for MD 97 Brookeville Project to the State Highway Administrator.

Key resource agency coordination meetings and public involvement dates include:

- December 1995 Wetland Jurisdictional Review Meeting.
- Public comments received from the Informational Public Workshop that was held on June 22, 1995.
- Public comments received from the Alternates Public Workshop that was held on May 28, 1996.
- Public comments received from the Informational Public Meeting that was held on June 8, 2000.
- September 2000 Interagency Review (IAR) meeting discussed draft version of the Alternates Retained for Detailed Study.

- October 2000 Interagency Field Review reacquainted the environmental review ٠ agencies with the project area and provided them with the opportunity to view the proposed ARDS alignments.
- November 17, 2000 Community Field Review. .
- Review of public and agency comments on the DEIS September 1, 2001. .
- Public comments received from the Combined Location/Design Hearing that was • held on October 3, 2001.
- January 16, 2002 IAR courtesy presentation regarding the preferred alternate. .
- September 20, 2002 Agency Field Review was held to look at the archeology site . and review the newly developed Alternate 7 Modified.
- March 19, 2003 IAR- present Alternate 7 Modified as SHA's selected alternate as . identified in the February 2003 draft Selected Alternate and Conceptual Mitigation package.
- Twelve Focus Group meetings were held on the following dates: .
 - 4/19/95 3/14/96
- 12/9/96 6/11/98
- 4/8/96 9/9/96

•

4/24/00 9/25/00

- 8/14/01 11/17/01
- 3/18/02
- 7/24/02

MD 97 BROOKEVILLE ERRATA FINAL SELECTED ALTERNATIVE AND CONCEPTUAL MITIGATION PACKAGE-MAY 2003

FEDERAL HIGHWAY ADMINISTRATION	RESPONSE
FHWA (Denise King) commented on the draft Selected Alternative and Concentual Mitigation	The Oakley Cabin Trail is now referred to as man- made in the final SACM Package
(SACM) Package that the Oakley Cabin Trail is a man-made trail.	made in the final SACIM Fackage.
FHWA (Denise King) noted at the March 19,	The draft MOA was submitted to FHWA on April
2003 Interagency Review (IAR) Meeting that the	17, 2003 (see Attachment 1). The transmittal letter
Section 106 Memorandum of Agreement (MOA)	includes appropriate statements requesting FHWA to
Historic Preservation (ACHP)	the ACHP wishes to review and he a signatory to the
	MOA. FHWA has sent the draft MOA to the ACHP.
US ARMY CORPS OF ENGINEERS	RESPONSE
COE (Paul Wettlaufer) stated at the March 19	Coordination between SHA, MNCPPC and the COE
IAR that his agency will concur with the SACM	that occurred subsequent to the IAR has resulted in
MNCPPC for wetlands and stream restoration	written agreement of stream restoration and wetlands
before a permit will be issued. The COF approves	MNCPPC's approval letter approval letter dated May
of the mitigation in terms of offsetting the impact.	1, 2003 is attached (see Attachment 2).
COE (Paul Wettlaufer) also commented that the	After the IAR meeting, SHA and MNCPPC meet
wildlife bench was supposed to be on the north	with the COE, USFWS and MDE to discuss wildlife
side of Reddy Branch but the south side is	passage mitigation (see Attachment 3). The northern
the northern side has room for vertical elegennes	passage was reevaluated and may be possible. A final
and there is also the opportunity to remove	final design. In the interim the SHA recommended
pavement from the existing road and connect a	south side wildlife passage will remain. Coordination
large tract that includes the riparian corridor.	will continue with the COE and USFWS.
US FISH & WILDLIFE SERVICE	RESPONSE
USFWS (Bill Schultz) commented that before he	At the IAR, SHA (Gay Olsen) noted that USFWS has
will concur, MNCPPC must provide a letter	already concurred but Bill Schultz clarified that
approving the stream restoration and wetlands	concurrence has only been given on the draft package
agency is satisfied with the selected alternate and	response to the COF Agencies including the USEWS
mitigation details need to be finalized.	will receive the final SACM package for concurrence
MARYLAND DEPARTMENT OF ENVIRONMENT	RESPONSE
MDE (Steve Hurt) is looking at the need to	MDE participated in the March 19 meeting after the
maintain stream channels due to the over widened	IAR (see Attachment 3). The MDE recommendation
onage structure	to maintain stream channels is included in the final SACM Package for consideration in final design.
	- 3

MD 97 – BROOKEVILLE – PROJECT PLANNING STUDY –MAY 2003 CONCURRENCE FOR SELECTED ALTERNATE AND CONCEPTUAL MITIGATION

Alternates Retained for Detailed Study

At the October 2000 Interagency Review IAR meeting, four alternates were recommended to be retained for further study. The Alternates Retained for Further Study are as follows: Alternate 1–No-Build Alternate, Alternate 5C-Eastern Bypass (Figure 2), Alternate 7–Western Bypass (Figure 3) and Alternate 8–Western Bypass which became Alternate 8A (Figure 5) and Alternate 8B (Figure 6). Concurrence was received from the agencies and the alternates were presented in the MD 97 Brookeville Project Draft Environmental Impact Statement/Section 4(f) Evaluation dated August 2001. The referenced Figures are appended to the Selected Alternate and Conceptual Mitigation (SACM) package attached to this Executive Summary document.

Combined/Location Design Public Hearing

A Combined Location/Design Public Hearing was held October 3, 2001. Approximately 117 citizens attended and a total of 40 public comments were made (23 oral and 17 written comments). As a result of public and agency comments, Alternate 7 was identified as the preferred alternate. Subsequent to the Public Hearing, Alternate 7 Modified was developed to minimize impacts to the National Register eligible Newlin/Downs Mill Complex archeological site. The modified alignment was presented at the January 2002 IAR meeting. An agency field view of Alternate 7 Modified occurred on September 20, 2002 and included mitigation sites.

Description of SHA-Selected Alternate

The SHA Selected Alternate, Alternate 7 Modified, is similar to Alternate 7 except that Alternate 7 Modified is shifted approximately 30-40 feet in a westerly direction through the Reddy Branch Park to minimize impacts to the Newlin/Downs Mill Complex archaeological site (Figure 4). A retaining wall will be placed on the south side of Brookeville Road, east of the roundabout to further minimize impacts to the Newlin/Downs Mill Complex. Alternate 7 Modified has a design speed of 40 miles per hour. Alternate 7 Modified has an open typical section, which consists of two 11' lanes, two 10' shoulders with a 4' paved area for bicycle compatibility (Figure 7). The SHA has selected the open section because existing MD 97 is an open section and this is consistent with both the northern and southern tie-ins with existing MD 97 (Figures 8 and 9). Roadway access is limited to the two roundabouts, at Brookeville Road and the southern termini. Cost is estimated at \$12.5 million.

Summary of Environmental Impacts and Conceptual Mitigation

Alternate 7 Modified and the build alternates impacts are summarized in appended Table ES-1

Natural Environmental: Alternate 7 Modified would cross two streams, Meadow Branch and Reddy Branch with impacts of approximately 1,339 linear feet. These streams in the Hawlings River subwatershed and the Patuxent River watershed are Use IV waters (Recreational Trout) and may require an in-stream work restriction from March 1 to May 31. Alternate 7 Modified will impact approximately 3.2 acres of floodplain and less than one-quarter acre of wetlands. The proposed MD 97 structure over Reddy Branch will be designed to accommodate wildlife passage along Reddy Branch by providing an 8 ft. vertical and 25 ft. horizontal clearance along one side of the stream as agreed to by the agencies. SHA will evaluate north side passage option during final design when topographic survey of the area is completed. Conceptual design of the Meadow Branch crossing consists of a box culvert in accordance with MDE design criteria. Design of the Reddy Branch Bridge and Meadow Branch culvert will be coordinated with the state and federal resource agencies as part of the and permitting requirements. Stream restoration and wetland mitigation sites within Reddy Branch Park have been coordinated with and approved by the agencies including written concurrence from the Maryland National Capital Parks and Planning Commission (MNCPPC).

Publicly Owned Parks and Recreation Areas: Alternate 7 Modified will impact 5.6 acres of Reddy Branch Park compared to 5.3 acres for Alternate 7 and 6.3 acres for Alternate 8. SHA met with MNCPPC on May 5, 2003 to discuss mitigation within Reddy Branch Park. A joint agency Memorandum of Understanding may be established between SHA and MNCPPC outlining mitigation including replacement of public parkland.

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Project Name & Limits: MD 97, Brookeville Study, Montgomery County		
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Federal Highway AdministrationFish and Wildlifc ServiceMD Dept. of Natural ResourcesMD Dept. of the EnvironmentNational Park ServiceMD Dept. of the EnvironmentNational Marine Fisheries ServiceMD Dept. of the EnvironmentNational Marine Fisheries ServiceND Dept. of the EnvironmentNATUREND Dept. of Natural ResourcesND Dept. o		
Comments / Reasons for Non-Concurrence:		
Note: Do <u>not</u> provide "conditional" concurrence. You should either concur with the information as provided (without comments or with <u>minor</u> comments) or not concur until revisions are made or additional information is provided.		
MD Historical TrustMD Department of PlanningMetropolitan Planning Organization		
Provides Comments (below or attached) Has No Comments		
Comments:		
Additional Information Necded:		
Signature: Date:		

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06/27/2003

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STREAMLINED PROCESS TRACKING
TO:EM: Nick Blandy Nick BlandyDate: 6/4/03PM: Carner HarrisProject: MD97 BrookevilleFROM: Gay Olsen/Wanda BrocardProject No.: M0746 B11
Purpose and Need Preliminary/Draft Alternatives Retained for Detailed Study X Final/Formal SHA's Selected Alternative & Conceptual Mitigation Final/Formal
Concurrence Concurrence Comments w/Comments
FHWA NPS MDP EPA NMFS MHT COE DNR MPO FWS MDE ME
Response Required: Ves 🛛 No
NOTE: Make sure all agencies receive a copy of this incoming concurrence/comment letter and (if applicable) the outgoing SHA response.
cc: Simpson Grey Kresslein Sparklin Wynn Sanders Finkle Jacobs FHWA Pedersen - Denue King Kice Simmons

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Concurs (without comments) Concurs (w/ minor comments) Does Not Concur
Comments / Reasons for Non-Concurrence:
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MD Historical TrustMD Department of PlanningMetropolitan Planning Organization
Provides Comments (below or attached) Has No Comments
Comments:
Additional Information Needed:
Signature: <u>faul Worthouses</u> Date: <u>5/29/03</u>

05/20/2003

STREAMLINED PROCES	S TRACKING
TO: EM: <u>Mich Blendy</u> PM: <u>Corner Horris</u> P FROM: Gay Olsen/Wanda Brocator Project	Date: <u>6/9/03</u> Project: <u>MD97-Broikeville</u> ct No.: <u>M0 746 B11</u>
 Purpose and Need Alternatives Retained for Detailed Study SHA's Selected Alternative & Conceptual Mitigation 	Preliminary/Draft Image: Second system Image: Second sys
Concurrence Concurrence w/o Comments w/Comments	Comments <i>WCOG(MP0)</i>
FHWA NPS EPA NMFS COE DNR FWS MDE	 МDР МНТ № мРО - ШСо G
Response Required: Yes	X No
Comments: TYJ <u>NOTE</u> : Make sure all agencies receive a copy of this incomin (if applicable) the outgoing SHA response.	ng concurrence/comment letter and
cc: Simpson Grey Kresslein	Sparklin Wynn FHWA Pedersen Daniec King (wcoG)

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Project Name & Limits: MD 97, Brookeville Study, Montgomery County
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Federal Highway Administration Fish and Wildlife Service MD Dept. of Natural Resources National Park Service MD Dept. of the Environment National Marine Fisheries Service Concurs (without comments) Concurs (w/minor comments) Dees Not Concur
Comments / Reasons for Non-Concurrence:
Note: Do <u>not</u> provide "conditional" concurrence. You should either concur with the information as provided (without comments or with <u>minor</u> comments) or not concur until revisions are made or additional information is provided.
MD Historical TrustMD Department of PlanningMetropolitan Planning Organization
Provides Comments (below or attached) Has No Comments
Comments:
Additional Information Needed:
Signature: Junu 3. ting Date: 4603

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05/20/2003

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Concurs (without comments) Concurs (w/ minor comments) Does Not Concur		
Comments / Reasons for Non-Concurrence:		
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MD Historical TrustMD Department of Planning XX_Metropolitan Planning Organization		
Provides Comments (below or attached) XX Has No Comments		
Comments:		
Additional Information Needed:		
NONE		
Signature: <u>Ronald E Kirby</u> Date: <u>June 3, 2003</u>		
Director, Department of		
Transportation Planning		
Metropolitan Washington		
Council of Governments		
2 05/20/2003		
STREAMLINED PROCESS TRACKING		
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TO: EM: <u>Nick B</u> PM: <u>Corner Ha</u> FROM: Gay Olsen/Wanda B	rocato Projec	Date: <u> </u>
 Purpose and Need Alternatives Retained for SHA's Selected Alternatives 	or Detailed Study tive & Conceptual Mitiga	Preliminary/Draft Final/Formal tion
Concurrence w/o Comments	Concurrence w/Comments	Comments
 FHWA EPA COE FWS 	 NPS NMFS DNR MDE 	МDР МНТ МРО
Response Required:	Yes	X No
Comments: FYI NOTE: Make sure all agencies receive a copy of this incoming concurrence/comment letter and (if applicable) the outgoing SHA response. cc: Simpson Grey Kresslein Sparklin Wynn Sanders Finkle Jacobs FHWA Pedersen Mice Simmons -Extly Strong		

Revised 12/14/00

MD 97 - Brookeville Study Selected Alternate and Conceptual Mitigation

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MD Historical Trust MD Department of Planning Metropolitan Planning Organization		
Provides Comments (below or attached) Has No Comments		
Comments:		
Additional Information Needed:		
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Signature: William Selint Date: 6/11/03		

05/20/2003

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STREAMLINED PROCESS TRACKING		
TO: EM: Mick Blendy Date: 6/24/63 PM: Carner Horris Project: MD 97 Broskevill FROM: Gay Olsen/Wanda Brocator Project No.: MO 746 Bil	 !lc	
 Purpose and Need Preliminary/Draft Alternatives Retained for Detailed Study Final/Formal SHA's Selected Alternative & Conceptual Mitigation 		
Concurrence Comments w/Comments		
FHWA NPS MDP EPA NMFS MHT COE DNR MPO FWS MDE		
Response Required: Yes No Comments: PYI NOTE: Make sure all agencles receive a copy of this incoming concurrence/comment letter al (if applicable) the outgoing SHA response.	nd	
cc: Simpson Grey Kresslein Sparklin Wynn Sanders Finkle Jacobs FHWA Pedersen VRice Simmons		

Revised 12/14/00

JUN-23-2003 16:21 EPA III ESD

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215 8142783 P.02/02

MD 97 - Brookeville Study Selected Alternate and Conceptual Mitigation

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Federal Highway Administration Fish and Wildlife Service MD Dept. of Natural Resources Image: Corps of Engineers National Marine Fisheries Service MD Dept. of the Environment
Concurs (without comments) Concurs (w/ minor comments) Does Not Concur
Comments/Reasons for Non-Concurrence: EPA appreciates the coordination with MNCPPC and is supportive of reevaluation for a northern wildlife passage.
Note: Do <u>not</u> provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.
MD Historical Trust MD Department of Planning Metropolitan Planning Organization
Provides Comments (below or attached) Has No Comments
Comments:
Additional Information Needed:
Signature: Sula-Kuluch Date: 6/23/03

2



To: "NICHOLAS BLENDY" <NBlendy@sha.stete.md.us>

cc: Subject: Re: Fwd: FW: MD 97, Brookville Project-FEIS/Section 4(f) Evaluation-Legal sufficiency determination

OK. Given the determination by FHWA, we concur.

Thanks for your help in getting the info that we needed.

Susan Hinton, ASLA, AICP Regional Transportation Liaisun National Park Service National Capital Region

Phone: (202) 619-7106 Fax: (202) 619-7420

22 '03 02:40PM WETLANDS/WATERWAYS 410 537 3751

P.2/2

MD 97 - Brookeville Study Selected Alternate and Conceptual Mitigation

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MD Historical TrustMD Department of PlanningMetropolitan Planning Organization		
Provides Comments (below or attached) Has No Comments		
Comments:		
Additional Information Needed:		
Signature: Colde, A. Sthizian I' Date: 12/22/03		

12/22/2003

2

FROM : ENVIRONMENTAL REVIEW UNIT PHONE NO. : 1 410 260 8339 Jun. 23 2003 03:35PM P1 Maryland Department of Natural Resources C. Ronald Franks Robert L. Ehrlich, Jr. ENVIRONMENTAL REVIEW Secretary Governor Tawes State Office Building, B-3 Annapolis, Maryland 21401 W. P. Jensen Michael S. Steele Deputy Secretary Lt. Governor FAX TRANSMITTAL MEMO Date: 6 123, 2003 We are sending _____Pages (Including this cover sheet) To: Gay Olsen Office: SHA Fax #: 410 - 209 - 5004 Comments: DNR concurrence on: SACM MD97 Brookeville Project Montgomen County, From:_ Rav D ntamar Fax #: ____ 410-260-8339 Phone #: 410-260-8331 Telephone: (410) 260-8330 DNR TTY for the Deaf: (410) 260-8835

FROM : ENVIRONMENTAL REVIEW UNIT

PHONE NO. : 1 410 260 8339

Jun. 23 2003 03:29PM P2



Robert L. Ehrlich, Jr. Governor

Michael S. Steele LL Governor Maryland Department of Natural Resources Environmental Review Tawes State Office Building 580 Taylor Avenue Annapolis, Maryland 21401 C. Ronald Franks Secretary

W. P. Jensen Deputy Secretary

June 23, 2003

Ms. Gay Olsen Project Planning Division Maryland Department of Transportation State Highway Administration P.O. Box 717 Baltimore, Maryland 21203-0717

Dear Ms. Olsen:

This letter is in reply to Cynthia D. Simpson's letter of request, dated May 21, 2003, for Maryland Department of Natural Resources (DNR) concurrence on the State Highway Administration's (SHA) Selected Alternate and Conceptual Mitigation (SACM) for the MD 97 Brookeville Project; Project No. MO746B11, Montgomery County.

The Department participated in discussions of this project at the Interagency Meeting and at field visits over the past several years. Also, the Department has provided written comments at the various comment and concurrence points in the Maryland Streamlined Environmental and Regulatory Process. DNR concurs with the Selected Alternate and Conceptual Mitigation and advocates continued efforts to optimize protection of natural resources during further planning for this project. We support the continued coordination that is referenced in the SACM package regarding the stream crossing structure designs, especially the wildlife crossing location which is still being evaluated and coordinated for the Reddy Branch stream crossing. Continued coordination may also be needed, as referenced, on the issue of the presence of shingle oak (<u>Quercus imbricaria</u>) in the study area. We will plan to participate in these continued interagency natural resource discussions.

If you have any questions concerning these comments, you may contact Greg Golden of my staff at 410-260-8334.

Sincerely,

Tay C. Dint amen, J

Ray C. Dintaman, Jr., Director Environmental Review Unit

TTY via Maryland Relay: 711 (within MD) (800) 735-2258 (Out of State) Toll Free in MD#: 1-877-620-8DNR ext. 8331

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FROM : ENVIRONMENTAL REVIEW UNIT

PHONE NO. : 1 410 260 8339

Jun. 23 2003 03:36PM P2

MD 97 - Brookeville Study Selected Alternate and Conceptual Mitigation

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MD Historical TrustMD Department of PlanningMetropolitan Planning Organization	
Provides Comments (below or attached) Has No Comments	
Comments:	
Additional Information Needed:	
Signature: Kag C. Dint amon h Date: June 23 2003	

05/20/2003

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Robert L. Ehrlich, fr. Governor

Michael S. Steele Lt. Governor Audrey E. Scott Secretary

Florence E. Burian Deputy Secretary

July 3, 2003

Ms. Cynthia D. Simpson, Deputy Director Office of Planning & Preliminary Engineering Maryland State Highway Administration P.O. Box 717 Baltimore, MD 21203-0717

Attention: Ms. Gay Olsen

Re: MD 97 - Brookeville Project Selected Alternate and Conceptual Mitigation

Dear Ms. Simpson:

This is in response to SHA's request for comments on the Selected Alternate for the MD 97 Brookville Project. In this letter, MDP provides an interpretation on how the Selected Alternate and the agency coordination efforts that have been taken thus far have addressed the central issues related to Maryland's Smart Growth and Neighborhood Conservation regulations and policy.

Overall, the Selected Alternate – Alternate 7 Modified best minimizes the potential of encouraging secondary sprawl development while meeting the Purpose and Need of the MD97 - Brookeville project. This Alternate's articulate design features appear to limit the future capacity of the planed bypass to no more that that of the capacity that which MD97 currently has through the Town of Brookeville. At essence is that the planned facility will remove the existing northbound and southbound traffic bottlenecks in the center of Brookeville. Specific design features that contribute to this include the 11ft. travel lanes and overall design speed of 40 mph, the roundabouts at Brookeville Road and at the southern end of the proposed bypass, and closing of the current MD97 for future through traffic. We also note that by locating the bypass as near as possible to the Town of Brookeville, this alternate appears to limit secondary and cumulative effects of the facility within this area.

The Govemor's March 5, 1999 letter proposed four criteria to restart the planning study for the MD97 - Brookeville project (the March 5, 1999 letter is attached). These four criteria were made through negotiation and an agreement with local elected officials in Montgomery County. MDP recognizes that MDOT/SHA, Montgomery County officials, local officials, and all state and local agencies have taken significant efforts to address the Governor's four criteria.

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301 West Preston Street Swite 1101 Baltimore, Maryland 21201-2305 Telephone: 410.767.4500 Fax: 410.767.4480 Toll Free: 1.877.767.6272 TTY Users: Maryland Relay Internet: www.MDP.state.md.us In regard to Criterion 1, the Montgomery County Council amended the County's Annual Growth Policy in an effort to prevent the use of the bypass to promote secondary sprawl development outside Brookeville. Currently, Montgomery County is in the process of updating the Olney Master Plan. A proposal included in the draft plan's Transportation Network Recommendations is to "establish a "two-lane" roadway policy for rural portion of Planning Area." The portion of MD 97 north of Brookeville sits within this designated rural area. Designating the rural portion of MD 97 to remain a two-lane road facility will greatly support the Montgomery County's "Wedges and Corridors" Policy and is the critical step to help to preserve the roadway capacity of MD 97 through Brookeville. The recommendation for a "two-lane" roadway policy is consistent with the intent of Criterion 1. Our Department supports the County's recommendation to establish a two-lane roadway policy in the rural portion of the Olney Planning Area.

We note that SHA has been at the forefront in the effort to provide quality project design for this project consistent with Criterion 2. In coordination with Maryland Environmental Trust, SHA has negotiated the use of a permanent easement to prevent inconsistent development along the right-of-way of the proposed bypass facility. This meets the requirements of Criterion 2. We note that it would be prudent to have the permanent easement agreement signed and entered into the public record prior to obtaining construction funding for the MD97 – Brookeville project.

With regard to Criterion 3, Montgomery County and the State should fully discuss under what circumstances the State may seek reimbursement for the cost of the bypass facility.

As stated in MDP's February 7, 2001 letter to SHA, prior to providing state funding for the construction of the project, an exception from the Maryland Board of Public Works will be required. We recommend that MDOT, SHA and MDP discuss the steps necessary for submittal of this project to the Board of Public Works.

Thank you for providing MDP the opportunity to review and provide comments on the Selected Alternate for the MD97 – Brookeville project. Should you have any questions with regard to the above comments, please do not hesitate to contact me at 410-767-4564 or Bihui Xu at 410-767-4567.

Sincerely.

David T. Whitaker, AICP Manager – Transportation Planning Unit

cc: Tom Rimrodt, Asst. Secretary - MDP James T. Noonan, MDP Joseph Kresslein, SHA Dan Johnson, FHWA Barbara Rudnick, EPA Paul Wettlaufer, COE Bill Schultz, USFWS Greg Golden, DNR Elder Ghigiarelli, MDE Michael Day, MHT Attn: Beth Cole Ron Kirby, WCG Don Halligan, MDOT Fatimah Hasan, MDOT Charles R. Loehr, M-NCPPC, Montgomery County Attn: Dan Hardy Khalid Afzal

STATE OF MARYLAND OFFICE OF THE GOVERNOR



PARRIS N. GLENDE

March 5, 1999

ANNAPOLIS G STATE H 100 STATE E ANNAPOLIS, MARYANO ; 1100 STA 1101 FREE 1-800-811-

The Honorable Isiah Leggett President Montgomery County Council 100 Maryland Avenue Rockville MD 20850

WASHINGTON DI SUTT 441 NORTH CARTOL STREET, WASHINGTON, D.C. 2 2021 E24-TDD 1410 113-:

Dear Ike:

As a follow up to our conversation last week, I appreciate your desire to find a positive solution to the Brookeville bypass issue. Your recognition of the statewide implication of my decisions about the bypass and the need to control sprawl development across County lines is appreciated.

The ideas we discussed about Montgomery County being able to guarantee that no sprawl development would result from the construction of the bypass speak directly to the real policy issues at stake. We must curtail the unbridled sprawl that has chewed up fertile rural areas and valuable open space, harmed our environment and damaged our quality of life.

Following up on our discussion, I have developed a proposal that could allow the future construction of the bypass without encouraging sprawl development north of Brookeville. If the County could implement the four items listed below, we would meet the anti-sprawl objectives and requirements of the Smart Growth legislation:

(1) Under local ordinance, the County is to adopt through appropriate enforceable action restrictions that will prevent this bypass from allowing sprawl development. Any capacity a bypass might add to the road network cannot be used to allow development outside the current boundaries of the town of Brookeville.

(2) Permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure no future access, widening or connection to the bypass is possible.

(3) If for any reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass.

(4) Montgomery County, the Maryland Department of Transportation and Howard County government will work out a safe traffic calming point north of the bypass which limits traffic capacity to the current capacity of MD 97 through Brookeville. Mr. Isiah Leggett Page Two

These four actions will enhance our anti-sprawl effort while allowing the bypass under the Smart Growth law. I realize it will take some time for the County Council to consider these points and implement such ideas. With your leadership, I am confident success will be achieved rapidly. At that point, I could put the bypass back into the Consolidated Transportation Program as it was last year and support a waiver of the funding prohibition. Until these four conditions are assured, I cannot consider funding even the planning monies for the bypass.

Let me reaffirm my commitment to implementing our Smart Growth initiatives. Our children and grandchildren deserve to inherit a State where rural areas and open space are preserved, the environment is healthy, and thriving communities enjoy their quality of life. This is my vision for Maryland

Ike, your willingness to work cooperatively to achieve our shared policy goal of limiting sprawl, and your practical suggestions on how to achieve our goal is very much appreciated. I look forward to your reply.

Sincerely,

Parris N. Glendening Governor Robert L. Ehrlich, Jr., Governor Michael S. Steele, Lt. Governor



Robert L. Flanagan, Secretary Neil J. Pedersen, Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION

July 29, 2003

Mr. John Bernstein, Director Maryland Environmental Trust 100 Community Place Crownsville MD 21032

Dear Mr. Bernstein:

Thank you for your March 18, 2002 letter suggesting changes to the Letter of Commitment and Memorandum of Understanding (MOU) relative to the Smart Growth criteria for the MD 97 Brookeville Project. We appreciate your suggestions and support in the development of a MOU.

It is the expectation of the State Highway Administration (SHA), under present conditions to cooperate with the Maryland Environmental Trust (MET) to assign or co-hold the easement with another land trust that is not an instrumentality of the State, in order to ensure the permanency of the easement. This will be subject to the approval of the Board of Public Works.

Upon the allocation of funds to move forward with preliminary engineering, acquisition of rightof-way and construction, the State Highway Administration will determine the exact location and acreage of the permanent easement. The proposed easement can be accommodated within the right-of-way required to support the roadway. The SHA anticipates addressing access onto the easement with a temporary crossing clause for roadway maintenance purposes.

If this Letter of Commitment is acceptable, please sign, keep a copy and return the original to Ms. Carmeletta T. Harris. If you would like to discuss the details of this project or this Letter of Commitment, please feel free to contact me or Ms. Harris, Project Manager, at 410-545-8522, toll free at 1-800-548-5026 or via email at <u>charris@sha.state.md.us</u>.

Very truly yours as H/Simmons, Director Office of Planning and Preliminary Engineering

CONCURRENCE:

Date

John Bernstein Director Maryland Environmental Trust

> My telephone number/toil-tree number is __________ Maryland Relay Service for Impaired Hearing or Speech 1.300.201.7165 Statewide Toll Free Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

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Mr. John Bernstein Page Two

cc: Mr. Nicholas Blendy, Environmental Manager, State Highway Administration

Ms. Janet Handy, Deputy Counsel, Office of Counsel, State Highway Administration

Ms. Carmeletta T. Harris, Project Manager, State Highway Administration

Mr. James Highsaw, Program Manager, Maryland Environmental Trust

Mr. David Whitaker, Transportation Planning Unit Manager, Maryland Department of Planning

Mr. J. Richard Zuzmyak, Transportation Projects Coordinator, Office of Smart Growth

Section VI-C. Focus Group Meetings

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

С. FOCUS GROUP MEETINGS



Maryland Department of Transportation State Highway Administration

Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

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MEMORANDUM

- TO: Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering
- FROM: Carmeletta T. Harris Project Engineer Project Planning Division
- DATE: April 4, 2002
- SUBJECT: MO746B11 MD 97 Brookeville Transportation Study Montgomery County

RE: March 18, 2002 Focus Group Meeting Minutes

A Focus Group meeting for the MD 97 Brookeville project was held March 18, 2002 at the Longwood Community Center. The following people were in attendance:

Carmeletta Harris	Project Manager, State Highway Administration
Ruel Manuel	Project Engineer, State Highway Administration
Shannon Rousey	Environmental Manager, State Highway Administration
Mary Barse	Archeologist, State Highway Administration
Karen Kahl	RK&K
Bob Simpson	Montgomery County Dept. of Public Works & Transportation
Joe Anderson	Maryland National Park and Planning Commission
Rick Allan	Town of Brookeville
Robert K. Heritage	Town of Brookeville
Leslie C. Unglesbee	Town of Brookeville
Linda Elliot	Linda's Dog Design
Tom Street	Citizen
Josh Rubin	Citizen-Islander Street
Mike Anderson	Citizen-Islander Street
Pat Smith	Citizen-Islander Street

My telephone number is .

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MD 97 Brookeville Focus Group Meeting Page 2

Rhonda Willis-Stuppel	Citizen-Islander Street
Betty Anderson	Citizen-Islander Street
Patricia Snell	Citizen-Islander Street
Michael Snell	Citizen-Islander Street
Dave Eskenazi	Greater Olney Civic Association.
Nora Blan	Tanterra HOA
Larry May	Citizen
Gabrielle Clements.	Citizen-Islander Street
John Hayter	Longwood Advisory
Rick Coburn	Greater Olney Civic Association
Terri Hogan	Gazette
Margaret Syski	Citizen
Todd Van Gelder	Citizen
David Bouve	Citizen
Michele Weiss	Citizen-Islander Street
Pamela Gibbons	Citizen-Islander Street
John Gibbons	Citizen-Islander Street
Jeri Gibbons	Citizen-Islander Street
Wilma Theard	Citizen-Islander Street
John Ferinde	Citizen-Islander Street
Michael Maines	Citizen-Islander Street
Timothy Hansen	Citizen-Islander Street
Barbara Stockinger	Citizen-Islander Street
Kathleen Smith	Citizen-Islander Street

Introduction and Purpose of the Meeting

Ms. Carmen Harris began the meeting with introductions. She then stated that the purpose of the meeting was to discuss the results of the Public Hearing, to provide an update of recent project developments related to archeology study and to update the Focus Group on the remaining schedule.

Review of Alternates

Ms. Carmen Harris presented a brief overview of the four alignments that were presented at the Public Hearing held on October 3, 2001 at the Rosa Parks Middle School. She stated that only Alternates 7 and 8B are still being considered. Alternate 5C was dropped from further study because it was too expensive, had the most public opposition, and required residential displacements. Alternate 8A was dropped from study because of the lack of public and team support.

MD 97 Brookeville Focus Group Meeting Page 3

Mr. Leslie Unglesbee, the Town Commissioner, stated that the Town of Brookeville supports Alternate 7 over the other alternates. They were under the impression that the option preferred by the Town would be the selected option. He also questioned why Alternate 7 was not selected already. Ms. Carmen Harris stated that an archeological site exists in the study area which will require further study to assess its significance.

Public Hearing Summary

Ruel Manuel gave an update on the Public Hearing held on October 3, 2001 at Rosa Parks Middle School. A handout was provided which included a summary of the testimony and comments received. Out of 23 public testimonies and 17 written comments, 76% supported a build alternate of some type. 42% supported Alternate 7 (Western Bypass), 24% supported Alternate 8B (Grade Separated Western Bypass), 10% supported Alternate 5C (Eastern Bypass), and no support for Alternate 8A (At-Grade Western Bypass) was tallied. Out of 18 comments, received, 9 comments were against Alternate 5C (Eastern Bypass), 3 comments were against Alternate 8B (Grade Separated Western Bypass), 3 comments were against Alternate 8B (Grade Separated Western Bypass), 3 comments were against Alternate 8B (Grade Separated Western Bypass), 3 comments were against Alternate 8B (Grade Separated Western Bypass), 3 comments were against Alternate 7 (Western Bypass), 3 comments were against Alternate 1 (No-Build), 2 comments were against Alternate 8B (Grade Separated Western Bypass), and 1 comment against Alternate 7 (Western Bypass).

Mr. Manuel noted that most of the comments against Alternate 5C (Eastern Bypass) came from the community located on the eastside of MD 97 (Georgia Avenue) within the project area.

It was stated that SHA has identified new archeological issues that were not presented at the Public Hearing and that the public did not get the whole story before they made their testimony.

Ms. Carmen Harris stated that the archeological sites were identified in the document and in the brochure.

Recent Developments - Archeology

There are two sites that are potentially eligible for the National Register of Historic Places. They were identified in 2001:

- A mill at the intersection of Brookeville Road and MD 97 (2 acres)
- Two domestic structures near Longwood Community Center

Ms. Mary Barse explained in depth the reasoning and the process of the archeology study. She explained that in order to expedite the study, SHA does an archeological evaluation to determine potential impacts and now they need to do a detailed study. SHA does not do detailed archeological study for all alternates identified because the field work is costly. At this time, SHA has narrowed down the alternates and knows the probable alternates will impact the identified archeological study to determine the full extent of the site and what kind of mitigation is warranted.

MD 97 Brookeville Focus Group Meeting Page 4

Ms. Mary Barse stated that there are several possible ways to mitigate the site. Preservation in place requires the site to be preserved in its current location. Typically, sites which are significant to the historic nature of the community are preserved in place. She noted that once a site is removed from its location it is removed forever. If the identified historic archeological sites in Brookeville needs to be preserved in place, the project could be delayed because the probable alternate(s) must be realigned to miss the site. The other form of mitigation is Data Recovery. Data recovery can be performed during the design phase of the project. Three weeks of fieldwork will be needed to do data recovery for each site (total of three months will probably be needed to complete the study). The consultant will be asking for public input in order to create an interpretive plan for these resources. The Town Commissioners understand what needs to be done and supports the archeological study, however they are concerned about what the study will mean to the schedule of the project. Ms. Carmen Harris noted that the phase II archeology is underway and a report on the findings is expected in May 2002.

A citizen asked who decides the significance of the historic site and if it needs to stay in place. Ms. Barse stated that the SHA makes a recommendation and then a further determination is made in coordination with the Maryland Historic Trust (MHT) and the Advisory Council.

An attendee asked if SHA would realign the southern part of bypass since all of the alternates impact one of the archeological sites. Ms. Carmen Harris stated that the alternates were not being modified at this time and will await the results of the archeological study. Ms. Mary Barse noted that the site at the southern end could be mitigated with data recovery. The site closer to Brookeville Road; however, will require the careful analysis and must await the result of the archeological study.

A citizen noted that the SHA must maintain a balance between the archeological study and the transportation needs that the community has been trying to get addressed for over 40 years. SHA should pay more attention to preserving a town that is intact and not just buried artifacts.

Environmental

Ms. Shannon Rousey explained that SHA has met with the Maryland National Capital Park and Planning Commission (MNCPPC) to discuss possible sites for mitigation. Restoration areas were then identified following a field visit. East of historic Brookeville near Brighton Dam Road was identified as possible wetland mitigation site.

Several citizens suggested that SHA consider investigating the Reddy Branch stream bank where it crosses MD 97 because it floods often and is over grown. SHA will look into this suggestion.

SHA provided a brief explanation of the noise evaluation and stated that noise would be an agenda item for next meeting.

MD 97 Brookeville Focus Group Meeting Page 5

Comments

A number of citizens from Islander Street were present at the Focus Group meeting. The citizens from Islander Street were dissatisfied because they were not invited to the Focus Group meeting. Carmen Harris explained that the Focus Group Meeting is not a Public Hearing, but a group that was appointed in 1998 to work with SHA and disseminate information back to the community. The meeting was not advertised like a Public Hearing. Ms. Carmen Harris explained that the SHA was not excluding residents from the process or the meeting, but simply inviting the members of the Focus Group and informing them of the recent developments. Nevertheless, a number of citizens requested to be included in the Focus Group.

<u>Questions</u>

- 1. Will alternates shift closer to Islander Street once the archeology site is determined? Ms. Carmen Harris stated that the alignments would not be shifted closer to Islander Street.
- 2. Are there plans to inform the focus group about the results of the archeological study? SHA can return in the summer to present the findings.
- 3. What is the capacity of the roundabouts? The roundabouts can accommodate more traffic than a 4-way stop or signal controlled intersection and they can accommodate the future traffic demands.
- 4. What is the County's position on the alternates?

Bob Simpson of Montgomery County Department of Public Works and Transportation (MCDPW&T) stated that the County bodies wait for comments from the Public Hearing and recommendations from SHA before the County Executive and Council makes a recommendation. The SHA will schedule the necessary meetings with the County prior to SHA meeting with their Director.

Joe Anderson of MNCPPC noted that they support Alternate 7.

The Town was concerned that the County may come in with a different opinion especially with the potential of the archeological derailing the bypass.

Enclosures (3)

cc: File

Attendees Ms. Jamaica Kennon



Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor

John D. Porcari Secretary Parker F. Williams

Administrator

MEMORANDUM

Ms. Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

FROM: Carmeletta T. Harris Project Manager Project Planning Division

- DATE: August 13, 2002
- SUBJECT: MD 97 Brookeville Project Transportation Study Montgomery County MO 746B11

July 24, 2002 MD 97 Brookeville Focus Group Meeting

A MD 97 Brookeville Focus Group meeting was held on Wednesday, July 24, 2002 at the Brookeville Academy, in the Town of Brookeville. The following people were in attendance.

Ms. Carmeletta Harris	SHA, Project Planning Division
Ms. Jamaica Kennon	SHA, Project Planning Division
Mr. Ruel Manuel	SHA, Project Planning Division
Ms. Mary Barse	SHA, Cultural Resources, Project Planning Division
Mr. Dan Hardy	M-NCPPC
Mr. James Sorensen	M-NCPPC
Mr. Bob Simpson	Montgomery County DPW&T
Ms. Lauri Putt	Aide to Montgomery County Council/Dacek
Ms. Karen Kahl	Rummel, Klepper & Kahl, LLP
Mr. Ray Moravec	URS
Mr. Leslie Unglesbee	Brookeville Commissioner
Mr. Clyde Unglesbee	Citizen
Mr. John Ferinde	Citizen
Mr. Peter Weinberger	Citizen
Mr. Patrick Smith	Islander Street Resident
Mr. Timothy Hansen	Islander Street Resident
Ms. Nora Blau	Greater Olney Civic Association/Tanterra HOA

My telephone number is ____

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Mr. Mike Anderson Islander Street Resident Citizen Ms. Margaret Svski Mr. Leszek Syski Citizen Greater Olney Civic Association Mr. Dave Eskenazi Mr. Josh Rubin Islander Street Resident Ms. Gudrun Rubin Islander Street Resident Mr. Michael Snell Islander Street Resident Islander Street Resident Ms. Patricia Snell Mr. Wilmer Theard Islander Street Resident

Handouts included:

- Meeting Agenda
- Noise Handout
- Archeology Impacts Mapping
- Archeology Impacts Photos
- Archeology Glossary

Introduction and Purpose of the Meeting

Carmeletta Harris began the meeting with introductions. She then proceeded with the purpose of the meeting. The purpose of the meeting was to follow-up on the March 18, 2002 Focus Group meeting, primarily present the findings of the archeology study and secondly answer remaining questions and concerns regarding noise impacts/analysis.

Noise Impacts/Analysis

At the request of citizens from the previous Focus Group meeting the noise specialist involved with the Brookeville Transportation Study was brought in to speak with the Focus Group. Mr. Ray Moravec of URS (Consultant) provided the discussions regarding the highway noise analysis undertaken for this study.

Mr. Ray Moravec began with a discussion of what noise is, noise sources and how sound levels are measured. Basically highway noise is primarily the result of tires making contact along the road, vehicle emissions and vehicle braking. Mr. Moravec stated that failing Level of Service (LOS) does not necessarily equate to the greatest noise impacts, rather, noise is typically greatest during steady traffic flow at or about Level of Service "C" or "D".

Noise is measured in terms of decibels (dBA) in logarithmic (non-linear) scale. Mr. Moravec noted that the human ear can typically perceive a noise increase of 3 dBA, and a 7-dBA increase is perceived as a doubling of noise intensity. The Federal Highway Administration (FHWA) uses a criterion of approaching/exceeding 67 dBA as a qualifying mark for considering possible mitigation.

The State Highway Administration (SHA) uses FHWA's noise abatement criteria. When noise levels for outside activities approach or exceed 66 dBA or when there is a 10-dBA noise increase over existing conditions noise abatement will be evaluated. In order for a property or a community to qualify for noise abatement, a series of feasibility and reasonability criteria are applied under SHA's noise policy. Should noise abatement be determined to be feasible, reasonability is analyzed based on the cost benefit per resident. In accordance with SHA's Sound Barrier Policy, a noise barrier should not exceed \$50,000 per benefiting residence.

In highway noise analysis, the future sound levels for the proposed build alternates are compared against existing sound levels. Forecasting of future noise levels is determined using traffic noise modeling software approved by the FHWA. Field sound levels and traffic data is used to validate the traffic noise model. Mr. Moravec noted that the traffic noise models have an accuracy of +/-2 dBA.

A few properties along MD 97 at the northern and southern limits of the project exceeded the 66dBA criterion or experienced an increase of 10 dBA or greater. There are no properties along Islander Street forecasted to exceed 66 dBA. The projected increase due to any of the build alternates for Islander Street is approximately 5 dBA (48 dBA existing to 53 dBA with Alt 7, 8A, 8B).

Several questioned why existing (today) noise was the basis of comparison, why not 20 or more years ago; Mr. Moravec indicated that because the analysis is based on average level of operating traffic (LOS 'C'), it would not make a significant difference. The worst-case 10 years ago would be the same as the worst case today because the traffic facility (i.e. no drastic roadway alignment) remains unchanged. Another citizen queried whether there is a possibility of verifying future noise readings after the roadway improvements are implemented. Mr. Moravec indicated that the communities could request that SHA monitor noise levels at the completion of any roadway improvement. All requests for post construction measurements will be evaluated by SHA on a case by case basis.

A few members of the focus group requested copies of the Noise Report.

<u>Archaeology</u>

Mary Barse of SHA (Project Planning Cultural Resources Group) presented an overview of the archeological findings. At the previous meeting the focus group was made aware that a Phase II archaeology study would be undertaken to determine the potential historic significance of two identified affected sites. The first site is located at the southern limit of the project near the Longwood Community Center and the other is located off Brookeville Road near the intersection of Brookeville Road and MD 97.

All western build alternates impacts the southern site. The degree of impact is the same for Alternate 7 and 8B. The Phase II archaeology concluded that southern site is not will maintained or intact. Foundation and structural remains uncovered at this site are believed to be the remains of a 19th century rental house for an old farmstead. Because the site is sparsely scattered with structural remains, the site is not recommended as eligible for the National Register. The Maryland Historic Trust (MHT) is the agency that will ultimately decide on the eligibility and the need for preservation. SHA is not recommending additional work.

Alternates 7 and 8B impact the other site off Brookeville Road. This site is part of the Maryland National Park and Planning Commission (MNCPPC) parkland. Newlin Downs Mill site is the core area where structural remains are evident above ground. A Millrace (trail) along the south side of Brookeville Road is associated with the Newlin Downs Mill. Handouts provided at the meeting indicate the difference in impact between Alternates 7 and 8B. Alternate 8B impacts a portion of the millrace only (structural remains will be intact); Alternate 7 impacts would be extensive.

The Newlin Downs Mill structural remains are believed to the part of a mill or the millworkers' house. The mill itself is one of the two mills in Brookeville. Other features are evident in the landscape such as an old well. The entire site and the Millrace are recommended as eligible for the National Register. SHA is also recommending that impacts to this site could be mitigated through the process of data recovery.

A citizen queried what this means in terms of the process. Ms. Barse noted that the schedule remains the same. If data recovery is recommended by MHT it will likely be implemented prior to the construction stage. Another citizen queried what can be done if preservation in place is selected. Mary Barse confident on receiving concurrence from MHT cautioned the group that if MHT recommends preservation in-place, an avoidance alternate must be developed or mitigation would be required. Ms. Barse noted however that there is probably no easy way to mitigate the impacts.

The archaeology report as well as SHA's recommendation will be submitted to MHT in the next few weeks (no exact date was given) for concurrence. MHTs' final recommendation will ultimately play a role in the final alternate selection process. Ms. Barse stressed however that the archaeology is only a contributing factor and not the deciding factor in the selection of the SHA preferred Alternate.

Other Discussions

Carmeletta Harris continued the discussion and updated the focus group on recent project developments. A MD 97 Brookeville team meeting was held July 22, 2002. The project team was briefed of the results of the Phase II-archaeology. As a result of the team meeting Ms. Harris informed the focus group that the team is divided between Alternate 7 and Alternate 8B and would like feedback from the focus group taking into consideration the results of the archaeology study. Citizens from the focus group expressed great concern. Islander Street residents somewhat satisfied with the noise analysis were still reluctant to a build alternate. An Islander Street resident noted that either Alternate 7 or nothing at all is his preference. By show of hands however, a majority of the focus group voted that they still prefer Alternate 7 over Alternate 8B.

Future Steps

Carmeletta Harris noted the remaining project schedule. Prior to the selection meeting, Montgomery County will be conducting a public hearing regarding the MD 97 Brookeville project to aide them in their recommendation to SHA. Dan Hardy of the Maryland National Capital Park and Planning Commission (M-NCPPC) encouraged the focus group to attend and voice their concerns (date, time and location for this venue will be forthcoming). The Administrator's Selection meeting is tentatively scheduled for early October 2002. A newsletter will be mailed out describing the SHA selected alternate shortly thereafter. No more focus group meetings are anticipated for this project.

Enclosures () cc: Attendees

Section VI-D. Greater Olney Civic Association Correspondence

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

D. GREATER OLNEY CIVIC ASSOCIATION CORRESPONDENCE



GreaterOlney CivicAssociation

Post Office Box 212 Olney, Maryland 20830 Website Address: http://www.goca.org

ICA Officers		Members
sident	October 30, 2001	Briars Acres
t Brodsky strywood		
cutive Vice President :h Kopanda	Ms. Carmen Harris, Project Manager	
rth Creek	Project Planning Division	Cherrywood
Vice President a Folk ce Hallowell	State Highway Administration 707 N. Calvert Street Baltimore, MD 21202	
Vice President		
ve Smet rbock Meadows		Goldmioe Crossing
cording Secretary	Dear Ms. Harris:	Hallowell
lene Rosenheim phlands of Olney	The Greater Olney Civic Association (GOCA) has a longstanding interest in the Brookville humass in no large part because of the potential effects of the road	Highlaods of Olocy
rresponding Secretary	project on Olney residents, and on traffic north of the town center of Olney.	Homeland Village
ROCA	GOCA recognizes as well that even though a bypass will affect Olney residents,	James Creek
a y Peck dank Mandaur	the massive increase of traffic on Route 97 through the Town of Brookeville during the past few years has exceeded the capacity of the road through the	Lake Hallowell
FDECK MERGOWS	town, and threatens the integrity of the town.	Manor Oaks
ke Kelley Ilowell	As a result of these and other considerations, GOCA feels strongly that the selected bypass alternative should:	Norbeck Grove
ards Chairman	1. Avoid impacting the fields at the Longwood Recreation Center;	Norbeck Mendows
rbeck Meadows	2. Not include a bridge(s)	North Creek
insportation Chairman	3. Cross Brookeville Road at grade; and	Oak Grove
rbeck Meadows	4 Include berms as appropriate, and maintain as many of the trees alongside	Olacy Mill
siness Liaison	the bypass alignment as possible to minimize the visual and noise impact of the bypass, to minimize the impact on the environment, and to	
rbeck Grove		
tisoa Organizatio os	eliminate the need for more intrusive structures, such as sound barriers.	Olney Towne
oey Chamber of mmerce	Based on our understanding of the alternatives, GOCA believes Alternative 7 accomplishes those objectives far more effectively than the other alternatives,	Olsey Village
d-Consty Citizens	and thus, GOCA supports the construction of Alternative 7 of the bypass.	
visory Board	GOCA comes to this conclusion after a great deal of involvement in the issues surrounding the construction of the road. Mr. David Eskenazi, the GOCA Transportation Chair and Bypass Focus Group Member, has led discussions about the bypass at numerous GOCA meetings during the past few years, including animated participation from the Olney Village Home Owners Association, about the value and impact of the bypass.	
		Victoria Springs

The issues discussed at GOCA meetings have been the basis of numerous conversations between GOCA and the Commissioners of the Town of Brookeville to identify common concerns and positions related to the bypass. Presentations by you and your predecessor, Mr. Paul Maloney, further expanded our understanding of the issues.b

The willingness of you, Mr. Maloney, and others at SHA to request our input, and to share information about the planning of the Bypass Project has alleviated numerous concerns that once existed about the Bypass. As a result, GOCA supports the construction of a Bypass that minimizes the visual and noise impact for nearby residents, and that protects the environment to the maximum extent feasible.

Again, I want to thank you for the significant efforts you have made to involve GOCA, member civic associations and Olney residents in the planning efforts for the bypass. I would also like to commend you on the success of those efforts.

Sincerely,

Art Brodsky President Greater Olney Civic Association barg Village

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Maryland Department of Transportation State Highway Administration Parris N. Glendening Governor John D. Porcari Secretary Parker F. Williams Administrator

November 29, 2001

Mr. Art Brodsky President Greater Olney Civic Association P. O. Box 212 Olney MD 20830

Dear Mr. Brodsky:

Thank you for your comments regarding the MD 97 Brookeville Project. The State Highway Administration (SHA) encourages public involvement and appreciates your comments. Your support for Alternate 7 has been noted. Your concerns regarding the Longwood Recreation Center fields and, the visual and noise impacts have been noted as well.

At this time, the at-grade and grade-separated connection at Brookeville Road will continue to be evaluated for each of the alternates. The SHA will also make every attempt to minimize any impacts near the Longwood Community Center as well as the residents along the proposed bypass.

The next step for this project will be the selection of a preferred alternate. This decision will be made in the winter 2001/2002. During this process, continued coordination with the federal, state and local government agencies will occur. The citizen comments received at the MD 97 Brookeville Location/Design Public hearing held on Wednesday, October 3, 2001 will be also utilized in the decision making process.

My telephone number is

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717 Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 Mr. Art Brodsky Page Two

Again, thank you for your interest in the MD 97 Brookeville Project. If you have any further questions or comments, please feel free to contact Carmeletta T. Harris, the project manager, at 410-545-8522 or toll-free in Maryland at 1-800-548-502 or via email at charris@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson Deputy Director Office of Planning and Preliminary Engineering

posento By:

Melissa Kosenak Project Engineer Project Planning Division

cc: Ms. Carmeletta T. Harris, Project Manager, State Highway Administration Ms. Shannon Rousey, Environmental Manager, State Highway Administration

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Section VII. List of Preparers

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



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Maryland State Highway Administration

VII. <u>LIST OF PREPARERS</u>

Federal Highway Administration

Nelson J. Castellanos, Jr. Division Administrator

Denise King (formerly Winslow) Environmental Protection Specialist

Maryland State Highway Administration

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Joseph R. Kresslein Assistant Division Chief, Project Planning Division

James Wynn Assistant Division Chief, Project Planning Division

Carmeletta T. Harris Project Manager Project Engineer (1998-2001)

Allison E. Grooms Environmental Analyst

Mona Sutton Travel Forecaster

Sharon Alderton Environmental Analyst

Mary F. Barse Archaeologist

Gary Green Environmental Analyst Maryland State Highway Administration (Continued)

Karen Arnold Environmental Analyst

Cheryl Jordan Environmental Analyst

Rita M. Suffness Architectural Historian

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Karen Kahl Project Engineer

KCI Technologies, Inc. FEIS/Section 4(f) Evaluation

Brian A. Bernstein Division Chief, Environmental Planning

Lydia Hill NEPA Document Coordinator

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Jen Gillis Environmental Planner

Kristen Goddard Environmental Planner

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URS Greiner, Inc. (Noise Analysis)

Ray Moravec Project Manager

Wilson T. Ballard (Air Analysis)

Mike Kelly, Manager, Technical Air Quality

R. Christopher Goodwin and Associates, Inc. (Archeology)

April Fehr, Historian Senior Archaeologist

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Section VIII. Distribution List

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration
VIII. Distribution List

VIII. DISTRIBUTION LIST

A. Federal Agencies

Mr. Davis P. Doss State Conservationist Natural Resources Conservation Service U.S. Department of Agriculture 339 Busch's Frontage Road, Suite 301 Annapolis MD 21401

Mr. Willie Taylor, Director Office of Environmental Policy and Compliance U.S. Department of the Interior Main Interior Building, MS 2340 18th and C Streets, NW Washington, D.C. 20240

Ms. Denise Rigney NEPA Program Manager (3ES30) Office of Environmental Programs U.S. Environmental Protection Agency 1650 Arch Street Philadelphia PA 19103-2029 Attention: Ms. Barbara Rudnick

U.S. Environmental Protection Agency EIS Filing Section Mail Code 2252-A, Room 7241 Ariel Rios Building (South Oval Lobby) 1200 Pennsylvania Avenue, NW Washington D.C. 20460

Mr. Timothy E. Goodger National Marine Fisheries Service Habitat and Protected Resources Oxford Laboratory Oxford, MD 21650 Attention: Mr. John Nichols

Mr. Bill Schultz U.S. Department of the Interior Fish and Wildlife Service Chesapeake Bay Field Office 177 Admiral Cochrane Drive Annapolis MD 21401 Mr. Paul Wettlaufer Transportation Program Manager U.S. Army Corps of Engineers Baltimore District (CENAB-OP-R) P.O. Box 1715 10 S. Howard Street Baltimore MD 21201

Commander U.S. Coast Guard, 5th District 431 Crawford Street Portsmouth, VA 23730

Mr. Eugene Keller National Capital Planning Commission 401 Ninth Street NW Suite 500 North Washington D.C. 20576

Mr. Gene Gruber Regional Environmental Officer Federal Emergency Management Agency Region III 615 Chestnut Street Philadelphia PA 19106-4404

B. State Agencies

Ms. Linda Janey, Chief State Clearinghouse Maryland Office of Planning 301 West Preston Street, Room 1104 Baltimore MD 21201 B. State Agencies (Continued)

Maryland Department of Planning

Department of Natural Resources

Department of Budget and Fiscal Planning

Department of General Services

Department of Housing and Community Development

Department of Education

Department of Health and Mental Hygiene

Interagency Committee for School Construction

Maryland Historical Trust

Department of Public Safety and Correctional Service

Mr. Ray Dintaman, Director Environmental Review Unit Maryland Department of Natural Resources Tawes State Office Building, B-3 Annapolis MD 21401

Mr. Elder Ghigiarelli Maryland Department of the Environment Wetlands and Waterways Program 2500 Broening Highway Baltimore MD 21224

Maryland Department of Natural Resources Greenways and Resource Planning Tawes State Office Building, D-3 Annapolis MD 21401 Attention: Mr. Arnold Norden

Depository Libraries for Maryland Publications

Ms. Lynda Davis, Director Maryland Department of Legislative Services Library 90 State Circle Annapolis MD 21401

Ms. Christine Alvey Maryland State Archives 350 Rowe Boulevard Annapolis MD 21401

Ms. Ruth Hodgson Maryland State Law Library Court of Appeals Building 361 Rowe Boulevard Annapolis MD 21401

Mr. Jeff Korman State Library Resource Center Enoch Pratt Free Library Maryland Department 400 Cathedral Street Baltimore MD 21201

C. Maryland Department of Transportation

Director Public Affairs Maryland Department of Transportation BWI Airport

Ms. Marsha Kaiser, Director Office of Systems Planning and Evaluation Maryland Department of Transportation BWI Airport

D. County/Local Agencies

Montgomery County

Mr. Charles H. Loehr, Director Montgomery County Department of Planning 8787Georgia Avenue Silver Spring, MD 20910

Mr. Gordon Aoyagi, Director Montgomery County Fire and Rescue Service 101 Monroe Street, 12th Floor Rockville, MD 20850

Mr. William O'Toole Acting Chief of Police Montgomery County Department of Police 2350 Research Boulevard Rockville, MD 20850

Mr. Albert J. Genetti, Director Montgomery County Department of Public Works and Transportation 101 Monroe Street Rockville, MD 20850

Ms. Ellen Scavia, Chief Montgomery County Division of Environmental Policy and Compliance Department of Environmental Protection 255 Rockville Pike, Suite 120 Rockville, MD 20850

Maryland-National Capital Park and Planning Commission

Mr. Robert Arciprete, Chief Park Planning and Development Division Department of Parks and Recreation Maryland-National Capital Parks and Planning Commission 6600 Kenilworth Avenue Riverdale MD 20737

Maryland-National Capital Park and Planning Commission (Cont'd)

Ms. Patricia Willard Maryland National Capital Parks and Planning Commission 8787 Georgia Avenue Silver Spring, MD 20904

Town of Brookeville

Mr. Richard Allan President of Commissioners P.O. Box 67 Brookeville, MD 20833

Mr. Christopher Scanlon, Chairman Brookeville Planning Commission P.O. Box 67 Brookeville, MD 20833

E. Citizen Groups

Montgomery County Citizens Bicycle Commission 4000 Wexford Drive Kensington, MD 20895

F. Others

Maryland State Law Library Upper Level Court of Appeal Building 361 Rowe Boulevard Annapolis MD 21401

Mr. Michael Clifford MWCOG 777 N. Capitol Street, NE Suite 300 Washington DC 2007-4226

Section IX. References

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Maryland State Highway Administration

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Section X. Appendices Appendix A. Farmland Conversion Impact Rating Form

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MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Appendix A. Farmland Conversion Impact Rating Form

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Natural Resources Conservation Service 18410 Muncaster Road Derwood, MD 20855 301-590-2855

March 2, 2001

Mr. Brian Bernstein Assistant Division Chief Environmental Planning Section KCI 10 North Park Drive Hunt Valley, MD 21030-1846

Dear Mr. Bernstein:

Enclosed please find the completed AD-1006 Farmland Conversion Impact Rating Form for the MD 97 Brookeville Bypass Project. Thank you for providing the information that I requested. That information enabled me to complete the form AD-1006 in a more timely fashion.

If you have any questions, please call me at 301-590-2855.

Sincerely,

Iningil

J. G. Warfield District Conservationist

JGW/bjb

The Natural Resources Conservation Service is an agency of the U.S. Department of Agriculture - U S GOVERNMENT PRINTING OFFICE 1984-451 159/1324

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U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)	Date	Of Land Evaluation	n Request	bruary 15,	2001			
Name Of Project MD 97 Brookeville Bypa	al Agency Involve	Federal	Highway A	dministrati				
Proposed Land Use Highway		Count	Montgomery County, Maryland					
PART II (To be completed by SCS)		Date	Request Received	By SCS 2/	21/01			
Does the site contain prime, unique, statewide or	local important farm	land?	Yes N	o Acres Irrigat	ed Average Far	m Size		
(If no, the FPPA does not apply - do not comple	te additional parts of	this fo	rm). 🕱 [15	7		
Major Cropisi	Farmable Land In Gove	L. Jurisdi	iction	Amount Of	Farmland As Def	ined in FPPA		
CORN SMALL GRAWS SOYBEAUS HAY	Acres: 167,100	.	* 52	Acres: /	13800	* 35		
Name Of Land Evaluation System Used	Name Of Local Site As	sessmen	t System	Dete Land E	valuation Return	ved By SCS		
EALUATION ANALYSIS			3	12/01				
PART III (To be completed by Federal Agency)			Size A		Site Rating	Site D		
A Total Acres To Be Converted Directly			9.6/10.69	0.01/0.0	0.59/0.53	1.24/0.99		
B Total Agree To Be Converted Indirectly	0.0	0.0	0.0	0.0				
C Total Acres In Site	58.30	58.51	58.51	58.51				
PART IV (To be completed by SCS) Land Evaluation]				
A. Total Acres Prime And Unique Farmland	24.19/23.21	4.47/4:25	4.90/4.75	4.44/4.33				
B. Total Acres Statewide And Local Important	5.63/1.74	1.38/1.24	3.96/3.72	5.28/4.73				
C. Percentage Of Farmland In County Or Local G	0.0001	0.00004	0.00005	0.00006				
D. Percentage Of Farmland In Govt. Jurisdiction With	23.8	30.5	30.5	34.2				
PART V (To be completed by SCS) Land Evaluatio Relative Value Of Farmland To Be Converte	n Criterion of (Scale of 0 to 100 Po	oints)	93.3	76.9	75.6	79.9		
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 C	FR 658.5(b) Po	imum ints	Alt. SC	Alt. 7	Alt. 8A	Alt. 8B		
1. Area In Nonurban Use	15		· 11	11	11	11		
2. Perimeter in Nonurban Use	10		10	10	10	10		
3. Percent Of Site Being Farmed	20		20	20	20	20		
4. Protection Provided By State And Local Gov	emment 20		15	20	20	20		
5. Distance From Urban Builtup Area	N//	A	N/A	N/A	<u>N/A</u>	N/A		
6. Distance To Urban Support Services	<u>A</u>	N/A	<u>N/A</u>	N/A	<u>N/A</u>			
7. Size Of Present Farm Unit Compared To Ave		ļ_ <u>0</u>	0	0	┾╝			
8. Creation Of Nonfarmable Farmland				<u> </u>	<u> </u>			
9. Availability Of Farm Support Services		2			<u> </u>			
10. On-Farm Investments	20		2	0	0	<u> </u>		
11. Effects Of Conversion On Farm Support Ser	vices 25				0	<u> </u>		
12. Compatibility With Existing Agricultural Use	75	<u> </u>	60	4				
TOTAL SITE ASSESSMENT POINTS	1	60	13	00	00	60		
PART VII (To be completed by Federal Agency)								
Relative Value Of Farmland (From Part V)	1	00	<u> </u>			· ·		
Total Site Assessment (From Part VI above or a l site assessment)	ocal 1	60						
TOTAL POINTS (Total of above 2 lines)	2	60				<u> </u>		
Site Selected: Da	elected: Date Of Selection			Was A Local Si Yei	te Assessment Us	ed? No		

Reason For Selection:

PRIME FARMLAND SOILS **Montgomery** County

<u>Map Symbol</u>	<u>Soil Map Unit Name</u>
1B	Gaila silt loam, 3 to 8 percent slopes
2A	Glenelg silt loam, 0 to 3 percent slopes
2B	Glenelg silt loam, 3 to 8 percent slopes
4B	Elioak silt loam, 3 to 8 percent slopes
17B	Occoquan loam, 3 to 8 percent slopes
19A	Bucks silt loam, 0 to 3 percent slopes
19B	Bucks silt loam, 3 to 8 percent slopes
20A	Brentsville sandy loam, 0 to 3 percent slopes
20B	Brentsville sandy loam, 3 to 8 percent slopes
21A	Penn silt loam, 0 to 3 percent slopes
21B	Penn silt loam, 3 to 8 percent slopes
25B	Legore silt loam, 3 to 8 percent slopes
26B	Montalto silt loam, 3 to 8 percent slopes
27B	Neshaminy silt loam, 3 to 8 percent slopes
41A	Elsinboro silt loam, 0 to 3 percent slopes
41B	Elsinboro silt loam, 3 to 8 percent slopes
43A	Elk silt loam, 0 to 3 percent slopes, occasionally flooded
45A	Delanco silt loam, 0 to 3 percent slopes, occasionally flooded
46A	Huntington silt loam, 0 to 3 percent slopes, occasionally flooded
47A	Lindside silt loam, 0 to 3 percent slopes, occasionally flooded
50A	Rowland silt loam, 0 to 3 percent slopes, occasionally flooded
57B	Chillum silt loam, 3 to 8 percent slopes
58B	Sassafras loam, 3 to 8 percent slopes

SOILS OF STATEWIDE IMPORTANCE **Montgomery County**

<u>Map Symbol</u>	<u>Soil Map Unit Name</u>
1C	Gaila silt loam, 8 to 15 percent slopes
2C	Glenelg silt loam, 8 to 15 percent slopes
4C	Elioak silt loam, 8 to 15 percent slopes
9B	Linganore-Hyattstown complex, 3 to 8 percent slopes
9C	Linganore-Hyattstown complex, 8 to 15 percent slopes
16B	Brinklow-Blocktown complex, 3 to 8 percent slopes
16C	Brinklow-Blocktown complex, 8 to 15 percent slopes
17C	Occoquan channery loam, 8 to 15 percent slopes
20A	Brentsville sandy loam, 0 to 3 percent slopes
20B	Brentsville sandy loam, 3 to 8 percent slopes
21C	Penn silt loam, 8 to 15 percent slopes
25C	Legore silt loam, 8 to 15 percent slopes
26C	Montalto silt loam, 8 to 15 percent slopes
27C	Neshaminy silt loam, 8 to 15 percent slopes
29B	Jackland silt loam, 3 to 8 percent slopes
37B	Travilah silt loam, 3 to 8 percent slopes
45A	Delanco silt loam, 0 to 3 percent slopes, occasionally flooded
48A	Melvin silt loam, 0 to 3 percent slopes, occasionally flooded
51A	Bowmansville silt loam, 0 to 3 percent slopes, occasionally flooded
57C	Chillum silt loam, 8 to 15 percent slopes
59A	Beltsville silt loam, 0 to 3 percent slopes
59B	Beltsville silt loam, 3 to 8 percent slopes
61B	Croom gravelly loam, 3 to 8 percent slopes
61C	Croom gravelly loam, 8 to 15 percent slopes
64B	Croom and Bucks soils, 3 to 8 percent slopes
64C	Croom and Bucks soils, 8 to 15 percent slopes
65B	Wheaton silt loam, 0 to 8 percent slopes

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FARMLAND CONVERSION IMPACT RATING FORM AD-1006 RATIONALE FOR EVALUATION OF SIT ASSESSMENT CRITERIA 7 CFR 658.5 (b) MARYLAND ROUTE 97-BROOKEVILLE, MARYLAND BYPASS MONTGOMERY COUNTY, MARYLAND FEBRUARY 2001

1. How much land is in non-urban use within a radius of 1 mile from where the project is intended?

More than 90 percent – 15 points 90 to 20 percent – 14 to 1 point(s) Less than 20 percent – 0 points

Aerial photography and lane use maps were reviewed and a field review of the site was conducted to determine non-urban use within a 1-mile radius of the project area. It was estimated that 75 percent of the land area around the study area is in non-urban use. The town of Olney, located south of the study area, is the only urban area in the vicinity.

Rating: Alternative 5C-11 points; Alternative 7 - 11 points; Alternative 8A and B - 11 points

2. How much of the perimeter of the site borders on land in non-urban use?

More than 90 percent – 10 points 90 to 20 percent – 9 to 1 point(s) Less than 20 percent – 0 points

Aerial photography and lane use maps were reviewed and a field review of the site was conducted to determine the amount of non-urban land use bordering the project area. It was estimated that more than 80 percent of the land area bordering the perimeter of the site is in non-urban use.

Rating: Alternative 5C-10 points; Alternative 7 - 10 points; Alternatives 8A and B - 10 points

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent – 20 points 90 to 20 percent – 19 to 1 point(s) Less than 20 percent – 0 points

Aerial photographs were reviewed from previous years to evaluate changes in land use patterns. This review revealed that more than 90 percent of the farmland in the study area has been farmed more than give of the last ten years.

Rating: Alternative 5C-20 points; Alternative 7-20 points; Alternative 8A and 8B-20 points

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland or covered by private programs to protected farmland?

To preserve farmland and open space, the Maryland National Capital Park and Planning Commission has adopted a Functional Master Plan for the Preservation of Agriculture and Rural Open Space (1980, updated 1988). The plan recommends techniques to protect and preserve farmland and rural open space. The study area is located within two agricultural protection areas of the county. The study area west of existing MD 97 is within the Rural Density Transfer Zone or "RDT" zone. One dwelling unit is permitted per 25 acres of

farmland. The study area east of existing MD 97 is located within the Rural Cluster (RC) Zone. In this zone, overall density is one dwelling unit per five acres with a cluster option for one-acre minimum lot sizes. For example, if the base zone is one dwelling unit per five acres and the tract is 100 acres in size, the number of permitted dwelling units is 20. The cluster option would allow these 20 units to be grouped on lots as small as one acre on approximately 40 percent of the parcel or 40 acres. The remainder of the tract (60 percent or 60 acres) could be preserved as open space or used for agricultural uses.

Rating: Alternative 5C-15 points; Alternative 7 – 20 points; Alternative 8A and 8B – 20 points

- 5. Criterion 5 is not considered applicable for corridor-type projects.
- 6. Criterion 6 is not considered applicable for corridor-type projects.
- 7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the country?

As large or larger – 10 points Below average – deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more Below average – 9 to 0 point(s)

According to the Natural Resources Conservation Service in Montgomery County, the average size of a farm in the county is 157 acres. All four Alternatives impact one farmland parcel. The size of each farmland parcel affected by these alternatives is less than 50 percent of the average farm size in the county.

Rating: Alternative 5C - 0 points; Alternative 7 - 0 points; Alternatives 8A and 8B - 0 points

8. If this site is chosen for the project, how much of the remaining land on the farm will become nonfarmable because of the interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project -25 points Acreage equal to between 25 and 5 percent of the acres directly converted by the project -24 to 1 point(s) Acreage equal to less than 5 percent of the acres directly converted by the project -0 points

Only Alternative 5C will bisect farmland. Alternatives 7, 8A and 8B will only affect the edge of the existing farm field. Because the proposed roadway improvements will be two-lane undivided roadways with shoulders, access to the remaining farmland is not anticipated to be a problem.

Rating: Alternative 5C - 5 points; Alternative 7 - 0 points; Alternatives 8A and 8B - 0 points

9. Does the site have available adequate supply of farm support services and markets, i.e. farm suppliers, equipment dealers, processing and storage facilities and farmers markets?

All required services are available – 5 points Some required services are available – 4 to 1 point(s) No required services are available – 0 point(s)

All required services are available to the farms in the area for each alternative. According to the Natural Resources Conservation Service in Montgomery County, agricultural services are located outside of the study area in Frederick, Howard and Montgomery Counties.

Rating: Alternative 5C - 5 points; Alternative 7 - 5 points; Alternatives 8A and 8B - 5 points

10. Does the site have substantial and well maintained and on-farm investments such as barns, other storage buildings, farm trees and vines, field terraces, drainage, irrigation waterways or other soil and water conservation measures?

High amount of on-farm investments – 20 points Moderate amount of on-farm investment – 19 to 1 point(s) No on-farm investment – 0 point

A minimal amount of on-farm investments was noticed during a field visit to the study area. No structures related to farming activity would be required by any of the proposed build alternatives.

Rating: Alternative 5C - 2 points; Alternative 7 - 0 points; Alternatives 8A and 8B - 0 points

11. Would the project at this site, by converting farmland to non-agricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted -25 points Some reduction in demand for support services if the site is converted -24 to 1 point(s) No significant reduction in demand for support services if the site is converted -0 points

None of the proposed build alternatives are anticipated to reduce the demand for farmland support services in the area. The 10.69 acres of active farmland impacts associated with Alternative 5C is the maximum amount of active farmland impacts generated by any of the proposed build alternatives. The other three alternatives affect less than 1.25 acres. The viability of the study area for farming activity should not be jeopardized by the proposed roadway improvements.

Rating: Alternative 5C - 0 point(s); Alternative 7 - 0 point(s); Alternatives 8A and 8B - 0 point(s)

12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to non-agricultural use?

Proposed project is incompatible with existing agricultural use of surrounding farmland -10 points Proposed project is tolerable to existing agricultural use of surrounding farmland -9 to 1 point(s) Proposed project is fully compatible with existing agricultural use of surrounding farmland -0 point(s)

The purpose of the proposed roadway improvements is to remove the increasing volumes of traffic from the town of Brookeville, improve traffic operations and safety on existing MD 97 and preserve the historic character of Brookeville. The zoning classifications of land in the study area (see item 4) are in place to preserve agricultural activity and provide developers the opportunity to cluster their developments on agriculturally zoned land.

Rating: Alternative 5C - 7 points; Alternative 7 - 2 points; Alternatives 8A and 8B - 2 points

Total Rating:	Alternative 5C – 75 points
-	Alternative 7 – 68 points
	Alternative 8A – 68 points
	Alternative 8B – 68 point

Section X. Appendices Appendix B. Stream Flow Gaging Data

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Parameter	Measurement	Comments &
Annual Mean	29.1	
Highest Annual Mean	48.3	ų
Lowest Annual Mean	16.0	
Highest Daily Mean	1500	October 1, 1979
Lowest Daily Mean	1.7	September 11-13, 1995
Annual Seven-day Minimum	1.8	September 10, 1995
Instantaneous Peak Flow	4300 (a)	September 6, 1979
Instantaneous Peak Stage	8.80	September 6, 1979
Instantaneous Low Flow	.75 (b)	January 30, 1981
Annual Runoff (cfsm)	1.08	
Annual Runoff (inches)	14.64	
10 Percent Exceeds	48	
50 Percent Exceeds	18	
90 Percent Exceeds	5.6	

Summary Statistics, Hawlings River Near Sandy Spring, Maryland, Water Years 1978-1995

Source: James, R.W., Simmons, R.H., and Helinsky, B.M. U.S. Geological Survey Water-Data Report MD-DE-95-1. <u>Water Resources Data Maryland and Delaware Water</u> <u>Year 1995.</u> Volume 1 - Surface-Water Data.

(a) From rating curve extended above 1,200 cubic ft/s on basis of contracted-opening and flow-over-road measurement of peak flow.

(b) Result of freezeup

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	1+00						
Offset (ft)	Rod Depth (ft)	Elevation (ft)	Comments				
0.00	0.00	100.00					
2.00	0.55	99.45					
3.00	1.05	98.95		·····			
3.50	1.70	98.30			e	tation 1.00	
5.80	2.60	97.40	Bankfull		3	LOUVIL ITVU	
10.00	4.05	95.95		100		ι.	
12.00	4.30	95.70		Ê 99	A STATE OF A STATE	an administration of the state of the state of the	
14.00	4.65	95.35		5 98		the state and fair the	
16.00	4.62	95.38		t 97 -	and the second	And Alexandren a	
18.00	3.90	96.10	Boulder	96	and the second		
20.00	5.00	95.00		95	E 40		
22.00	4.85	95.15		0	5 10	15 20 25 30 35	
24.00	4.60	95.40				Offset (ft)	
26.00	4.70	95.30					
28.00	3.95	96.05				·	
30.00	0.40	99.60					
31.00	0.00	100.00					
Section Dat		0.000		Results		Stream Classification Parame	ners
eclion Da Vtd. Manni	a ngs Coefficient	0.032		Results Flow Area	38.00 ft^2	Stream Classification Parame Average Depth	1.66
eclion Dai Vtd. Manni Channel Sk	a ngs Coefficient ope	0.032	ft/ft	Results Flow Area Wetted Perimeter	38.00 ft^2 24.61 ft	Stream Classification Parame Average Depth Width/Depth Ratio 1	1.66 3.87
Section Dat Vtd. Manni Channel Str Valer Surfa	a ngs Coefficient ope ace Elevation	0.032 0.01 97.4	ft/ft ft	Results Flow Area Wetted Perimeter Top Width	38.00 ft^2 24.61 ft 22.98 ft	Stream Classification Parame Average Depth Width/Depth Ratio 1 Entrenchment	1.66 3.87 1.35
eclion Da /td. Manni hannel Sl /aler Surfa ischarge	a ngs Coefficient ope ace Elevation	0.032 0.01 97.4 235.73	ft/ft ft cfs	Results Flow Area Wetted Perimeter Top Width Maximum Depth	38.00 ft^2 24.61 ft 22.98 ft 2.4 ft	Stream Classification Parame Average Depth Width/Depth Ratio 1 Entrenchment Rosgen Classification	1.66 3.87 1.35 F4

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Appendix B.

Stream Flow Gaging Data

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Offset (ft) Rod Depth (ft) Elevation (ft) Comments 0.00 0.00 100.00 2.00 5.05 94.95 3.00 5.30 94.70 4.00 5.10 94.90 6.00 5.55 94.45 8.00 5.75 94.25 Thaweg 10.00 5.50 94.80 14.00 12.00 5.20 94.80 14.00 5.20 94.80 16.30 5.00 95.00 Edge of water 17.00 3.75 96.25 18.00 2.20 97.80 Bankfuli 19.00 1.65 98.35 21.00 0.90 99.10 23.80 0.00 100.00 100.00 100.00	Station 4+00 f_{1} g_{9
0.00 0.00 100.00 2.00 5.05 94.95 3.00 5.30 94.70 4.00 5.10 94.90 6.00 5.55 94.45 8.00 5.75 94.25 Thaweg 10.00 5.50 94.80 12.00 5.20 94.80 14.00 5.20 94.80 16.30 5.00 95.00 Edge of water 17.00 3.75 96.25 18.00 2.20 97.80 Bankfuli 19.00 1.65 98.35 21.00 0.90 99.10 23.80 0.00 100.00 100.00 100.00	$\mathbf{Station 4+00}$
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6.00 5.55 94.45 8.00 5.75 94.25 Thaweg 10.00 5.50 94.50 12.00 5.20 94.80 14.00 5.20 94.80 16.30 5.00 95.00 Edge of water 17.00 3.75 96.25 18.00 2.20 97.80 Bankfuli 19.00 1.65 98.35 21.00 0.90 99.10 23.80 0.00 100.00	$ \begin{array}{c} $
8.00 5.75 94.25 Thaweg 10.00 5.50 94.50 12.00 12.00 5.20 94.80 14.00 5.20 94.80 16.30 5.00 95.00 Edge of water 17.00 3.75 96.25 18.00 2.20 97.80 Bankfuli 19.00 1.65 98.35 21.00 0.90 99.10 23.80 0.00 100.00 100.00 100.00	E 100 99 97 96 97 94 0 5 10 15 20 25 Offset (ft)
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12.00 5.20 94.80 14.00 5.20 94.80 16.30 5.00 95.00 Edge of water 17.00 3.75 96.25 18.00 2.20 97.80 Bankfuli 19.00 1.65 98.35 21.00 0.90 99.10 23.80 0.00 100.00	5 90 97 96 95 94 0 5 10 15 20 25 Offset (ft)
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21.00 0.90 99.10 23.80 0.00 100.00	
23.80 0.00 100.00	L
ction Data Res	Results Stream Classification Parameters
td, Mannings Coefficient 0.035 Flow	Flow Area 48.85 ft/2 Average Depth 2.85 ft
nannei Siope 0.004 ft/ft Wet	Wetted Perimeter 20.8 ft Width/Depth Ratio 6.01 *
ater Surface Elevation 97.8 ft Top	Top Width 17.13 ft Entrenchment 2.35
ischarge 231.76 cfs Max	Maximum Depth 3.55 ft Rosgen Classification C4
Velo	Velocity 4.74 ft/s * Does not fit Rosgen's Classification for width/depth ration

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Note: All e	levations relativ	e to an arbritr	ary datum. Viev	v facing upstream							
Station	5+00		· .								
Offset (ft)	Rod Depth (ft)	Elevation (ft)	Comments	-							
0.00	0.00	100.00		-			•••••••••••••••••••••••••••••••••••••••				
1.00	0.20	99.80					Sectio	on 5+00			
1.60	0.40	99.60		Ì							
2.00	1.30	98.70		10	00					-	
4.00	2.20	97.80	Edge of water	E	A MAR AND	10.220	े लाहा जिस्तु ह ि	العام بي العربي . العام العام الع			
5.00	2.25	97.75		5	99 1	-L.F 5		nant 16 2	and the second	-42 7 2	
6.30	2.20	97.80		, at	08			·*• \$231.4 14			
7.00	2.05	97.95	•		21.2.1	and the second			and the second second	.	
8.00	2.15	97.85		· _ •	97 🛄 😳	The Ch		part and the	in the same	<u><u>v</u>e</u>	
9.00	2.30	97.70			0	2 4	(8 8	10 12	14	
9.60	2.20	97.80	Edge of water					Offset (ft)			
11.00	1.40	98.60	Bankfull					• •			
14.00	0.00	100.00								J	
Section Da	ta			Results					Stream Classification	Parameters	
Wtd. Mann	ings Coefficient	0.037		Flow Area		5.71 ft^2			Average Depth	0.65 ft	
Channel S	lope	0.04	ft/ft	Wetted Perimeter		9.2 ft			Width/Depth Ratio	13.50	
Water Surf	ace Elevation	98.6	ft	Top Width		8.78 ft			Entrenchment	1.25	
Discharge		33.37	cfs	Maximum Depth		0.9 ft			Rosgen Classification	B3	
				Velocity		5.84 ft/s			-		
									a an		

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Station 6 Offset (ft) Rod D 0.00 0 2.00 1 2.30 1 3.00 1 4.00 2 6.00 2 8.00 2 10.00 2 12.40 2 15.00 2 17.00 2 10.00 2	+00 Depth (ft) Elevi .000 10 .10 9 .30 9 .60 9 .20 9	ation (ft) (00.00 88.90 98.70 97.80 97.70 97.750 97.750 97.35 97.10 97.20 97.20 97.10	Comments Bankfull Edge of water		evation (ft)	00 99 98			Stati	on 6+00						
Offset (ft) Rod D 0.00 0 2.00 1 3.00 1 4.00 2 6.00 2 8.00 2 10.00 2 12.40 2 15.00 2 17.00 2	Depth (ft) Elev. 0.00 10 .10 9 .30 9 .60 9 2.20 9 2.30 9 2.50 9 2.65 9 2.80 9 2.80 9	ation (ft) (00.00)8.90)8.70)8.40)7.80)7.70)7.50)7.50)7.35)7.10)7.20)7.20)7.20	Comments Bankfull Edge of water		evation (ft)	00 99 98			Stati	on 6+00						
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2.30 1 3.00 1 4.00 2 6.00 2 8.00 2 10.00 2 12.40 2 15.00 2 17.00 2	1.30 9 1.60 9 2.20 9 2.30 9 2.50 9 2.65 9 2.90 9 2.80 9 2.90 9 2.90 9	08.70 1 08.40 07.80 07.70 07.50 07.35 07.10 07.20 07.20	Bankfull Edge of water		evation (ft)	00 99 98	X		Stati	on 6+00				5. d		
3.00 1 4.00 2 6.00 2 8.00 2 10.00 2 12.40 2 15.00 2 17.00 2	1.60 9 2.20 9 2.30 9 2.50 9 2.65 9 2.90 9 2.80 9 2.90 9 2.90 9 2.90 9	98.40 97.80 97.70 97.50 97.35 97.10 97.20 97.10	Edge of water		evation (ft)	00 99 98	X		Stati	on 6+00) 	140	- 1	11. av	i tag	
4.00 2 6.00 2 8.00 2 10.00 2 12.40 2 15.00 2 17.00 2	2.20 9 2.30 9 2.50 9 2.65 9 2.90 9 2.80 9 2.90 9	97.80 97.70 97.50 97.35 97.10 97.20	Edge of water		evation (11)	20 29 28						Sec. 1		5. ď	-ing	
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8.00 2 10.00 2 12.40 2 15.00 2 17.00 2	2.50 9 2.65 9 2.90 9 2.80 9 2.90 9	97.50 97.35 97.10 97.20 97.10	Edge of water		evation (11)	99 98	S.		an a	ويعدينه متعدد	59-14- ¹⁶ -1	1816		1. 44	1	
10.00 2 12.40 2 15.00 2 17.00 2	2.65 9 2.90 9 2.80 9 2.80 9	97.35 97.10 97.20 97.10	Edge of water		evation (98	X	Sector				AL . Same	a local A. L. L.			
12.40 2 15.00 2 17.00 2	2.90 9 2.80 9 2.90 9	97.10 97.20 97.10	Edge of water		evatio	98	and the		tion of	لمين ميرينية موما معرف	A CARACTER STATE	mint.	-se (-se [*	en e	s. it	
15.00 2 17.00 2	2.80 9 2.90 9	97.20 97.10		ļ	6	Sec. 6. 622		1999 - 1999 -	200 Sec.	10 a (1. S.	11.17		in alle Second States		
17.00 2	2.90 9	17 10			m	97 🛒	Carlier 6	مهنعهداون	ur en	A CONTRACTOR	Sec. Para	1 N.A.	<u> </u>	and the second	247) 3**	
40.00					544	96	ni s inipitati		<u> </u>					· · · ·	ens.	
18.00 3	3.00 9	97.00				0	5	1	10	15	20)	25		30	
20.00 2	2.80 9	97.20		,						Offset (i	t)					
21.00 2	2.80 9	97.20								•	•					
22.00 3	3.00 9	97.00		L												_)
23.00 2	2.90 9	97.10														
24.00 3	3.10 9	96.90														
25.00 3	3.00 9	97.00	Edge of water													
26.00 0).20 9	99.80														
27.00 0	0.00 1	00.00														
ection Data				Results							Strea	im Cia	assifica	ation	Parar	neters
Itd. Mannings C	oefficient	0.033		Flow Area			31.59 ft	^2			Aver	age D	epth			1.36 ft
hannei Slope		0.009	ft/ft	Wetted Perime	eter		24.83 ft				Widtl	v Dep	th Rat	io		17.20
Vater Surface Ei	evation	98.7	ft	Top Width			23.31 ft				Entre	enchm	ient			1.16
Discharge		158.44	cfs	Maximum Dep	oth		1.8 ft				Rose	en Cl	assific	ation		F4
				Velocity	· · · ·		5.02 ft	/s								
				volocity			0.02 1							<u>.</u>		

		Impact Statement
		Appendix B.
		Stream Flow Gag

Station 7+00 Offset (ft) Rod Depth (ft) Elevation (ft) Comments 0.00 0.00 100.00 3.00 2.70 97.30 3.40 3.30 96.70 Bankfuli 5.00 4.25 95.75 Station 7+00 6.50 5.30 94.70 Edge of water 8.00 5.60 94.40 100 10.00 5.50 94.50 99 Elevation (ft) 12.00 5.60 94.40 98 14.00 5.75 94.25 97 96 2 (S Ge 3) 16.00 5.92 94.08 95 and the 18.00 5.85 94.15 94 20.00 5.55 94.45 10 15 20 5 25 30 21.00 4.75 95.25 Offset (fi) 22.00 4.25 95.75 24.00 2.60 97.40 26.00 0.00 100.00 Section Data Results Stream Classification Perameters Wtd. Mennings Coefficient 0.033 Flow Aree 38.58 ft^2 Average Depth 1.95 ft Channel Slope 0.0067 ft/ft Wetted Perimeter 21.15 ft Width/Depth Ratio 10.11 * Water Surfece Elevation 96.7 ft Top Width 19.75 ft Entrenchment 1.32 Discharge 212.29 cfs Maximum Depth 2.62 ft Rosgen Clessification F4 Velocity 5.5 ft/s * Does not fit Rosgen's Classification for width/depth ratio

Note: All elevations relative to an arbritrary datum. View facing upstream

eing Data

Section X. Appendices Appendix C. STORET Database Information

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Surface Water Quality Data (EPA STORET DATABASE)

Parameter	Unit of Measurement	Maximum	Minimum	Beginning Date *	Ending Date *
Water Temp.	Celsius (Fahrenheit)	23 (73.4)	0 (32.0)	2/3/71	12/4/84
Turbidity	PPM Si0 ₂	292.0	0	1/12/72	11/29/77
Turbidity	HACH FTU	30.0	0.8	2/15/78	12/4/84
Conductivity	Micromho	142.0	142.0	12/4/84	12/4/84
DO	mg/l	14.6	6.4	2/3/71	12/18/80
DO	Percent	126.4	57.7	2/3/71	12/18/80
BOD	mg/l	5.8	0.3	1/12/72	12/18/80
pН	SU	8.8	4.9	2/3/71	12/4/74
Residue	Total mg/l	158	54	9/11/75	12/4/84
NO ₂ & NO ₃	N-Total mg/l	4.64	0.90	1/12/72	12/18/80
T PO ₄	PO ₄ mg/l	1.59	0.02	1/12/72	6/2/80
PHOS-TOT	mg/l/P	0.14	0.14	12/4/84	12/4/84
Total P as PO ₄	mg/l	0.60	0.23	7/17/80	12/18/80
Fecal Coliform	MPN	120,000	23	1/12/72	10/9/79
Fecal Coliform	MPNECMED/ 100 ml	11,000	36	1/29/80	12/4/84
Total Coliform	MPN CONF Tubecode	2,400,000	210	1/12/72	10/9/79

(Station: 21MDMONT/60040 Reddy Branch BRKVILLE-BRGHTN RD-River/Streams-S)

* Most recent data available.

Section X. Appendices Appendix D. Wetland Data Sheets

U97

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



The all the faith of the

Maryland State Highway Administration

861

Wetland Function-Value Evaluation Form

Total area of welland: 0.27 ec. Human Mada	d part of a wildlife conidor? X of a "habital island?"	Weitand ID 1 - A Pond w/ emergent edge
Adjacent land Use	Distance to neargast roadway or other	Prepared by Dele
Dominant welland, systems present PEM / SS	Conuguous undeveloped buffer zone present 144	Type, Aree
Is the welland a separate hydraulic system NO Pif nor, where does the	weitend lie in the drainage beat	Eveluetion based on: 'Office:'X: TField::::::::::::::::::::::::::::::::::::
How many incurants contribute to the wetlend?	Vegetation diversity/abundance (see anacted list)	Corps manual welland delineeiton completed

	Function/Value	Occu Y	rence N	 Rationale (Reference #)* F 	Pri Function	ncipal (s)/Value(s)	Comments
Ţ	Groundwater Recharge/Discharge	x		1,2,5,7,9,13,14,15	x		
	Fioodflow Alteration	X .		2,3,5,6,7,8,9,10,13,15,16,	18 X		
-	Fish and Shellfish Habitat	x		7,9,10,12,13,15,16			
Y	SedIment/ToxIcant/Pathogen Retention	x		3,4,5,6,10,11,12,14,15	x		
#	Nutrient Removal	x		2,3,4,5,7,11,12,13,14,15	x		
->	Production Export	x		1,4,5,13			
	Sediment/Shoreline Stabilization	x		4,9,t5			
-	Wildlife Habitat	x		3,4,5,6,7,8,9,17,19,20			-
Ŧ	Recreation	x		5,6			
	Educational Scientific Value	x		2,4,11,12,13			
*	Uniqueness/Heritage	X .		6,10,11,16,17,19,21,22,27	7		
00	Visual Quality/Aesthetics	x		1,5,7,8,10,11,12	x		
ES	Endangered Species		X				
Othe	f						4 Defecte book up liet of numbered encelderates

Notes:

ns: lefer to beck up list of

Appendix D. Wetland Data Sheets

66 h

Wetland Function-Value Evaluation Form

Totel area of welland 0.20 Human Made: NO is welland	part of a wildlife comdor? X , or a "hebitat island?"	Wellend ID W	/1 - B
		Latituda	Longitude
Adjacent land use: Forest w/ some residential	Distence to neereast roadway or other	Prepered by	*Dele
		Wetland Impect:	. بەڭلى دېراپلوچىلىسلىكى تورىدىنى رەپ كەتتى
Dominant wetland systems present? Riverine and PEM	Contiguous undeveloped buffer zone present Yes	Туре	Aree
		Evaluation based of)n:
le the wetlend a seperale hydraulic system NO 11 not, where does the w	elland Ite in the drainage basin 🦥	Office:?	Field: X
How many the trainer portified to the welland?		Corps manual well	and delineetion completed
Torr stary indulates contribute to the wenalting		Yes X	No

	Function/Velue Comments	Occi Y	irence	e Retionale N (Princip (Referen	ce #)	Function(s)/Velue(s)
T	Groundweter Recherge/Discharge	x		1,2,4,5.7,9,13,15,16,	x		
-	Floodflow Alteretion	x		5,6,7,8,9,10,13,18	x		
-	Fish end Sheilfish Hebitet	x		1,2,7,8,15			
Y	Sediment/Toxicent/Pethogen Retention	x		3,4,5,6,7,9,10,13,16	x		
₩	Nutrient Removal	x		3,4,7,8,9,11,12			
\rightarrow	Production Export	x		1,2,4,5,7,11,12,14	x		
m	Sediment/Shoreline Stabilization	x	ŗ	2,3,5,6,8,9,12,13	x		an a
	Wildlife Hebltat	x		1,3,4,5,6,7,8,9,12,13,14,15,1 17,18,19,21,23	^{6,} X		
Æ	Recreetion	x		1,2,4,5,8,12			
	Educational Scientific Value	x		3,5,7,10,11			
\star	Unlqueness/Heritage	x		2,8,11,12,13,14,15,16,19,22,	,27		
	Visuel Quality/Aesthetics	x		1,2,3,4,5,6,7,8,11			
ES	Endangered Species		x				
Other	·						

Notes:

27

Refer to back up list of numbered considerations.

500

Wetland Function-Value Evaluation Form

Total area of wattandette	nett of a wildlife contine? Y or a "habitat laland?"	Wetlend ID V	N1 - C
Tulian Made of Webernet		Latitude .	Longitude
Adjacent land use:	Distance to neereast roadway or other 250 ft	Prepared by	Dele
	development	Wetlend Impact:	Contraction
Dominant welland systems present PFO	Contiguous Undeveloped buffer zone present	Туре »,	Area _% -
		Evaluation based	on:
is the welland a separate hydraulic system * NO , If not, where does the w	elland lie in the drainage basin	:Office:	Fleidi x
ter and the second s		Corps menual we	lland delineetkin completed:
How many tributenes contribute to the wetlend?	vegetetion diversity/abundance (see attached itsi)	Yes X	No

Function/Value Comments	Occu Y	rence	e Rationale N	Princip (Referenc	al ce #)	Function(s)/Value(s)
Groundwater Recharge/Discharge	X		1,2,4,5,7,13,14,15,16	x		
Floodflow Alteration	x		2,3,5,6,7,9,12,11,12,13,14,1	8 X		
- Fish and Shellfish Habitat	x		8,15,16,17			
Y Sediment/Toxicant/Pathogen Retention	x		3,4,7,9,10,11,12,14,15,16	x		
Nutrient Removal	x		3,5,7,8,9,11,13,14,15			· · ·
	x		1,2,4,5,7,10,12,13	x		
Sediment/Shoreline Stabilization	x		1,2,6,9,12,13,15			
🛥 Wildlife Habitat	x		3,6,8,13,16,17,18			
-A Recreation	x		12			
Educational Scientific Value	x		9,10			
★ Uniqueness/Heritage	x		7,8,15,19,22,27			
Visual Quality/Aesthetics	. x		4,6,11			
ES Endangered Species		x				
Other						

Noles:

15.

Appendix D. Wetland Data Sheets

501

Wetland Function-Value Evaluation Form

Tolel area of welland: 0.14 Human Made: NO Is welland r	all of a wildlife condor? X or a habitat island?	Wetlend ID * W	I-D
	nar in senten senten fin	Latitude !	Longitude
Adjacent land use: Agricultural/Forest/Fettow Field	Distance to neareast roadway or other	Prepared by, s	, Date
	rosonthilioit to	Welland Impect:	a ser a s
Dominant wellend systems present PFO	Contiguous undeveloped buffer zone present	Туре	Aree
		Evaluation based or	n:
is the wetterno a separate myoraulic system NO 11 not, where does the we	tland lie in the drainage besin	· Office:	Field: X
How many tributation contribute to the welland?	the set in the set of	Corpa minut wette	nd de neeten oompleted: `
T-2 Cyliniae aviante a via a second a	egeretion oversnyrebunoance (see eneched isi)	Yes X	Notering

Function/Value Comments	Occu Y	renci	e Rationale N (R	Princip eferenc	pal rce #) Function(s)/Velue(s)
Groundweter Recharge/Discherge	x		1,2,4,5,7,9,13,14,16	x	
Fioodflow Alteration	x		2,3,5,6,7,8,,9,13,14,15,16,18	x	
Fish and Shelifish Habitat	x		1,2,4,8,11,15,16,17		
Sediment/Toxicant/Pathogen Retention	x		1,3,4,5,6,8,9,10,12,13,14,15,16	5 X	
Nutrient Removal	x		2,3,4,5,7,8,9,11,12,13,14,15	x	
Production Export	x		1,2,4,5,7,8,10,12,13,14	x	
Sediment/Shoreline Stebilizetion	x		2,3,6,8,9,12,13,14,15		
Wildlife Hebitat	x		1,3,4,5,6,7,8,10,11,13,14,15,16 17,18,19,20,21	x	
Recreetion	x		5,6		
Educetional Scientific Velue	x		2,4,5,10,11,13,14		
Uniqueness/Heritage	x		2,5,7,10,11,12,13,15,19,22,23		
Visuel Quality/Aesthetics	x		1,2,3,4,5,8,10,11	x	
Endangered Species		x			
·					
	Function/Vaiue CommentsGroundweter Recharge/DischergeFioodflow AlterationFish and Shelifish HabitatSediment/Toxicant/Pathogen RetentionNutrient RemovalProduction ExportSediment/Shoreline StebilizetionWildlife HebitatRecreetionEducetIonai Scientific VeiueUniqueness/HeritageVisuei Quaiity/AestheticsEndangered Species	Function/Value CommentsOccur YGroundweter Recharge/DischergeXFioodflow AlterationXFish and Shelifish HabitatXSediment/Toxicant/Pathogen RetentionXNutrient RemovalXProduction ExportXSediment/Shoreline StebilizetionXWildlife HebitatXRecreetionXLducetional Scientific VeiueXVisuei Quality/AestheticsXEndangered SpeciesI	Function/Value CommentsOccurrence YGroundweter Recharge/DischergeXFioodflow AlterationXFish and Shelifish HabitatXSediment/Toxicant/Pathogen RetentionXNutrient RemovalXProduction ExportXSediment/Shoreline StebilizetionXWildlife HebitatXRecreetionXLucetionai Scientific VeiueXVisuei Quaiity/AestheticsXEndangered SpeciesXXX	Function/Value CommentsOccurrence YRationale NGroundweter Recharge/DischergeX1,2,4,5,7,9,13,14,16Fioodflow AlterationX2,3,5,6,7,8,,9,13,14,15,16,18Fish and Shelifish HabitatX1,2,4,8,11,15,16,17Sediment/Toxicant/Pathogen RetentionX1,3,4,5,6,8,9,10,12,13,14,15,16Nutrient RemovalX2,3,4,5,7,8,9,11,12,13,14,15Production ExportX1,2,4,5,7,8,10,12,13,14,15Sediment/Shoreline StebilizationX2,3,6,8,9,12,13,14,15Wildlife HebitatX1,3,4,5,6,7,8,10,11,13,14,15,16RecreetionX5,6EducetIonal Scientific VelueX2,4,5,10,11,13,14Uniqueness/HeritageX1,2,3,4,5,8,10,11Visuel Quality/AestheticsX1,2,3,4,5,8,10,11Endangered SpeciesXX1,2,3,4,5,8,10,11IIII	Function/Vaiue CommentsOccurence YRationale NPrinci (Referent (Referent X)Groundweter Recharge/DischergeX1,2,4,5,7,9,13,14,16XFioodflow AlterationX2,3,5,6,7,8,9,13,14,15,16,18XFish and Shelifish HabitatX1,2,4,8,11,15,16,177Sediment/Toxicant/Pathogen RetentionX1,3,4,5,6,8,9,10,12,13,14,15,16XNutrient RemovalX2,3,4,5,7,8,9,11,12,13,14,15XProduction ExportX1,2,4,8,7,8,10,12,13,14,15XSediment/Shoreline StebilizetionX2,3,6,8,9,12,13,14,15XWildlife HebitatX1,3,4,5,6,7,8,10,11,13,14,15,16XRecreetionX2,4,5,10,11,13,14,15,16XUniqueness/HeritageX2,5,7,10,11,12,13,15,19,22,23XVisuei Quaiity/AestheticsX1,2,3,4,5,8,10,11XEndangered SpeciesXX1,2,3,4,5,8,10,11X

Notes:

Refer to back up list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wellend as 0.27 Human Made	Yes Is welland can of a wildlife comider?	or a habilat laland?	Wellend ID 9 W1	-E
			"Latilude"	Longitude 🕹
Adjacent land use:	Distence to neareast roadwey	or other 21 200 ft	Prepared by	Detex
			Wetlend Impact	Manage Co. Page - Martin
Dominant wetland systems present PFO/PEM	Contiguous undeveloped butte	r zone present Development	Туре	Area
		· · · · · · · · · · · · · · · · · · ·	Evaluation based on	:
Is the welland a separate hydraulic system - NO	al, where does the wetland lie in the drainage besin;	g Upper 1/3	Office:	Field: X
			Corps menual wellar	nd delineation completed:
now many programea commoure to me wettand (Yes 📈 X	No

	Function/Value Comments	Occu Y	rence	e Rationale N	Pr (Refe	incipal erence #)	Function(s)/Value(s)
T	Groundwater Recharge/Discharge	x		1,2,5,7,8,9,13			
	Floodflow Alteration	x		2,5,9,13,15,18			
	Fish and Sheilfish Habitat	x		1,7,8,15			
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,6,10,13,16			
些	Nutrient Removal	x		3,5,8,9,11,14,15		x	
->	Production Export	x		1,5,7,14			
.	Sediment/Shoreline Stabilization	x		5,9			
	Wildlife Habitat	x		3,4,5,6,7,8,13			
Æ	Recreation	x		6			
	Educational Scientific Value	x		11			
*	Unlqueness/Heritage	x		10,11,19,21,22			
0	Visual Quality/Aesthetics	x		5,10,11,12			
ES	Endangered Species		x				· ·
Other							

Notes:

D-5

Wetland Function-Value Evaluation Form

Totel area of welland: 2.30 Human Mede: No Is welland	part of a wildlife condor? X or a "habilat island?"	Wellarid ID W1-F
Adjacent land use	Distence to neareast roedway or other 600 ft	Prepared by 7
Dominant wetland systems present . PFO	Contiguous undeveloped buffer zone present	Type Aree
te the welland a separate hydreuilc system NO II not, where does the we	tiand lie in the drainage basin 34 Lower 1/4	Office Field: 4-3 X
How many induitantes contribute to the welland? 1	vegetation threashy abundance (see altached ist)	Yes X No

,,	Function/Value Comments	Occi Y	irence	∋ Rationale N (Princip (Referen	ce #)	Function(s)/Value(s)
 .	Groundwater Recharge/Discharge	x		1,2,5,7,9,13,14,15	x	No defined outlet	
-	Floodflow Alteration	x		1,2,3,5,7,9,13, t4,18			
-	Fish and Shellfish Habitat	x		1			u a se an
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,6,7,10,13,14,15,16	x		
₩	Nutrient Removal	x		1,3,7,8,9,11,12,13,14,15	x	#10 n/e	
	Production Export	x		1,2,4,5,7,8,10,14	x	#9 n/e	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
~ J	Sediment/Shoreline Stabilization	×		2,4,12,13			
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,14,15,17,18,	19		
Æ	Recreation	x		1,5,6,7			
	Educational Scientific Value	x		2,4,5,11,13			
*	Uniqueness/Heritage	x		7,10,11,16,19,22,27			
	Visual Quality/Aesthetics	x		3,5,7,8,10,11			
ES	Endangered Species		х	- <u> </u>			
Other	·						

Noles:

DT

E 11

* Refer to back up list of numbered c derations.

Wetland Function-Value Evaluation Form

Total erea of wetland: *** 0.19 Human Made 7 NO is wellend	sert of e wildlife corridor? * X or e thabitet island?	Wetland ID W1 - G
Adjecent land use	Distance to neareast roadway or other development 100 ft	Prepared by - Date
Cominent Weltand Systems present	Contiguous undeveloped buller zone present // Yes	Type Aree
Is the welland a separate hydreulic system - NO . If not, where does the we	land lie in the drainage basin	Company of the second s
How many tributerias contribute to the wetland?	ageletion diversity/ebundance (see attached itsi)	Yes X No.

	Function/Value Comments	Occu Y	rence	e Rationale N	Princip (Referenc	al :e #) Function(s)/Value(s)
X	Groundweter Recharge/Discharge	x		1,2,4,6,7,9,13,15,16	x	
-	Floodflow Alteration	x		5,6,7,8,9,10,13,18	x	
	Fish and Shellfish Hebitat	x		1,2,7,8,15		
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6,7,9,10,13,16	x	
11	Nutrient Removel	x		3,4,5,7,8,9,11,12		
-	Production Export	x		1,2,4,5,7,8,10,11,12,14	x	
	Sediment/Shoreline Stebilizetion	x		1,2,3,5,6,8,12,13,14	x	
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,14,15,16,17 19,21	^{,18} X	
Ŧ	Recreetion	x		1,2,4,5,8,12		
	Educationel Scientific Velue	x		2,3,4,5,10,11		
*	Uniqueness/Heritege	x		2,8,11,15,16,19,22,27,31		Scores high but this is a small floodplain watland - not necessarily unique
00	Visual Quality/Aesthetics	x	[4,5,7,8,11		· · · · · · · · · · · · · · · · · · ·
ES	Endangered Species	Ι	x			
Olhe						

Notes:

ns.

Appendix D. Wetland Data Sheets 504
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|--|

Total aree of welland; 0.47 Human Made; No Is wello	nd part of a wildlife corridor? X or a "hebilat island?"	Welland ID W2-A
		Lalitude
Adjacent land use: Forest, Residential, Roadway	Distance to neareast roadwey or other <75 ft	Prepared by Dale
	1 State of the	- Welland Impact:
Dominani wetland systems present PEM/PFO	Contiguous undeveloped builter zone present No, Roed	Type Aree
		Evaluation besed on:
is the webland a separate hydraulic system NO If not, where does the	welland lie in the drainage basin,	Office:
How many influitades contribute to the welland?	R viegotation divorchite and lange the states	Corps manual wetland de neation completed;
	a vegetation diversity abuildence (see ellectied list)	Yes X No X

	Function/Value Comments	Occu Y	renc	e Rationale N	Princi; (Referen	ce #)	Function(s)/Value(s)
.	Groundwater Recharge/Discharge	x		1,2,5,7,13,14,15			
)	Floodilow Alteration	x		2,3,5,6,8,9,10,13,15,16,18	x	1	
	Fish end Shelltish Hebitat	x		1,4,8,16,17			
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6,7,10,12,13,14,15,16	6 X		
#	Nutrient Removal	x		3,7,8,9,11,12,13,14,15	x		
-+	Production Export	x		1,4,5,7,10,11,14	x		
m	SedIment/Shoreline Stabilization	x		6,9,12,13,15			
- 1 -	Wildlife Habitat	x		1,4,5,6,7,8,13			
Æ	Recreation	x		6			
	Educational Scientific Value	x		2,4,11,13			
★	Uniqueness/Hentage	x		10,11,16,17,19,20,27			
Q	Visual Quality/Aesthetics	x		7,9,11,12			
ES	Endangered Species		x	······································			
Other	· · · · · · · · · · · · · · · · · · ·						

1

Notes:

* Refer to back up list of numbered considerations.

Total area of wetland: 0.13 (B) Human Mada	Dart of a Wildfill's corridor?	Wetland ID	W2-B and W2-C
0.13 (C)		Latilude	Longitude
Adjacent land use	Distance to neareast roadwey or other the second 100-200 ft	Prapared by,	Date
		Watland Impact:	
Dominant walland systems prasent +- PFO	Contiguous undeveloped buffer zone present	Тура	Area
		Evaluation besad	011:
Is the walland a separate hydraulic system a NO / I not, where does the we	Iland Ite In the drainaga basin Upper 1/4	.Office:	· Field: X
The second s		Corps manual wal	land dalinaation complated: 1
	vegetation diversity/abundance (see anached list)	Yes X	No

	Function/Value Comments	Occi Y	Irenco	e Rationale N	Princlp (Referend	pal ce #) Function(s)/Value(s)
T	Groundwater Recharge/Discharge	x		1,2,4,5,7,9,13,14,16	x	
-	Floodflow Alteration	x		2,3,5,7,9,10,13,18		
-	Fish and Shelifish Habitat		x	t		
Y	Sediment/Toxicant/Pathogen Retention	x	1	4,5,6	x	stopped after #9
-	Nutrient Removal	x		3,5,7,8,9,11,12	X	stopped after #12
->	Production Export	x		1,2,4,5,7,8,14	x	
~ . • . •	Sediment/Shoreline Stabilization	x		2,5,9,12,13,15		
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,15,17,18,19 21	^{,20} X	
Æ	Recreation	x		5,6		
	Educational Scientific Value	x		2,4,5,11,13		
*	Uniqueness/Heritage	x		6, t0, 11, 19, 22, 27		
<	VIsual Quality/Aesthetics	x		7,8,11		
ES	Endangered Species		x	-		
Other						

* Refer to back up list of numbered considerations.

Appendix D. Wetland Data Sheets

Notes:

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Wetland Function-Value Evaluation Form

Totel area of wetland: 0.17 Human Made: 13 No Is wetland	part of a wildlife comdor? X or e "habitat island?"	Wellend ID · W3
Adjectification and uses the second s	Distance in neereast rookway or other 2000 ft	Lalitude Longitude Prepared by / Dalé
Dominati Welland systems present PFO	Contiguous undeveloped buffer zone present Yes	Type , Aree
le the welland a seperete hydreulic system - NO II nol, where does line we	bland lie in the grainage basin. Upper 1/3	Eveluation based on: Office: X
How many tribularies contribute to the wettend? It 1 Widt to a	vegetation (prets.) abundanca (see cliating ()	Corps manual welfend delineation completed:

·····	Function/Value Comments	Occu Y	renci	e Retionele N (I	Princip Referenc	ipal nce #) Function(s)/Veiue(s)
Ŧ	Groundwater Recharge/Discherge	x		1,2,4,5,6,7,9,13,14,15	x	
<u> </u>	Floodflow Aiteration	x		3,5,6,7,8,9,10,13,14,15,16		
	Fish and Sheilfish Habitet	x	Ι	1,2,8,14,15,16,17		
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6,7,9,10,11,12,13,14,15 16	x	
#	Nutrient Removal	x		3,5,7,8,9,11,12,13,14,15	x	
	Production Export	x		1,2,3,4,5,7,8,10,12,13	x	
	Sediment/Shoreline Stabilizetion	x		1,2,4,6,9,12,13,15	x	
- a t	Wildlife Habitat	X		1,3,4,5,6,7,8,9,10,13,14,15,16 17,18,19,20,21,22	^{6,} X	
Ŧ	Recreation	x		5,6		
	Educationel Scientific Velue	x		2,4,5,10,11,13		
\star	Uniqueness/Heritage	x		6,7,10,16,19,22,27		
	Visual Quality/Aesthetics	x		3,5,7,8,10,11		
ES	Endengered Species		x			
Other	· · · · · · · · · · · · · · · · · · ·					

Noles:

* Refer to back up list of numbered considerations.

Total erea of welland 0.11 Human Made: NO	Is welland part of a wikilite contdor? X for a thebitet Island?	Wetland ID-11 W4
Adjacent land use: Forest w/ some residential	Distance to neareast foldway or other development	Prépered by
Dominant welland systems present Riverine and PEM	Contiguous undeveloped buffer zone present 2017 Yes	Type Area
Is the wetland a separate hydraulic system NO If not, whe	re does the welland lie in the dreinege basin	Evaluation based on: Office: Field: X
How many inductaries contribute to the wetland?	Wikilite & vegatalion diversity/ebundance (sea effected list)	Corps manual welland dalineation completed:

	Function/Value Comments	Occu Y	rence	Rationale N	Princip (Referenc	ce #) Function(s)/Value(s)
T	Groundweter Recharge/Discharge	x		1,2,4,6,7,9,12,13,14,15,16	x	
-	Floodflow Alteretion	x		3,5,6,7,8,9,18	x	
	Fish and Shellfish Habitat	x		1,2,7,8,15		
Y	Sediment/Toxicant/Pathogen Retention	x		1,2,3,4,5,6,7,9,10,13,16	x	
#	Nutrient Removal	x		3,4,5,6,7,8,9,11,12		
-	Production Export	x		1,2,4,5,7,8,11,12,14	x	
!	Sediment/Shoreline Stabilization	x		2,3,5,6,8,12,13,15	x	
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,14,16,17,18 23	^{,19} X	
Ŧ	Recreation	x		1,2,4,5,7,8,12		
	Educetional Scientific Velue	x		2,5,7,10,11		
*	Unlqueness/Heritege	x		2,8,11,12,13,15,16,19,22,31		Scoras high but this is a small floodplein wetland - not necesserily unique
	Visual Quelity/Aesthetics	x		1,2,3,4,5,7,8,9,11		
ES	Endangered Species		x	·····		
Othe	f					

na.

D-11

Notes:

Appendix D. Wetland Data Sheets

508

Wetland Function-Value Evaluation Form

Tolel area of welland: 0.51 Human Made: No //s welland	part of a wildlife corridor? X of a "hebilat islend?"	Wetland ID 🔮 W	7
The second se	and the second s	- Latitude -	Longitude
Adjacent land use: Forasi, Roed, Fellow Field	Distance to neareast readway of other the sector of the other the sector of the sector	*Prepared by	Date -
The contract of the second state of the second		Welland Impact: "1	at the state of the second
Dominant wetland systems present . PFO/PEM	Contiguous undeveloped buffer zone present Partial	Туре	Arae -
	Design of the second	Evaluelion based of	n:
is the welland a separete hydraulic system 7 NO //If not, where does the we	tland lie in the drainage basin Upper 1/2	Officer	Field
How many lighting and contribute to the welfand?	The second s	* Corps manual wells	and delinealion completed: *>
	regelation orversity/adundance (see anached iisi)	Yes X	No

	Function/Value Comments	Occu Y	Irenci	e Retloneie N	Princlj (Referen	lpal nce #) Function(s)/Value(s)			
T	Groundwater Recherge/Discharge	x		1,2,5,8,9,13,14,15	x				
-	Floodflow Alteration	x		3,5,6,7,8,9,10,13,14,18	x	#15 n/a			
-	Fish end Sheilfish Habitat	x		1,7,8,15					
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6,7,10,12,13,14	x	No channelized flow In wetlend			
4	Nutrient Removel	x		3,5,7,8,9,11,12,13,14,15	x				
->	Production Export	x		1,4,5,7,8,14					
	Sediment/Shoreline Stabilization	x		2,5,6,9,12,13,14,15	x				
-	Wildlife Habitat	x		1,5,6,7,8,13,14,18,19,20		#2 n/a mostly emergent welland			
Æ	Recreetion	x		5,6					
	Educetional Scientific Value	x		5,11					
\star	Uniqueness/Heritege	x		6,7,11,17,19,22,27					
0	Visual Quelity/Aesthetics	x		5,8,9,10,11,12	x				
ES	Endangered Specles		х	· ·					
Other									
Notes:	tes: * Refer to back up list of numbered considerations.								

Total and of wallands	No. I swattend part of a wildlife control X	or a "babilat island?" >	Welland ID 🙀 W8	
	NU I's welland part of a wilding control i A		Latitude	Longilude
Adjacent land uses - Forest	Distance to neareast roedway or	other web 0-500 ft	Prepared by	Date,
	davelopment.		Wetland Impact:	here the second s
Dominant wetland systems presant PFO/PEM	Contiguous undavaloped buffet	zone present Yes	«Тура»	Araa if
1 Contract of the second se Second second s Second second seco		an and a second s	Eveluation besed on:	
is the welland a saparate hydroulic system 7 NO	f not, where does the welland lie in the drainage basin ,	Upper 1/3	Office	Flaid: X
		and Statistics	¹ Corps menual wetlan	d delinaetion completed:
How many inbularies contribute to the wettend?	Wildlife & vagetation diversity/abundance (se	e effached lisi)	Yes X	Nô

	Function/Value Comments	Occu Y	renci	ə Rationalə N (Princip (Referenc	al :e #)	Function(s)/Value(s)
¥.	Groundwater Recharge/Discharge	x	[1,2,5,7,8,9,13,14	x		
)	Floodflow Alteration	x		2,3,5,6,7,8,9,10,13,15,18	x	*****	
	Fish and Shallfish Habitat	x		1,2			
Y	Sadimant/Toxlcant/Pathogen Retention	x		4,5,6,9,10,12,13,15,16	x		
₩	Nutrient Removal	x		3,5,6,7,8,9,11,12	x		
-	Production Export	x		1,2,3,4,5,7,8,14	x		
m	Sediment/Shorellne StabllIzation	x		2,3,5,6,8,12,13,15	x		
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,14,15,18,19, ,21	,20		
Æ	Recreation	x		1,5,6,7			
	Educational Scientific Valua	x		2,4,5,11,13			
*	Unlqueness/Heritage	x		10,11,13,16,19,22,27			
	VIsual Quality/Aesthetics	x		2,3,5,7,8,10,11,12	x		
ES	Endangered Species		x				
Other		1					
Notes:							* Refer to back up list of numbered consideration:

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Wetland Function-Value Evaluation Form

Total area of wetlend: -, 0.17	Human Made: No Is wella	nd part of a wildlife comdor? X ot e "habitat island?	Wetlend ID	/10
Particular and a second second	1.5.5 A. 1.5. 1.5. 1.6. 1.6.	We wanted a state of the second state of the s	Lalitude _*	Longitude
Adjacent land use: Forest		Distance to neareast roedway or other	Prepared by	,Dete
and the second se	ت ا	A Second Se	Wellend Impact:	a harden ar anna an a
Dominant wetland systema presen	PFO	Contiguous undevaloped buffer zone present	~Туре,	Area
Is the wetland a separate historial	ye Welter The Assessment		Eveluetion besed of	л:
ia ne weneriu a separate rivoleuro	system s in not, where does the	Wetland lie in the drainage basin Upper 1/2	Office:	· Fleidil-J.J. X
How many tributaries contribute to	the watend?	Sundanthan di manangan di sanangan di s	Corps menual wet	and delineation completed: 14
			Yes X	No or st

	Function/Value Comments	Occi Y	irenc	e Rationale N	Princip (Referen	eal ce #) Function(s)/Value(s)	
Ţ	Groundwater Recharge/Discharge	x	Ι	t,2,5,7,9,14,15	x		
-	Floodflow Alteration	x		2,3,5,6,8,9,10,13,18	x		<u></u>
-	Fish and Shellfish Hebitat	Τ	x	1			
<u>y</u>	Sediment/Toxicant/Pathogen Retention	x		1,4,5,6		stopped after #9	
1	Nutrient Removal	x		3,5,7,8,9,11,12	x		
->	Production Export	x		1,2,4,5,7,14			
	Sediment/Shoreline Stabilization	x		5,6,9,12,13,14,15	x		
-	Wildlife Habitat	x		1,3,4,5,6,7,8,13,17,18,20	x		
Ŧ	Recreation	x		1,5,6,7		ar na a tha an	
	Educational Scientific Value	x		2,4,5,6,11,13			
*	Unlqueness/Heritage	x		7,10,19,22,27			
	Visual Quelity/Aesthetics	x		5,7,8,10,11			······
ES	Endangered Species		х				
Other							
Notes:				[* Refer to back up list of numbered	consideration

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Wetland Function-Value Evaluation Form

Tolat area of welland	d pert of a wildlife corridor? X or a habilat island?	Wetland ID	W11
		Latitude	Longitude 2
Adjecent lend use:	Distance to neareast roadwey or other 24 4 1975 1000 ft	Prepared by	Date
	Development	Wetlend Impecta	wardsher warten in the
Dominant wettend eystems present PFO	Contiguous undeveloped buffer zone present	⊮Туре∷́	Area
	197	Eveluation besed	on:
Is the wetland a separate hydreulic system - e II not, where does the w	velland lie in the drainage basin	Office:	Field X
	and the second	Corps menuel we	llend delineetion completed:
How many tributaries contribute to the Welland?	vegetation diversity/ebundence (see attached lisi)	Yes X	.No

	Function/Value Comments	Occu Y	renc	e Rationele N	P (Ref	rinclpai erence #)	Function(s)/Value(s)
T	Groundwater Recharge/Discherge	x		5			
-	Floodflow Alteration	x		5,9			
	Fish and Sheilfish Habitat		x	1			
Y	Sediment/Toxicant/Pethogen Retention	x		4,5			
#	Nutrient Removal	x		.5,7		ł	
->	Production Export	Τ	x				
~~ 1	Sediment/Shoreline Stabilization	Τ	x				
-at	Wildlife Habitat	x		3,4,5,7,8			
7	Recreation		x				
	Educetional Scientific Value	x		11			
*	Uniqueness/Heritage	x		t1,27			
	Visual Quelity/Aesthetics	x		5,10,11			
ES	Endangered Species		x				
Othe	,						

Notes: ponded wetland possibly created by cattle trampling along pathway

* Refer to back up list of numbered considerations.

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Wetland Function-Value Evaluation Form

Total area of wetland: 0.38 Human Mac	de; 11 No is welland part of a wildlife corndor?! X	or a "habitat island?"	Wetland ID V	/12
and the second s		S. S. S. Samerar Street Bills	Latitude"	Longitude 1
Adjacent land use: Forest	Distance to neareast roadway	or other 100 ft	-Prepered by	, Deté
Contraction of the second s	ug vervanienit	A CARLES AND A C	Wetland Impect:	Citile and a second second second
Dominant wetland systems present PFO	- Contiguous undeveloped buff	er zone present * 💷 yes	'Type''	Aree
	A CALL AND A	Thereastic and the Second	Eveluation based	on:
Is the welland a separate hydraulic system no	Il not, where does the wetterd the in the drainage basin	ipper 1/2	Office:	Field: State X
The local month of the second states		Concerning and the second s	Corps manual wet	land delinection completed;
How many induleries contribute to the wettend?	1 • Wildlie & Vegeleijon diversity/ebundance	(see affached Hst)	"Yes X	No. If

	Function/Value Comments	Occu Y	rence	e Rationale N	Princi (Referer	pal nce #)	Function(s)/Value(s)
T	Groundwater Recharge/Discharge	x		1,2,4,5,7,8,9,15	x		
	Floodflow Alteration	x		5,6,7,8,9,10,11,13,14,16,11	8 X		
-	Fish end Sheilfish Habitat	x		1,7,8,14,15			
Y	Sediment/Toxicant/Pathogen Retenilon	x		3,4,6,7,10,12,14,16	x		unnen en allen en ander en andere en ande
#	Nutrient Removel	x		3,7,8,9,11,12,13,14	x		
->	Production Export	x		1,2,4,5,7,11,14	x		
	Sediment/Shoreline Stabilization	x		2,5,7,9,12,13,14,15	x		
.	Wildlife Habitat	x		1,3,4,5,8,13,17,18			
Ŧ	Recreation	x		1,6			
	Educationel Scientific Value	x		2,4,6,11,13			n na har fan Hellen an Lander yn ar yn fan Staar yn ar yn Yn yn ar yn graf yn ar yn a
\star	Uniqueness/Heritege	x		7,10,11,16,18,19,22,27			
	Visual Quality/Aesthetics	x		5,7,11			
ES	Endangered Species		x				an na an a
Othe		<u> </u>	Ļ]	

Notes: ponded welland possibly created by cettle trampling elong pathway

Refer to beck up list of numbered considerations.

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ω

Tolai area of welland 0.25 Human Made No Is wellan	d part of a wildlife corridor? X or a "habital "island?"	Wellend ID W13
Adecent land use the set of period of the set of the se	Distance to neareast roadway of other with the 200 h	Prepared by Date
Dominant weitand systems present	Conliguous undeveloped buffer zone present	Type Aree
Is the welland a separate hydraulic system no If not, where does the w	etiend lie in the drainage besin	Office X
How many tributaries contribute to the westand? 1 Winding &	vegetallon diversity/abundance (see attached list)	Corps manual wellend delineation completed

	Function/Value Comments	Occl Y	Irenc	e Rationale N	Prine (Refere	clpai ence #)	Function(s)/Value(s)
T	Groundwater Recharge/Discharge	x		1,2,4,5,7,9,10,13,14,15,16	2	(
	Floodflow Alteration	x		3,5,6,7,8,9,10,11,13,15,18	>	(
-	Fish and Sheilfish Habitat	x		1,7,8,14			
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6,10,12,13,14,15,16	>	۲ ۲	
#	Nutrient Removal	x		3,5,7,8,9,11,12,13,14,15	>	(
-+	Production Export	x		1,4,7,12,14			
.	Sediment/Shoreline Stabilization	x	Γ	2.5,6,9,12,13,14,15	>	(
	Wildlife Habitat	x		1,3,4,5,8,13,17,20			
Ŧ	Recreation	x		6			
	Educational Scientific Value	x		2,4,11,13			
*	Uniqueness/Heritage	x		7,10,11,15,19,22,27			
00	Visual Quality/Aesthetics	x		4,11,12			
ES	Endangered Species	T	x				
Othe	r	Τ					
Notes:							* Refer to back up list of numbered considerations

Final Environmental Impact Statement

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Total area of wellend: 0.06 Hi	uman Made: NO Is we	land part of a wikilite contidor?	nd?*	Welland ID / Wi	18
				Letitude	Longitude
Adjecent lend user Foresi		Dietance to neereast roadway or other 3	100 ft	Prepared by 🖉	Date
and the set of the set				Wetland Impact:	المراجع والمحافظ والم
Dominent wetlend systems present RI	liverine	Contiguous undeveloped buffer zone present	Yes	Туре	Area //
Allen 1986 - Anna Anna Anna Anna Anna Anna Anna An				Evaluation besed or	n:
is the welland e seperale hydreulic system	NO If not, where does	he wettend lie in the drainage besin		Office:	Field:
the second s			S C NUMBER OF	Corps manual wette	nd delineetion completed: **
riow many inputaties contribute to the wette	iena/ I Wild	ie a vegetation protection calification (see effacted list)		Yes X	No

	Function/Value Comments	Occu Y	rence	e Rationale N	Princip (Referen	oal ce #)	Function(s)/Value(s)
<u> </u>	Groundwater Recharge/Discharge	x		1,2,4,7,9,12,13,15,16	x		
	Floodflow Alteration	x		2,3,5,6,7,10,11,15,18	x		·
-	Fish and Shellfish Habitat	х		1,2			
Y	Sediment/Toxicant/Pathogen Retention	x		3,4,5,6.9,10,13,16	x		
	Nutrient Removal	x		3,4,5,7,9,11,12	x		
	Production Export	x		1,2,4,7,10,12,13			
	Sediment/Shoreline Stebilization	x		3,4,8,15			
	Wildlife Habitat	x		1,3,4,5,6,7.8,9,14,15,19,20	x		
Æ	Recreation	x		1,12			
	Educetional Scientific Value	x		10,11,13			
\star	Uniqueness/Heritege	x		2,10,11,12,16			·
	Visual Quality/Aesthetics	x		1,2,3,7,8,9,10,11			
ES	Endangered Species		x				
Other	······································						

Notes:

* Refer to back up IIst of numbered considerations.

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S,

Totel erea of wetland: 0.02 Human Made	natt of e wikilite contribut? X For e behiet island?	Wetland ID: # V	¥19
	Cartante and Cartante a	-Letitude -	Longitude ->
Adjacent land use/	Distence to neareast roadwey or other	*Prepered by	Dele
		Wellend Impaction	
Dominant wellend systems present PFO	Conliguous undeveloped buffer zone present construction yes	∵Туре≆	Area 7
		Evaluation based	on:
Is the welland a seperate hydraulic system _ ye If not, where does the we	liend lie in the drainage basin	Office:car	Field: X
With a state of the second state of the		Corps manual wet	tand delineation completed
How many induced scontribute to the wetland?	egetation diversity/abundence (see ettached list)	Yes. X	No

	Function/Value Comments	Occu Y	renc	e Rationale N	Princip (Referenc	al e #) Function(s)/Value(s)
Ţ	Groundwater Recharge/Discharge	x		1,2,5,7,9,13,14,15,16		depressional wettend
-	Floodflow Alteration	x		3,5,7,9,10,12,13	•	ponded water, no outlet
-	Fish and Sheilfish Habitat		x	1,7,8,14,15		
Y	Sediment/Toxicant/Pathogen Retention	x		4,5,6,13,16		
#	Nutrient Removat	x		3,5,7,9,11,15		
	Production Export	x		1,2,14		
 ‡	Sediment/Shoreline Stabilization	x		2,5,12		
-	Wildlife Habitat	x		1,3,4,5,8		
Æ	Recreation		x			
	Educational Scientific Value	x		2,4,13		
*	Uniqueness/Heritage	x		10,11,17		
	Visual Quality/Aesthetics	x		5,10,12		
ES	Endangered Species		х			
Other						
Notes:				· ·		* Refer to back up list of numbered considerations

516 Appendix D. Wetland Data Sheets

Section X. Appendices Appendix E. Plant Species/Wildlife Lists

MD Poute 07 Prochaville Project

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Tulip Poplar Association					
Botanical Name	Common Name				
Liriodendron tulipifera	tulip poplar				
Acer rubrum	red maple				
Cornus florida	flowering dogwood				
Parthenocissus quinquefolia	Virginia creeper				
Nyssa sylvatica	black gum				
Quercus alba	white oak				
Sassafras albidum	sassafras				
Prunus serotina	black cherry				
Vitis spp.	grape				
Carya tomentosa	mockernut hickory				
Viburnum dentatum	southern arrowwood				
Carya glabra	pignut hickory				
Quercus velutina	black oak				
Toxicodendron radicans	poison ivy				
Smilax spp.	greenbriers				
Fagus grandifolia	American beech				
Lindera benzoin	spicebush				
Quercus rubra	northern red oak				
Viburnum acerifolium	mapleleaf viburnum				
Vaccinium angustifolium	early low blueberry				
Prunus virginiana	choke cherry				
Rubus spp.	brambles				

Plant S	pecies	Common i	to the	Tulip	Po	plar	Association

Plant Species Common to the Sycamore-Green Ash-Box Elder-Silver Maple Association

Sycamore-Green Ash-Box Elder-Silver Maple Association					
Botanical Name	Common Name				
Acer rubrum	red maple				
Parthenocissus quinquefolia	Virginia creeper				
Quercus alba	white oak				
Cornus florida	flowering dogwood				
Vitis spp.	grape				
Prunus serotina	black cherry				
Quercus rubra	northern red oak				
Lindera benzoin	spicebush				
Liriodendron tulipifera	tulip poplar				
Nyssa sylvatica	black gum				
Sassafras albidum	sassafras				
Fraxinus americana	white ash				
Carya tomentosa	mockernut hickory				
Toxicodendron radicans	poison ivy				
Viburnum dentatum	southern arrowwood				
Quercus velutina	black oak				
Carya glabra	pignut hickory				
Rubus spp.	brambles				
Smilax spp.	greenbriers				
Carpinus caroliniana	ironwood				
Fraxinus pennsylvanica	green ash				
Platanus occidentalis	sycamore				
Acer negundo	box elder				
Acer saccharinum	silver maple				

	2 011 0501 04	<i>ii ii iiuiije</i>	
Common Name	Scientific Name	Common Name	Scientific Name
	BIF	RDS	
Red shouldered hawk	Buteo lineatus	Mourning dove	Zenaida macroura
Wood thrush	Hylocichla mustelina	Turkey vulture	Cathartes aura
Pileated woodpecker	Dryocopus pileatus	Brownheaded cowbird	Molothrus ater
American robin	Turdus migratorius	Blue-Gray gnatcatcher	Polioptila caerulea
Chimney swift	Chaetura pelagica	American kestrel	Falco sparverius
Rufous-Sided towhee	Pipilo erythrophthalmus	Field sparrow	Spizella pusilla
Blue jay	Cyanocitta cristata	Prairie warbler	Dendroica discolor
Gray catbird	Dumetella carolinensis	Eastern bluebird	Sialia sialis
Northern cardinal	Cardinalus cardinalis	Indigo bunting	Passerina cyanea
Red-Tailed hawk	Buteo jamaicensis	Eastern kingbird	Tyrannus tyrannus
Northern mockingbird	Mimus polyglottos	Red-Winged blackbird	Agelaius phoeniceus
European starling	Sturnus vulgaris	Common flicker	Colaptes auratus
Common grackle	Quiscalus quiscula	Carolina chickadee	Parus carolinensis
	MAM	MALS	
Eastern chipmunk	Tamias striatus	Woodchuck	Marmota monax
White-tailed deer	Olocoileus virginianus	Raccoon (tracks)	Procyon lotor
Eastern Gray squirrel	Sciurus carolinensis		
	REPTILES/A	MPHIBIANS	
American toad	Bufo americanus	Black Rat snake	Elaphe obsoleta
		(shedded skin)	
Box turtle	Terrapene carolina		

Terrestrial Wildlife

Fish Species Likely to Reside and Spawn in Reddy Branch

Common Name	Scientific Name	Common Name	Scientific Name
Blacknose dace	Rhinichthys atratulus	River chub	Nocomis micropogon
Bluegill sunfish	Lepomis macrochirus	Rosyside dace	Clinostomus funduloides
Common shiner	Notropis cornutus	Satinfin shiner	Notropis analostanus
Cutlip minnow	Exoglossum maxillingua	Shield darter	Percina peltata
Fallfish	Semotilus corporalis	Spottail shiner	Notropis hudsonius
Green sunfish	Lepomis cyanellus	Stripeback darter	Percina notogramma
Golden shiner	Notemigonus crysoleucas	Swallowtail shiner	Notropis procne
Longnose dace	Rhinichthys cataractae	Smallmouth bass	Micropterus dolomieu
Largemouth bass	Micropterus salmoides	Tessellated darter	Etheostoma olmstedi
Margined madtom	Noturus insignis	White catfish	Ictalurus catus
Northern hogsucker	Hypentelium nigricans	White sucker	Catostomus commersoni
Redbreast sunfish	Lepomis auritus		

Section X. Appendices Appendix F.

Benthic Macroinvertebrate Data

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Final Environmental Impact Statement

Benthic Macroinvertebrate Data

Project: MD 97 - Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 1: Stream Crossing @ Alternate 3 along Brookeville Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas

Taxa (Order)	Trophic Status	Tolerance Value*	Number of Individ.	Tolerance Value Score	
Heptagenidae (Ephemeroptera)	Scraper	4	4	16	
Ephemerellidae (Ephemeroptera)	Gathering Collector	2	3	6	
Chironomidae (Diptera)	Gathering Collector	8	18	144	
Aeshnidae (Odonata)	Predator	4	2	8	
Coenagrionidae (Odonata)	Predator	8	2	16	
Total Number of Taxa		5			
Total Number of Individuals	29				
Total Tolerance Value Score		190			

Modified Hilsenhoff Tolerance Values determined by the Maryland Save Our Streams (SOS) Project Heartbeat Program. Tolerance Values range from 0 to 10 and increase as water quality decreases.

MD-SOS DATA SUMMARY

Project: MD 97 Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 1: Stream Crossing @ Alternate 3 along Brookeville Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas Reference Collection: MD-DNR Biological Reference for the Patuxent Pledmont

Metrics*	Reference Score	Sample Score	Comparability of Sample Score to Reference Score	Biological Condition Score of Reference*	Biological Condition Score of Sample*
Taxa Richness (TOTTAX) (a)	19	5	26%	6	·, 0
Modified Family Biotic Index (FBI) (b)	4.30	6.55	66%	6	3
Ratio of EPT and Chironomidae Abundances (EPT:CHIRO)	16.6	0.39	2%	6	0.00
% Contribution of Dominant Family (DOMTOT) (c)	23%	62%		6	0
EPT Index (EPTTAX) (a)	10	2	20%	6	0.00
% EPT (EPTTOT) (c)	70%	24%		. 6	3
	36	6			
% Comparability of Total Biological	17	/%			
BIOAS	Severely	Impaired			

* Metrics and Biological Condition Scoring Criteria based upon Information provided by the MDE and Maryland Save Our Streams (SOS) Project Heartbeat Program.

- (a) Score Is a ratio of sample site to reference site X 100.
- (b) Score Is a ratio of reference site to sample site X 100. (c)
 - S' evaluates the actual percent contribution of the samp' Ite, rather than percent comparability to the reference s

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Benthic Macroinvertebrate Data

Project: MD 97 - Brookeville Study KCI Job No.: 01-95095 Fl Stream: Reddy Branch Station 2: Stream Crossing @ Alternate 4 off of Brookeville Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas

Taxa (Order)	Trophic Status	Tolerance Value*	Number of Individ.	Tolerance Value Score	
Hydropsychidae (Trichoptera)	Filtering Collector	6	35	210	
Heptagenidae (Ephemeroptera)	Scraper	4	2	8	
Ephemerellidae (Ephemeroptera)	Gathering Collector	2	16	32	
Baetidae (Ephemeroptera)	Gathering Collector	6	12	72	
Perlidae (Plecoptera)	Predator	1	4	4	
Peltoperlidae (Plecoptera)	Shredder	0	2	0	
Chironomidae (Diptera)	Gathering Collector	8	6	48	
Elmidae (Colcoptera)	Scraper	4	1	4	
Gomphidae (Odonata)	Predator	3	1	3	
Total Number of Taxa	9				
Total Number of Individuals	79				
Total Tolerance Value Score		381			

 Modified Hilsenhoff Tolerance Values determined by the Maryland Save Our Streams (SOS) Project Heartbeat Program. Tolerance Values range from 0 to 10 and increase as water quality decreases.

MD-SOS DATA SUMMARY

Project: MD 97 Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 2: Stream CrossIng @ Alternate 4 off of Brookeville Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas Reference Collection: MD-DNR Bloiogical Reference for the Patuxent Piedmont

Metrics*	Reference Score	Sample Score	Comparability of Sample Score to Reference Score	Biological Condition Score of Reference*	Biological Condition Score of Sample*
Taxa Richness (TOTTAX) (a)	19	9	47%	6	. 3
Modified FamIly Blotic Index (FBI) (b)	4.30	4.82	89%	6	6
Ratio of EPT and Chironomidae Abundances (EPT:CHIRO)	16.6	11.8	71%	6	0.00
% Contribution of Dominant Family (DOMTOT) (c)	23%	44%	**	6	3
EPT Index (EPTTAX) (a)	10	6	60%	6	0.00
% EPT (EPTTOT) (c)	70%	90%	***	6	6
	36	21			
% Comparability of Total Biological	58	%			
BIOAS	Moderatei	v Impaired			

* Metrics and Biological Condition Scoring Criteria based upon information provided by the MDE and Maryland Save Our Streams (SOS) Project Heartbeat Program.

- (a) Score is a ratio of sample site to reference site X 100.
- (b) Score is a ratio of reference site to sample site X 100.
- (c) S e evaluates the actual percent contribution of the same site, rather than percent comparability to the reference

Final Environmental Impact Statement

Benthic Macroinvertebrate Data

Project: MD 97 - Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 3: Stream Crossing of Alternate 5 along Brighton Dam Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas

Taxa (Order)	Trophic Status	Tolerance Value*	Number of Individ.	Tolerance Value Score	
Hydropsychidae (Trichoptera)	Filtering Collector	6	72	432	
Heptagenidae (Ephemeroptera)	Scraper	4	2	.8	
Ephemerellidae (Ephemeroptera)	Gathering Collector	2	1	2	
Baetidae (Ephemeroptera)	Gathering Collector	6	14	84	
Perlidae (Plecoptera)	Predator	1	ŀ	1	
Peltoperlidae (Plecoptera)	Shredder	0	8	0	
Chironomidae (Diptera)	Gathering Collector	8	8	64	
Simulidae (Diptera)	Filtering Collector	6	3	18	
Total Number of Taxa	8				
Total Number of Individuals	109				
Total Tolerance Value Score		609			

 Modified Hilsenhoff Tolerance Values determined by the Maryland Save Our Streams (SOS) Project Heartbeat Program. Tolerance Values range from 0 to 10 and increase as water quality decreases.

MD-SOS DATA SUMMARY

Project: MD 97 Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 3: Stream Crossing of Alternate 5 along Brighton Dam Rd. Date Collected: 6/5/97 Method of Collection: Composite klck-net sample of fast and slow riffle areas Reference Collection: MD-DNR Biological Reference for the Patuxent Piedmont

Metrics*	Reference Score	Sample Score	Comparability of Sample Score to Reference Score	Biological Condition Score of Reference*	Biological Condition Score of Sample*
Taxa Richness (TOTTAX) (a)	19	8	42%	6	3
Modified Family Blotic Index (FBI) (b)	4.30	5.59	77%	6	3
Ratio of EPT and ChironomIdae Abundances (EPT:CHIRO)	16.6	12.3	74%	6	3
% Contribution of Dominant Family (DOMTOT) (c)	23%	66%		6	0
EPT Index (EPTTAX) (a)	10	6	60%	6	0.00
% EPT (EPTTOT) (c)	70%	90%		6	6
· · · · · · · · · · · · · · · · · · ·	36	15			
% Comparability of Total Biological	42	%			
BIOAS	Moderately impaired				

* Metrics and Biological Condition Scoring Criteria based upon information provided by the MDE and Maryland Save Our Streams (SOS) Project Heartbeat Program.

- (a) Score is a ratio of sample site to reference site X 100.
- (b) Score is a ratio of reference site to sample site X 100.
- (c) Sr '9 evaluates the actual percent contribution of the samp! 'ite, rather than percent comparability to the reference s'

Appendix F. Benthic Macroinvertebrate Data

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Benthic Macroinvertebrate Data

Project: MD 97 - Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 4: Control Point east of Alternate 5 along Brighton Dam Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas

Taxa (Order <u>)</u>	Trophic Status	Tolerance Value*	Number of Individ.	Tolerance Value Score
Hydropsychidae (Trichoptera)	Filtering Collector	6	4	24
Hypdroptilidae (Trichoptera)	Scraper	5	1	5
Heptagenidae (Ephemeroptera)	Scraper	4	4	16
Ephemereillidae (Ephemeroptera)	Gathering Collector	2	7	14
Baetidae (Ephemeroptera)	Gathering Collector	6	6	36
Perlidae (Plecoptera)	Predator	1	3	3
Peltoperlidae (Plecoptera)	Shredder	0	1	0
Chironomidae (Diptera)	Gathering Collector	8	4	32
Elmidae (Coleoptera)	Scraper	4	6	24
Total Number of Taxa		9		
Total Number of Individuals	36			
Total Tolerance Value Score		154		

 Modified Hilsenhoff Tolerance Values determined by the Maryland Save Our Streams (SOS) Project Heartbeat Program. Tolerance Values range from 0 to 10 and increase as water quality decreases.

MD-SOS DATA SUMMARY

Project: MD 97 Brookeville Study KCI Job No.: 01-95095 F1 Stream: Reddy Branch Station 4: Control Point east of Alternate 5 along Brighton Dam Rd. Date Collected: 6/5/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas Reference Collection: MD-DNR Biological Reference for the Patuxent Pledmont

Metrics*	Reference Score	Sample Score	Comparability of Sample Score to Reference Score	Biological Conditlon Score of Reference*	Biological Condition Score of Sample*
Taxa Richness (TOTTAX) (a)	19	9	47%	6	3
Modified Family Biotic Index (FBi) (b)	4.30	4.28	100%	6	6
Ratio of EPT and Chironomidae Abundances (EPT:CHIRO)	16.6	6.5	39%	6	0.00
% Contribution of Dominant Family (DOMTOT) (c)	23%	19%	 	6	6
EPT index (EPTTAX) (a)	10	7	70%	6	3
% EPT (EPTTOT) (c)	70%	72%	4 1 1	6	6
Total			36	27	
% Comparability of Total Biological Condition Score of Sample to Reference (a)			75	5%	
BIOASSESSMENT			Moderately impaired to Non-Impaired		

* Metrics and Bloiogical Condition Scoring Criteria based upon Information provided by the MDE and Maryland Save Our Streams (SOS) Project Heartbeat Program.

(a) Score is a ratio of sample site to reference site X 100.

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(b) Score is a ratio of reference site to sample site X 100.

(c) S e evaluates the actual percent contribution of the samp' site, rather than percent comparability to the reference

Final Environmental Impact Statement

Benthic Macroinvertebrate Data

Project: MD 97 - Brookeville Study KCI Job No.: 01-95095 F1 Stream: Unnamed tributary to Reddy Branch Station 5: Stream Crossings of Alternates 3 & 4 Date Collected: 6/27/97 Method of Collection: Composite kick-net sample of fast and slow riffle areas

Taxa (Order)	Trophic Status	Tolerance Value*	Number of Individ.	Tolerance Value Score
Hydropsychidae (Trichoptera)	Filtering Collector	6	95	570
Heptagenidae (Ephemeroptera)	Scraper	4	1	4
Baetidae (Ephemeroptera)	Gathering Collector	6	5	30
Chironomidae (Diptera)	Gathering Collector	8	26	208
Simulidae (Diptera)	Filtering Collector	6	1	6
Tipulidae (Diptera)	Shredder	3	5	15
Elmidae (Coleoptera)	Scraper	4	13	52
Psephenidae (Coleoptera)	Scraper	4	9	36
Gammaridae (Amphipoda)	Gathering Collector	б	1	6
Palaemonidae (Decapoda)	Predator	6	2	12
Total Number of Taxa		10		
Total Number of Individuals	158			
Total Tolerance Value Score		939		

* Modified Hilsenhoff Tolerance Values determined by the Maryland Save Our Streams (SOS) Project Heartbeat Program. Tolerance Values range from 0 to 10 and increase as water quality decreases.

Stream: Unnamed tributary to Reddy Branch Station 5: Stream Crossings of Alternates 3 & 4 Date Collected: 6/27/97 Method of Collection: Composite kick-net sample of fast and slow riffie areas Reference Collection: MD-DNR Biological Reference for the Patuxent Piedmont

Metrics*	Reference Score	Sample Score	Comparability of Sample Score to Reference Score	Biological Condition Score of Reference*	Blological Condition Score of Sample*
Taxa Richness (TOTTAX) (a)	19	10	53%	· 6	·. 3
Modified Family Biotic Index (FBI) (b)	4.30	5.94	72%	6	3
Ratio of EPT and Chironomidae Abundances (EPT:CHiRO)	16.6	3.88	23%	6	0.00
% Contribution of Dominant Family (DOMTOT) (c)	23%	60%		6	0
EPT Index (EPTTAX) (a)	10	3	30%	6	0
% EPT (EPTTOT) (c)	70%	64%		6	6
Total			36	12	
% Comparability of Total Biological Condition Score of Sample to Reference (a)			33	3%	
BIOASSESSMENT			Severely to Moderately impaired		

* Metrics and Biological Condition Scoring Criteria based upon information provided by the MDE and Maryland Save Our Streams (SOS) Project Heartbeat Program.

- (a) Score Is a ratio of sample site to reference site X 100.
- (b) Score is a ratio of reference site to sample site X 100.
- (c) Sr re evaluates the actual percent contribution of the sample site, rather than percent comparability to the reference site.

Section X. Appendices Appendix G.

Brookeville Cultural Resource Photographs

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

BROOKEVILLE CULTURAL RESOURCE PHOTOGRAPHS



I. Brookeville Academy, circa 1810

The award winning Brookeville Academy is the town's centerpiece and community focal point. 32

One of first private the academies in Montgomery County, it offered a full classical curriculum for some sixty male students (later females were allowed), many of whom came from across the state and boarded with local families. Its library consisted of 600 volumes.



This Market Street house began as a small cottage circa 1820. The house's front block was renovated in 1863 to reflect the popular Gothic Revival style, which it maintains today. In 1928 a two-story addition was built on the rear, which enclosed the original cottage.

II. Gothic Revival, circa 1863 (original house circa 1820)

Photographs and captions taken from the Town of Brookeville website, http://www.townofbrookevillemd.org



BROOKEVILLE CULTURAL RESOURCE PHOTOGRAPHS (CONTINUED)

This Market Street house was constructed prior to 1809. With its three bay front facade, front door to one side, gable roof and chimney at the end wall, this simple two-story brick structure is a textbook example of Federal style architecture prevalent in the early years of the nation.

III. Heritage House Federal style, circa 1808



IV. Madison House, circa 1783

This stately two-story brick home, with fieldstone foundation, was built in several sections over a period of years by Caleb and Henrietta Bentley.

The house's right-hand section was Brookeville's first post office, opened in 1802. It also served as a 19th century store and a refuge for President Madison on August 26, 1814, when he fled Washington after the British burned the city.

Photographs and captions taken from the Town of Brookeville website, http://www.townofbrookevillemd.org

Section X. Appendices Appendix H. List of Acronyms

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AEP	Agricultural Easement Program
APE	Area of Potential Effect
BIBI	Benthic Index of Biotic Integrity
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability
	Information System
СО	Carbon Monoxide
COMAR	Code of Maryland Regulations
CSPS	Countywide Stream Protection Strategy
CTP	Consolidated Transportation Program
DBH	Diameter at Breast Height
DEIS	Draft Environmental Impact Statement
DNR	(Maryland) Department of Natural Resources
EIS	Environmental Impact Statement
ERIIS	Environmental Risk Information & Imaging Services
ERNS	Emergency Response Notification System
FBI	Family Biotic Index
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIBI	Fish Index of Biotic Integrity
FIDB	Forest Interior Dwelling Bird
FIRM	Flood Insurance Rate Maps
FTP	Federal Test Procedure
HAWP	Historic Area Work Permit
HPC	Historic Preservation Commission
HWS	(Maryland Notice of Potential) Hazardous Waste Sites
IAR	Interagency Review
LOS	Level of Service
LRST	Maryland Active Recovery Sites List
MALPF	Maryland Agricultural Land Preservation Foundation
MBSS	Maryland Biological Stream Survey
MC-DEP	Montgomery County Department of Environmental Protection
MDE	Maryland Department of the Environment
MDOT	Maryland Department of Transportation
MDP	Maryland Department of Planning

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LIST OF ACRONYMS (Continued)

MET	Maryland Environmental Trust
MHT	Maryland Historical Trust
M-NCPPC	Maryland-National Capital Park and Planning Commission
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSPGP	Maryland State Programmatic General Permit
MWCOG	Metropolitan Washington Council of Governments
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NFRAP	No Further Action Planned Sites
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWI	National Wetland Inventory
O ₃	Ozone
PM10	Particulate Matter
PDR	Purchase of Development Rights
PEM	Palustrine Emergent
PEPCO	Potomac Electric Power Company
PFA	Priority Funding Area
PFO	Palustrine Forested
PHI	Physical Habitat Index
PMA	Primary Management Area
PSS	Palustrine Scrub/Shrub
RC	Rural Cluster
RCRIS CA	Resource Conservation and Recovery Information System - Corrective Action Sites
RCRIS LG	Resource Conservation and Recovery Information System - Large Quantity Generators
RCRIS SG	Resource Conservation and Recovery Information System - Small Quantity Generators
RCRIS TS	Resource Conservation and Recovery Information System - Treatment, Storage and Disposal Facilities
RCZ	Rural Cluster Zone
RDT	Rural Density Transfer Zone
ROW	Right-of-Way
RST	Maryland Underground Storage Tank Report
RTE	Rare, Threatened, and Endangered
RCRIS CA RCRIS LG RCRIS SG RCRIS TS RCRIS TS RCZ RDT ROW RST RTE	Rural Cluster Resource Conservation and Recovery Information System - Corrective Action Sites Resource Conservation and Recovery Information System - Large Quantity Generators Resource Conservation and Recovery Information System - Small Quantity Generators Resource Conservation and Recovery Information System - Treatment, Storage and Disposal Facilities Rural Cluster Zone Rural Density Transfer Zone Right-of-Way Maryland Underground Storage Tank Report Rare, Threatened, and Endangered

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LIST OF ACRONYMS (Continued)

SACM	Selected Alternate and Conceptual Mitigation
SCEA	Secondary and Cumulative Effects Analysis
SHA	(Maryland) State Highway Administration
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
S/NAAQS	State and National Ambient Air Quality Standards
STORET	Storage and Retrieval System
SWF	(Maryland Permitted) Solid Waste Facilities
TDR	Transfer of Development Rights
TIP	Transportation Improvement Plan
TMDL	Total Maximum Daily Load
UPRRW	Upper Patuxent River Reservoir Watershed
USACOE	US Army Corps of Engineers
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	Underground Storage Tank
VEIP	Vehicle Emissions Inspection Program
VPD	Vehicles Per Day
WQC	Water Quality Certification
WSSC	Washington Suburban Sanitary Commission
WUS	Waters of the US

Section X. Appendices Appendix I. Relocation Act

MD Route 97 – Brookeville Project from South of Gold Mine Road to North of Holiday Drive Montgomery County, Maryland



Maryland State Highway Administration

Revised: December 24, 1996 State Highway Administration, Office of Real Estate

SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE STATE HIGHWAY ADMINISTRATION OF MARYLAND

All State Highway Administration projects must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601) as amended by Title IV of the Surface Transportation & Uniform Relocation Assistance Act of 1987 (P.L. 100-17), the Annotated Code of Maryland entitled "Real Property Article" Section 12-112 and Subtitle 2, Sections 12-201 to 12-212. The Maryland Department of Transportation, State Highway Administration, Office of Real Estate administers the Transportation Relocation Assistance Program in the State of Maryland.

The provisions of the Federal and State laws require the State Highway Administration to provide payments and services to persons displaced by a public project. The payments include replacement housing payments and moving costs. The maximum limits of the replacement housing payments are \$22,500 for owner-occupants and \$5,250 for tenant-occupants. Certain payments may also be made for increased mortgage interest costs and other incidental expenses. In order to receive these payments, the displaced person must occupy decent, safe and sanitary replacement housing. In addition to these payments, there are also moving expense payments to persons, businesses, farms and non-profit organizations. Actual but reasonable moving expenses for residences are reimbursed for a move of up to 50 miles or a schedule moving payment of up to \$1,300 may be used.

In the event comparable replacement housing is not available within the monetary limits for owners and tenants to rehouse persons displaced by public projects or available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the rehousing. Detailed studies must be completed by the State Highway Administration before relocation "housing as a last resort" can be utilized.

The moving cost payments to businesses are broken down into several categories, which include actual moving expense payments, reestablishment expenses limited to \$10,000 or fixed payments "in lieu of" actual moving expenses of \$1,000 to \$20,000. Actual moving expenses may also include actual direct losses of tangible personal property and expenses for searching for a replacement site up to \$1,000.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a selfmove. Payments for the actual reasonable expenses are limited to a 50-mile radius unless the State determines a longer distance is necessary. The expenses claimed for actual cost moves must be supported by firm bids and receipted bills. An inventory of the items to be moved must be prepared in all cases. In self-moves, the State will negotiate an amount for payment, usually lower than the lowest acceptable bid. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business vehicles or equipment, wages paid to persons who participate in the move, the cost of actual supervision of the move, replacement insurance for the personal property moved, costs of licenses or permits required and other related expenses.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses.

If the business elects not to move or to discontinue the use of an item, the payment shall consist of the lesser of: the fair market value of the item for continued use at the displacement site, less the proceeds from its sale; or the estimated cost of moving the item.

If an item of personal property which is used as part of a business or farm operation is not moved and is promptly replaced with a substitute item that performs a comparable function at the replacement site, payment shall be of the lesser of: the cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item; or the estimated cost of moving and reinstalling the replaced item.

In addition to the moving payments described above, a business may be eligible for a payment up to \$10,000 for the actual reasonable and necessary expenses of reestablishing at the replacement site. Generally, reestablishment expenses include certain repairs and improvements to the replacement site, increased operating costs, exterior signing, advertising the replacement location and other fees paid to reestablish. Receipted bills and other evidence of these expenses are required for payment. The total maximum reestablishment payment eligibility is \$10,000.

In lieu of all moving payments described above, a business may elect to receive a fixed payment equal to the average annual net earnings of the business. This payment shall not be less than \$1,000 nor more than \$20,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage; the business is not part of a commercial enterprise having more than three other establishments in the same or similar business that are not being acquired; and the business contributes materially to the income of a displaced owner during the two taxable years prior to the year of the displacement. A business operated at the displacement site solely for the purpose of renting to others is not eligible. Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net earnings of the business is to be one-half of the net earnings, before taxes during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State may use another two-year period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, owner's spouse, or dependents during the period. Should a business be in operation less than two years, the owner of the business may still be eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earnings, such as income tax returns, or certified financial statements, for the tax years in question.

Displaced farms and non-profit organizations are also eligible for actual reasonable moving costs up to 50 miles, actual direct losses of tangible personal property, search costs up to \$1,000 and reestablishment expenses up to \$10,000 or a fixed payment "in lieu of actual moving expenses of \$1,000 to \$20,000. The State may determine that a displaced farm may be paid a minimum of \$1,000 to a maximum of \$20,000, based upon the net income of the farm, provided that the farm has been relocated or the partial acquisition caused a substantial change in the nature of the farm. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization, is eligible to receive a fixed payment or an "in lieu of" actual moving cost payment, in the amount of \$1,000 to \$20,000 based on gross annual revenues less administrative expenses.

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A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms and non-profit organizations is available in the "Relocation Assistance" brochure that will be distributed at the public hearing for this project and be given to displaced persons.

Federal and state laws require that the State Highway Administration shall not proceed with any phase of a project which will cause the relocation of any persons, or proceed with any construction project, until it has furnished satisfactory assurances that the above payments will be provided, and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means, or that such housing is in place and has been made available to the displaced person.

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