

IX. Appendices

Appendix A: Selected Alternative Mapping at 1"=400' Scale

Appendix B: SHA Relocation Assistance Program

Appendix C: Memorandum of Agreement

Appendix D: Farmland Conversion Rating Form

Appendix E: Glossary

Appendix F: Index

Appendix A

Selected Alternative Mapping at 1" = 400' Scale

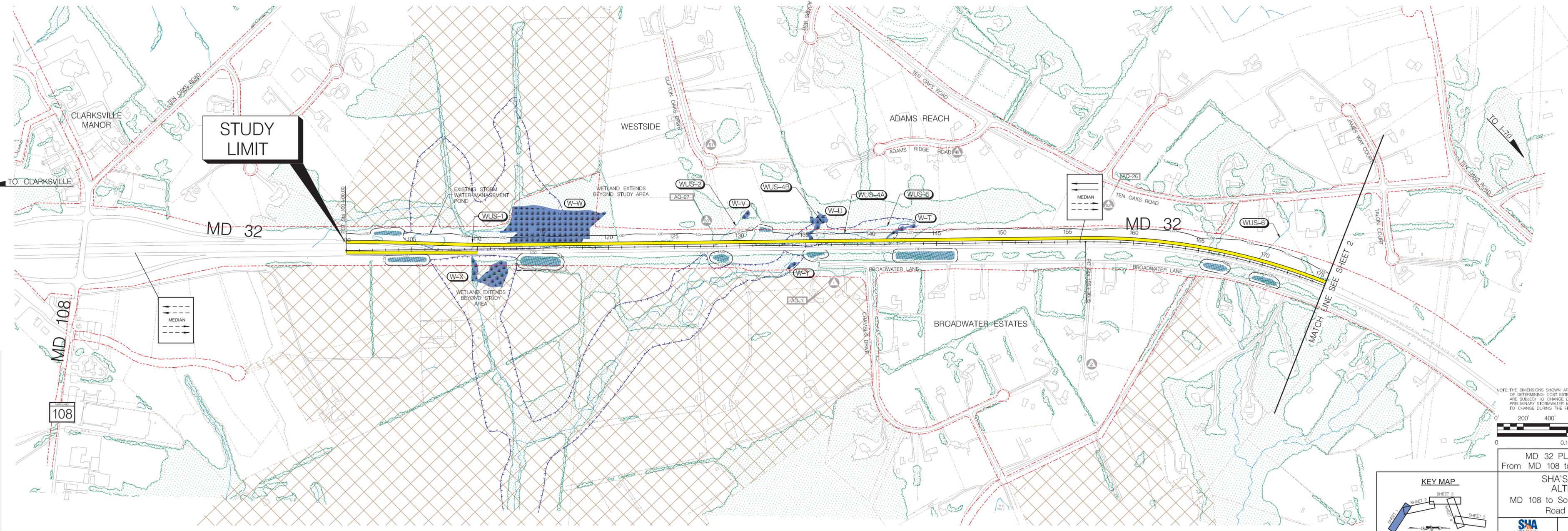
MD 32 Planning Study
MD 108 to I-70, Howard County, Maryland



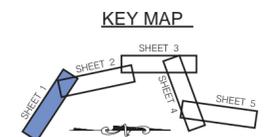
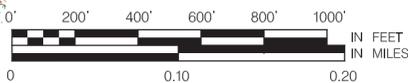
Office of Planning and Preliminary Engineering
Maryland State Highway Administration

STUDY LIMIT

- LEGEND**
- PROPOSED IMPROVEMENTS
 - PAVEMENT ACCESS TO BE REMOVED
 - PROPERTY LINE
 - EXISTING RIGHT OF WAY LINE
 - PROPOSED RIGHT OF WAY LINE
 - 100-YEAR FLOODPLAIN BOUNDARY
 - FIELD VERIFIED WETLANDS (1997)
 - POTENTIAL SWM FACILITY
 - TREELINE
 - WATERWAY
 - WETLAND LOCATION AND LETTER
 - WATERS OF THE US LOCATION AND NUMBER
 - AGRICULTURAL EASEMENT
 - RESIDENCE TO BE RELOCATED
 - BUSINESS TO BE DISPLACED
 - NOISE RECEPTOR SITE
 - AIR RECEPTOR SITES
 - LOD - LIMIT OF DISTURBANCE

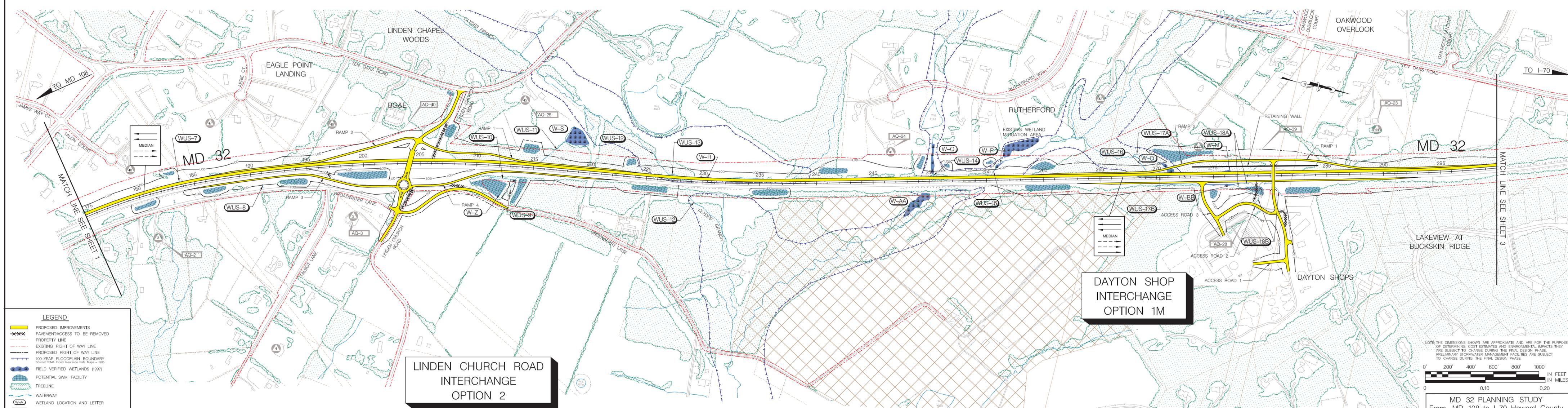


NOTE: THE DIMENSIONS SHOWN ARE APPROXIMATE AND ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS. THEY ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE. PRELIMINARY STORMWATER MANAGEMENT FACILITIES ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.



MD 32 PLANNING STUDY
 From MD 108 to I-70, Howard County

SHA'S SELECTED ALTERNATIVE
 MD 108 to South of Linden Church Road Interchange



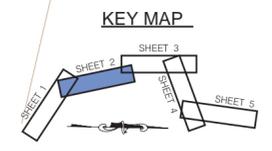
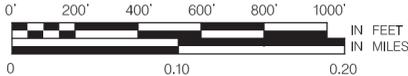
LEGEND

	PROPOSED IMPROVEMENTS
	PAVEMENT/ACCESS TO BE REMOVED
	PROPERTY LINE
	EXISTING RIGHT OF WAY LINE
	PROPOSED RIGHT OF WAY LINE
	100-YEAR FLOODPLAIN BOUNDARY Source: FEMA Flood Insurance Rate Maps - 1996
	FIELD VERIFIED WETLANDS (1997)
	POTENTIAL SWM FACILITY
	TREELINE
	WATERWAY
	WETLAND LOCATION AND LETTER
	WATERS OF THE US LOCATION AND NUMBER
	AGRICULTURAL EASEMENT
	RESIDENCE TO BE RELOCATED
	BUSINESS TO BE DISPLACED
	NOISE RECEPTOR SITE
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	LIMIT OF DISTURBANCE

DAYTON SHOP INTERCHANGE OPTION 1M

LINDEN CHURCH ROAD INTERCHANGE OPTION 2

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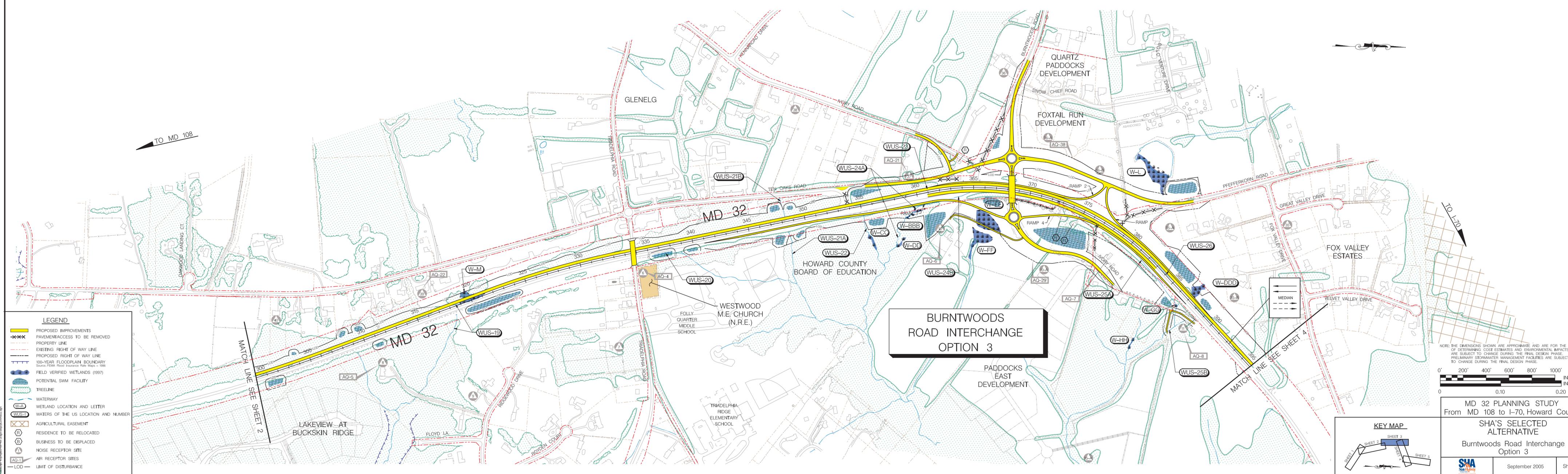


MD 32 PLANNING STUDY
From MD 108 to I-70, Howard County

SHA'S SELECTED ALTERNATIVE

Linden Church Road Interchange - Option 2
and Dayton Shop Interchange - Option 1M

September 2005 Sheet 2



TO MD 108

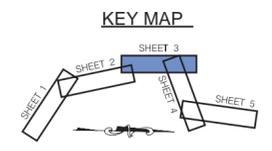
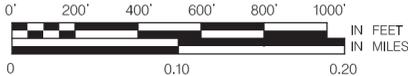
TO I-70

LEGEND

- PROPOSED IMPROVEMENTS
- x-x-x- PAVEMENT/ACCESS TO BE REMOVED
- PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- 100-YEAR FLOODPLAIN BOUNDARY
Source: FEMA Flood Insurance Rate Maps - 1986
- FIELD VERIFIED WETLANDS (1997)
- POTENTIAL SWM FACILITY
- TREELINE
- WATERWAY
- W-A WETLAND LOCATION AND LETTER
- WUS-1 WATERS OF THE US LOCATION AND NUMBER
- AGRICULTURAL EASEMENT
- B RESIDENCE TO BE RELOCATED
- B BUSINESS TO BE DISPLACED
- A NOISE RECEPTOR SITE
- AQ-1 AIR RECEPTOR SITES
- LOD - LIMIT OF DISTURBANCE

BURNTWOODS ROAD INTERCHANGE OPTION 3

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MD 32 PLANNING STUDY
From MD 108 to I-70, Howard County

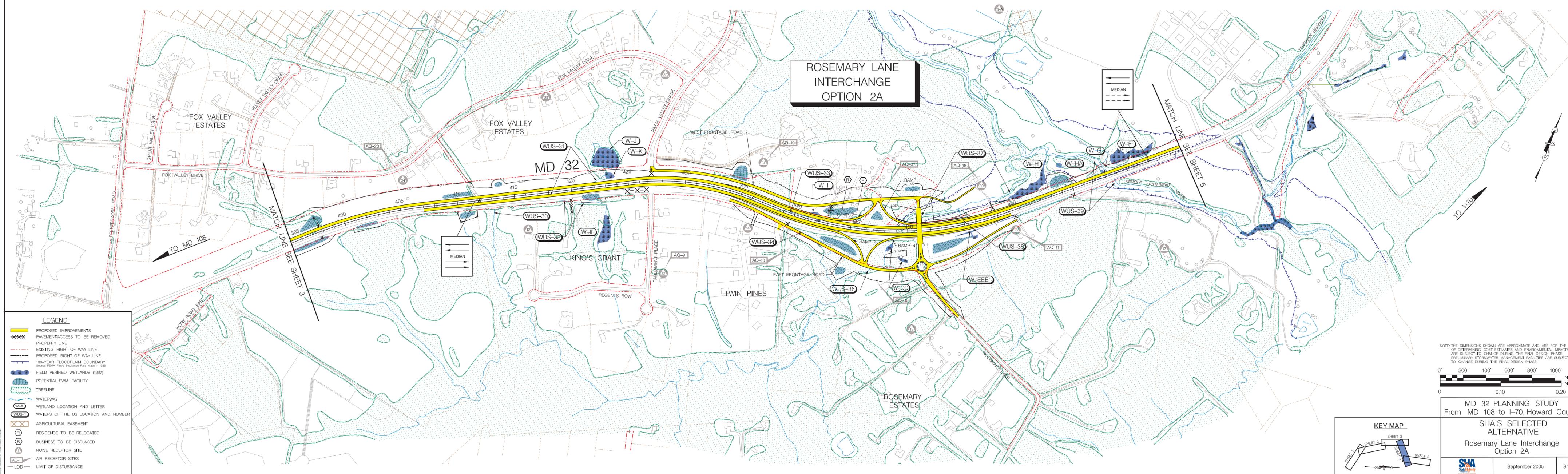
SHA'S SELECTED ALTERNATIVE

Burntwoods Road Interchange Option 3

SHA
State Highway Administration

September 2005 Sheet 3

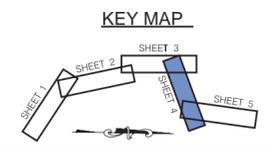
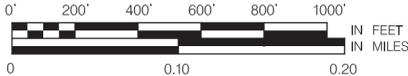
ROSEMARY LANE INTERCHANGE OPTION 2A



LEGEND

- PROPOSED IMPROVEMENTS
- X-X- PAVEMENT ACCESS TO BE REMOVED
- PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
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- TREELINE
- WATERWAY
- WETLAND LOCATION AND LETTER
- WATERS OF THE US LOCATION AND NUMBER
- AGRICULTURAL EASEMENT
- (B) RESIDENCE TO BE RELOCATED
- (B) BUSINESS TO BE DISPLACED
- (A) NOISE RECEPTOR SITE
- (AQ-1) AIR RECEPTOR SITES
- LOD - LIMIT OF DISTURBANCE

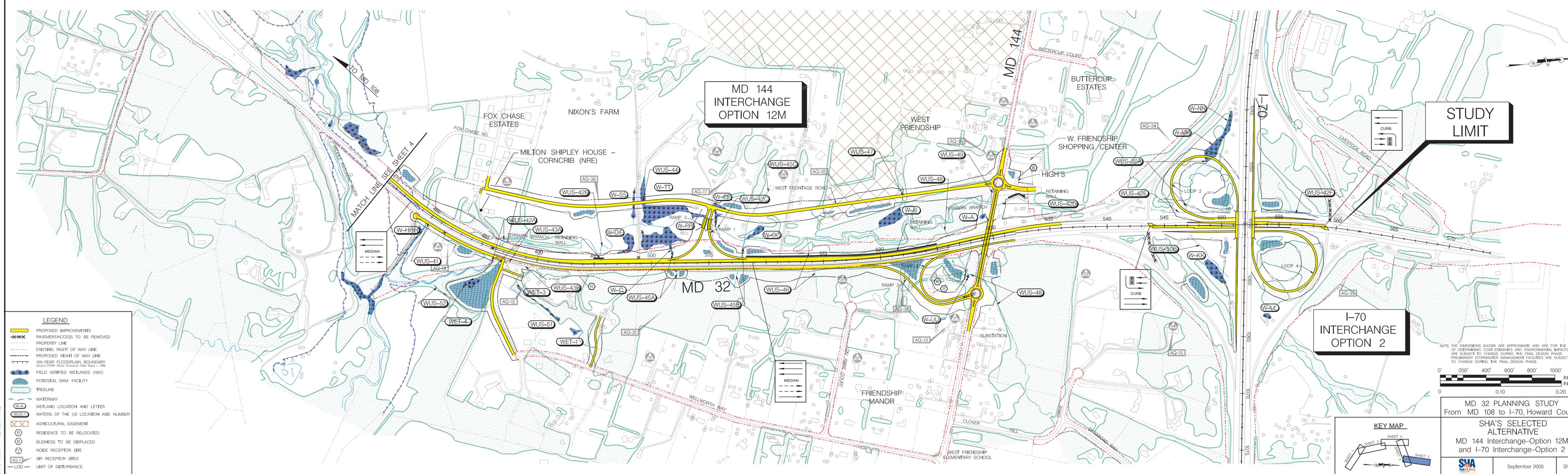
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MD 32 PLANNING STUDY
From MD 108 to I-70, Howard County

SHA'S SELECTED ALTERNATIVE

Rosemary Lane Interchange
Option 2A



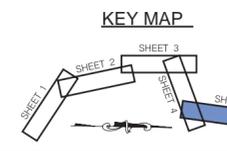
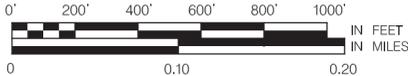
**MD 144
INTERCHANGE
OPTION 12M**

**I-70
INTERCHANGE
OPTION 2**

**STUDY
LIMIT**

- LEGEND**
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MD 32 PLANNING STUDY
From MD 108 to I-70, Howard County

**SHA'S SELECTED
ALTERNATIVE**

MD 144 Interchange-Option 12M
and I-70 Interchange-Option 2

Appendix B

SHA's Relocation Assistance Program

MD 32 Planning Study
MD 108 to I-70, Howard County, Maryland



Office of Planning and Preliminary Engineering
Maryland State Highway Administration

**SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE
MARYLAND STATE HIGHWAY ADMINISTRATION**

All State Highway Administration projects utilizing Federal funds must comply with the provisions of the Uniform Relocation and Real Property Acquisition Policies Act of 1970 (42 USC 4601) as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), Public Law 105-117 in 1997, and Title 49 CFR Part 24 in 2005. State-funded projects must comply with Sections 12-112 and Subtitle 2, Sections 12-201 to 12-212, of the Real Property Article of the Annotated Code of Maryland.

The State Highway Administration's Office of Real Estate administers the Relocation Assistance Program for the Maryland Department of Transportation.

The aforementioned Federal and State laws require that the State Highway Administration provide relocation assistance payments and advisory services to eligible persons who are displaced by a public project. There are two categories of residential occupants: 180-day owner-occupants and 90-day tenants and short-term owner-occupants. Non-residential occupants may be businesses, farms or non-profit organizations.

A displaced person that has owned and occupied a subject dwelling for at least 180 days prior to the initiation of negotiations for the property may receive a replacement housing payment of up to \$22,500. The replacement housing payment is composed of three parts: a purchase price differential; an increased mortgage interest differential; and reimbursement for incidental settlement expenses.

The purchase price differential is the difference between the value paid by the State Highway Administration for the existing dwelling and the cost to the displaced owner of a comparable replacement dwelling, as determined by the State's replacement housing study.

The increased mortgage interest differential is a payment made to the owner at the time of settlement on the replacement dwelling to negate the effects of less favorable financing in the new situation. The payment is calculated by use of the "buy-down" mortgage method.

Reimbursable incidental expenses are necessary and reasonable incidental costs that are incurred by the displaced person in purchasing a replacement dwelling, excluding pre-paid expenses such as real estate taxes and insurance. The maximum reimbursable amount for these incidental expenses is based upon the cost of the comparable selected in the replacement housing study.

A displaced person who has leased and occupied a subject dwelling for at least 90 days prior to the initiation of negotiations for the property may receive a replacement rental housing payment of up to \$5,250. The replacement rental housing payment is the difference between the

monthly cost of housing for the subject dwelling, plus utilities, and the monthly cost of housing for a comparable replacement rental unit, plus utilities, over a period of 42 months. Owner-occupants of 90-179 days prior to the initiation of negotiations for the subject dwelling are eligible for the same replacement rental housing payments as tenants.

As an alternative to renting, a displaced tenant-occupant may elect to apply the rental replacement housing eligibility amount toward the down payment needed to purchase a replacement dwelling.

The comparable properties used in calculating any replacement housing payment eligibility must comply with all local standards for decent, safe and sanitary (DS&S) housing and be within the financial means of the displaced person.

If affordable, comparable DS&S replacement housing cannot be provided within the statutory maximums of \$22,500 for 180-day owner-occupants or \$5,250 for 90-day tenants or short-term owners, the maximums may be exceeded on a case-by-case basis. This may only be done after the completion and approval of a detailed study that documents the housing problem, explores the available replacement options and selects the most feasible and cost-effective alternative for implementation.

In addition, eligible displaced residential occupants may be reimbursed for the expense of moving personal property up to a maximum distance of fifty (50) miles, using either an actual cost or fixed schedule method.

Actual cost moves are based upon the lower of at least two commercial moving estimates and must be documented with receipted bills or invoices. Other incidental moving expenses, such as utility reconnection charges, may also be paid in the same manner.

As an alternative method, the fixed schedule move offers a lump sum, all-inclusive payment based upon the number of rooms to be moved. Other incidental costs are not separately reimbursable with this method.

Non-residential displaced persons such as businesses, farms or non-profit organizations may also receive reimbursement for the expense of relocating and re-establishing operations at a replacement site on either an actual cost or fixed payment basis.

Under the actual cost method, a non-residential displaced person may receive reimbursement for necessary and reasonable expenses for moving its personal property, the loss of tangible personal property that is not moved, the cost of searching for a replacement site and a re-establishment allowance of up to \$10,000.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. 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 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 re-establishing at the replacement site. Generally, re-establishment expenses include certain repairs and improvements to the replacement site, increased operating costs, exterior signing, advertising the replacement location, and other fees paid to re-establish. Receipted bills and other evidence of these expenses are required for payment. The total maximum re-establishment 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 expense 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 \$2,500 and re-establishment 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.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms and non-profit organizations is available in the brochure entitled, "Relocation Assistance – Your Rights and Benefits," that will be distributed at the public hearing for this project and be given to all 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 persons.

In addition, the requirements of Public Law 105-117 provides that a person who is an alien and is not lawfully present in the United States shall not be eligible for relocation payments or other assistance under the Uniform Act. It also directed all State displacing agencies that utilize Federal funds in their projects to implement procedures for compliance with this law in order to safeguard that funding. To this end, displaced persons will be asked to certify to their citizenship or alien status prior to receiving payments or other benefits under the Relocation Assistance Program.

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER, AND
THE MARYLAND STATE HIGHWAY ADMINISTRATION
REGARDING MD 32 FROM MD 108 TO I-70
HOWARD COUNTY, MARYLAND**

WHEREAS, the Federal Highway Administration (FHWA) proposes to assist the Maryland State Highway Administration (MD SHA) with the dualization of MD 32 from MD 108 to I-70, located in Howard County, Maryland; and

WHEREAS, after detailed study of various alternates and consideration of efforts to avoid and minimize certain project impacts, the MD SHA has selected Build Alternative II Modified - Selected Alternate (Undertaking), including Linden Church Road Interchange Option 2; Dayton Shop Interchange Option 1, Modified; Burntwoods Road Option 3; Rosemary Lane Interchange Option 2 with Avoidance Efforts; MD 144/Nixon's Farm Interchange Option 12M; and I-70 Interchange Option 2 for design and construction; and

WHEREAS, the FHWA has established the Undertaking's Area of Potential Effects (APE), as defined at 36 CFR §800.16(d), to be the alignment corridors defined by the anticipated limits of right of way and/or easements for the Selected Alternate, including the subject interchanges; and

WHEREAS, the FHWA has determined that the Undertaking may affect archeological site 18HO261 as described in the report entitled *Phase IB Archeological Investigations for the Proposed Improvements to MD Route 32 from MD 108 to I-70, Howard County, Maryland*, prepared by R. Christopher Goodwin & Associates, Inc., a property that may be eligible for inclusion in the National Register of Historic Places (National Register) pending the results of Phase II site evaluation; and

WHEREAS, FHWA has determined that the Undertaking may affect unidentified cultural resources in areas that are associated with related project activities including, but not limited to, wetland and stream mitigation sites, reforestation areas, or other ancillary actions connected to the Undertaking that have not yet been subject to prior cultural resources investigations; and

WHEREAS, the FHWA has consulted with the Maryland State Historic Preservation Officer (MD SHPO), pursuant to 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the MD SHA participated in the consultation, has responsibilities for implementing stipulations under this Memorandum of Agreement (MOA), and pursuant to 36 CFR §800.6(c)(2) has been invited to be a signatory to it; and

WHEREAS, the FHWA has notified the Advisory Council on Historic Preservation (ACHP) regarding the undertaking's adverse effects and the ACHP declined to participate in the consultation for this undertaking; and

WHEREAS, the MD SHPO agrees that fulfillment of the terms of this MOA will satisfy the responsibilities of any Maryland state agency under the requirements of the Annotated Code of Maryland (Article 83B Sections 5-617 and 5-618) for any components of the Undertaking that require licensing, permitting, and/or funding actions from Maryland state agencies; and

NOW, THEREFORE, the FHWA, MD SHPO, and MD SHA agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties:

Stipulations

The FHWA and MD SHA will ensure that prior to and during the construction of the Selected Alternate the following stipulations are implemented:

I. Archeological Site 18HO261

A. Evaluation

The MD SHA shall evaluate the eligibility of 18HO261 for listing in the National Register of Historic Places, in consultation with the MD SHPO and in accordance with 36 CFR 800.4(c). The MD SHA shall ensure that all work adheres to the relevant performance standards in Stipulation IV of this MOA and shall provide a copy of the resulting draft report to the MD SHPO for review and comment.

B. Treatment

If the MD SHA and the MD SHPO determine that 18HO261 is eligible for listing in the National Register of Historic Places, the MD SHA shall develop a plan for its avoidance, protection, recovery, or destruction without recovery, and public education/interpretation in consultation with the MD SHPO. The MD SHA shall submit the treatment plan to the MD SHPO for a 30 day review period. Unless the MD SHPO objects within 30 days after receipt of the plan, the MD SHA shall implement it prior to the start of project ground disturbing activities within or immediately adjacent to the site area.

Should data recovery investigations be warranted, the MD SHA shall ensure that a data recovery plan is developed in consultation with the MD SHPO, consistent with the performance standards outlined in Stipulation IV. The plan shall specify, at a minimum:

1. The portions of the property where mitigation shall occur;
2. ~~Any portions of the property that will be destroyed without data recovery;~~

3. The research questions to be addressed through data recovery with a description of their relevance and importance;
4. The research and field methods to be used, with an explanation of their relevance to the research questions;
5. The methods to be used in analysis, data management, and dissemination of data, including a schedule;
6. The proposed disposition of recovered materials and records;
7. Proposed methods for involving and informing the interested public;
8. A proposed schedule for the submission of progress reports to the MD SHA and the MD SHPO; and
9. Concepts for a public interpretive component.

The MD SHA and the MD SHPO will meet on-site to evaluate the success of the fieldwork phase of any data recovery program, near the end of the fieldwork efforts. The MD SHA shall submit a management summary to the MD SHPO documenting the completion of fieldwork for 15 day review. Upon receipt of the written concurrence from the MD SHPO, the MD SHA may proceed with construction activities in the site areas concurrently with completion of the remaining laboratory, analyses, and reporting phases of the data recovery work.

II. Unexpected Discovery of Historic Properties

Should historic properties be unexpectedly identified during the implementation of the Undertaking, the MD SHA shall ensure that reasonable efforts are made 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.

III. Future Activities

Related ancillary activities including, but not limited to, wetland and stream mitigation sites, reforestation areas, or alignment modifications to the previously investigated alternatives may be added to this Undertaking in the future. Should such activities be added for which cultural resources studies have not been completed, the MD SHA shall ensure that such studies are implemented, adhering to all relevant standards and guidelines referenced in Stipulation IV and in accordance with the following:

A. Identification

MD SHA professional cultural resources staff shall review any additions or changes to the project and implement identification investigations as necessary. The MD SHA shall provide all completed information to the MD SHPO and all consulting parties under this MOA for review and comment.

B. Evaluation

The MD SHA shall ensure that all historic resources identified in any areas inventoried under Stipulation III.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 to the MD SHPO for concurrence. The consulting parties shall provide comment within 30 days of the receipt of acceptable documentation.

C. Treatment

Should any property eligible for inclusion in the NRHP be identified under Stipulation III and III.B, the MD SHA shall make a reasonable and good-faith effort to avoid adversely impacting the resources by relocating or modifying the proposed action. If adverse impacts are unavoidable, the MD SHA and MD SHPO and all consulting parties to this MOA shall consult to develop and implement appropriate treatment options. All work shall be accomplished in accordance with the performance standards outlined in Stipulation IV.

IV. Performance Standards

A. Professional Qualifications

The MD 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

The MD SHA shall ensure that all cultural resources investigations and work performed pursuant to this MOA shall be conducted consistent with the principles and standards contained in the documents (and subsequent revisions thereof) listed below:

- Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1983 and successors);
- Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole 1994);
- Standards and Guidelines for Architectural and Historical Investigations in Maryland (Maryland Historical Trust, 2000);
- Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites, ACHP 1999 (64 FR 27085-27087);
- Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR 68).

C. Curation

All materials and records resulting from cultural resources investigations conducted for the project will be curated in accordance with 36 CFR 79 at the Maryland Archeological Conservation Laboratory, unless clear title or Deed of Gift to the collection cannot be obtained.

V. Dispute Resolution

Should the MD SHPO, or any of the signatories to this MOA, object within 30 days to any plans or actions proposed pursuant to this MOA, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objection cannot be resolved, the FHWA shall request the comments of the Council pursuant to 36 CFR §800.7. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR §800.7(c)(4) with reference only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this MOA that are not subjects of the dispute will remain unchanged.

VI. Amendment

If any of the signatories to this MOA believes that its terms 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 can not be agreed upon, the dispute resolution process set forth in Stipulation V will be followed.

VII. Termination

Any signatory to this MOA may terminate it 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

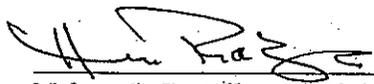
be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VIII. Duration

This MOA shall be null and void if its terms are not carried out within 10 (ten years) from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

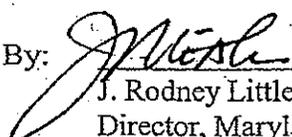
Execution of the MOA by the FHWA, MD SHPO, and MD SHA and its subsequent acceptance and implementation of its terms, is evidence that FHWA has afforded the signatories an opportunity to comment on the Undertaking and its effects on historic properties, and that the FHWA has taken into account the potential effects of the Undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By: 
Nelson J. Castellanos, Division Administrator

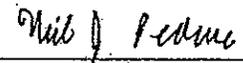
Date: 7/11/2005

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By: 
J. Rodney Little, State Historic Preservation Officer
Director, Maryland Historical Trust

Date: 5-18-05

MARYLAND STATE HIGHWAY ADMINISTRATION

By: 
Neil J. Pedersen, Administrator

Date: 5/24/05

Appendix D

Farmland Conversion Rating Form

MD 32 Planning Study
MD 108 to I-70, Howard County, Maryland



Office of Planning and Preliminary Engineering
Maryland State Highway Administration

Farmland Conversion Impact Rating Form

A Farmland Conversion Rating form (Form AD-1006) and rationale for evaluation of site assessment criteria were completed for the MD 32 Planning Study and evaluated by the Howard County Natural Resources Conservation Service (NRCS) in January 2005 for Build Alternative I (Site A) and Build Alternative II Modified (Site B). This appendix includes a copy of the evaluated January 2005 AD-1006 form and rationale for the alternatives that would impact farmland.



Howard Soil Conservation District

708 Lisbon Center Drive, Ste. E - Woodbine, MD 21797 - Phone (410) 489-7987, FAX (410) 489-9120
www.mda.state.us/howard/howard.htm

February 11, 2005

Mr. Bruce M. Grey
State Highway Administration
Deputy Director
Office of Planning & Preliminary Engineering
707 North Calvert Street
Baltimore, MD 21202

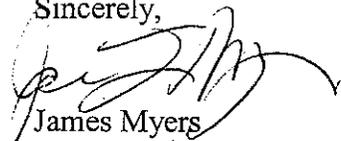
Re: Project No. HO 756 B11
MD 32 Planning Study
Form AD-1008
Farmland Conversion Impact Rating

Dear Mr. Grey:

Attached is the completed Form AD-1008 for the above referenced project. The Site B column was completed as that is the supplementary material our office had received.

I trust that all the information is as your office needed. If there is any other needed information, please contact me at 410-489-7987 or e-mail me at james.myers@md.usda.gov.

Sincerely,


James Myers
District Conservationist

JM/mpb

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 12/22/04	
Name Of Project MD 32 Planning Study		Federal Agency Involved Federal Highway Administration	
Proposed Land Use Highway		County And State Howard County, Maryland	

PART II (To be completed by NRCS)		Date Request Received By NRCS 1/18/05	
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Major Crop(s) Corn, Soybeans, small grain, hay		Acres Irrigated 0	Average Farm Size 109
Farmable Land In Govt. Jurisdiction Acres: _____ %		Amount Of Farmland As Defined in FPPA Acres: _____ %	
Name Of Land Evaluation System Used Howard County LESA		Name Of Local Site Assessment System Howard County LESA	
		Date Land Evaluation Returned By NRCS	

PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		36.2	28.3		
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		36.2	28.3	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland			24.2		
B. Total Acres Statewide And Local Important Farmland			4.1		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			.04		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			31		

PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		0	95	0	0

PART VI (To be completed by Federal Agency)		Maximum Points			
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use		8	8		
2. Perimeter In Nonurban Use		5	5		
3. Percent Of Site Being Farmed		0	0		
4. Protection Provided By State And Local Government		20	20		
5. Distance From Urban Builtup Area		0	0		
6. Distance To Urban Support Services		0	0		
7. Size Of Present Farm Unit Compared To Average		0	0		
8. Creation Of Nonfarmable Farmland		0	0		
9. Availability Of Farm Support Services		5	5		
10. On-Farm Investments		12	12		
11. Effects Of Conversion On Farm Support Services		0	0		
12. Compatibility With Existing Agricultural Use		0	0		
TOTAL SITE ASSESSMENT POINTS		160	50	50	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)		160	50	50	0
TOTAL POINTS (Total of above 2 lines)		260	50	50	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
----------------	-------------------	---

Reason For Selection:

Farmland Conversion Impact Rating Form AD-1006
Rational for Evaluation of Site Assessment Criteria
7 CFR 658.5 (b)
MD 32 from MD 108 to I-70, Howard County, Maryland

1. How much land is in a non-urban use within a radius of one 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 photographs and land use GIS maps were reviewed and a field review of the study area was conducted to determine non-urban land use within a one mile radius of the project area. I was estimated that between 55 and 59 percent of the land is in non-urban use for all of the alternatives.

Rating: Build Alternative I - 8 points
Build Alternative II -8 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 - 19 to 1 point(s)
- Less than 20 percent - 0 points

Aerial photographs and GIS land use maps were reviewed and a field review of the study area was conducted to determine non-urban land use bordering on the site. It was estimated that between 40 and 44 percent of the land bordering the alternatives is in non-urban use.

Rating: Build Alternative I - 5 points
Build Alternative II - 5 points

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?

- More than 90 percent - 20 points
- 90 to 20 percent - 19 to 1 point(s)
- Less than 20 percent - 0 points

Historically, western Howard County land has been used for agricultural activities. Based on review of aerial photographs GIS land use maps, and field reviews it is estimated that less than 20 % of the land for each alternative has been farmed five of the last 10 years.

Rating: Build Alternative I - 0 points

Build Alternative II - 0 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 farmlands?

Site if protected - 20 points
 Site is not protected - 0 points

Howard County has an Agricultural Preservation Program to preserve sufficient agricultural land in order to maintain a viable local base of food and fiber production and to maintain the rural character of western Howard County for the citizens of Howard County. Three sites impacted by the build alternatives impact land included in the Howard County Agricultural Preservation Program.

Both build alternatives would impact 0.35 acres of preserved agricultural land on the east side of MD 32 just north of the study area.

The second preservation parcel impacted by both alternatives is just south of the Dayton Shop interchange on the east side of MD 32 and is 0.12 acres

A third preservation parcel would be impacted by both alternatives. This 2.63 acre parcel is located west of MD 32 south of MD 144.

**Rating: Build Alternative I - 20 points
 Build Alternative II - 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 county?

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 points

Of the farm parcels impacted in the study area, all are less than 109 acres, the average size farm in Howard County according to the 2002 Census of Agriculture.

**Rating: Build Alternative I - 0
 Build Alternative II - 0**

- 8. If this site is chosen for the project, how much of the remaining land on the farm will

become non-farmable because of 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 acres directly converted by the project –

14 to 1 point(s)

Acreage equal to less than 5 percent of acres directly converted by the project - 0 points

The build alternatives are designed to parallel existing MD 32. Farmland will be impacted in the parcels adjacent to MD 32 and in locations required for the proposed interchanges. Accessibility to remaining farmland is expected to remain intact with all alternatives. None of the remaining farmlands would become non-farmable because of interference with land patterns.

Rating: Build Alternative I - 0 points

Build Alternative II - 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 farmer’s markets?

All required services are available - 5 points

Some required services are available - 4 to 1 point(s)

No required services are available - 0 points

All required services are available to the farms in the area for each alternative.

Rating: Build Alternative I - 5 points

Build Alternative II - 5 points

- 10. Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation waterways or other soil and water conservation measures?

High amount of on-farm investment - 20 points

Moderate amount of on-farm investment - 19 to 1 point(s)

No on-farm investment - 0 points

Most of the farms in the study area appear to have a moderate amount of on-farm investment in the form of barns, fencing, and other outbuildings.

Rating: Build Alternative I - 12 points

Build Alternative II - 14 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 alternatives being considered would reduce the demand for farmland support services.

Rating: Build Alternative I - 0 points
Build Alternative II - 0 points

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 points

The proposed project is fully compatible with existing agricultural use of surrounding farmland. The build alternatives include full access control thereby inhibiting potential secondary development. The study area is zoned rural residential or rural conservation. Should existing farmland be converted to residential development it would conform to these densities. In addition, Howard County is committed to maintaining the rural nature of western Howard County and to encouraging new development projects to locate in or near existing population centers.

Rating: Build Alternative I - 0 points
Build Alternative II - 0 points

Appendix E

Glossary

MD 32 Planning Study
MD 108 to I-70, Howard County, Maryland



Office of Planning and Preliminary Engineering
Maryland State Highway Administration

GLOSSARY

4(f)	Section 4(f) of the Department of Transportation Act of 1966
Access Control	<p>The restriction of direct access between a roadway and an immediate adjacent property. These restrictions generally are categorized as full control of access, partial control of access and access management.</p> <p>Full control of access allows access to the highway facility via interchange only (i.e., no at grade crossings), eliminates private driveway access.</p> <p>Partial control of access allows access to the facility only from public roads (no private driveways) through intersections or interchanges.</p> <p>Uncontrolled access limited only to safe locations dependent upon horizontal and vertical features of the facility. All crossroads, driveways, et., may have points of ingress or egress to the facility.</p> <p>Access Management limits and/or removes the number of points at which a vehicle may enter or exit a highway. Access management may include combining entrances and parking lots and adding service roads.</p>
ACHP	Advisory Council on Historic Preservation
ACOE	US Army Corp of Engineers
ADT	Average Daily Traffic - The total volume of auto and truck traffic passing a given point during a given time period (greater than one day and less than one year) is whole days, divided by the number of days in that time period. A commonly used measure of traffic flow.
Aerial Photography	High resolution photographs taken from aircraft which are used to assess features in a study area and are also used to produce topographic base maps of varying scales for alignment studies, engineering, and final design work.
Affected Environment	The physical features, land area, or areas to be influences, affected, or created by an alternative alignment under consideration; also includes various social and environmental factors and conditions pertinent to an area.
Alignment	The actual location of an existing or proposed highway.
Alternative	One of a number of specific transportation improvement proposals, alignments, options, design choices, etc., in a study. Following detailed analysis, one improvement alternative is selected for implementation. Sometimes, the term "alternate" is used interchangeably with the term "alternative".

APE	Area of Potential Effect
Aquatic	Living or growing in or on the water.
Avoidance Alternative	Any alignment proposal that has been developed, modified, shifted, or downsized specifically in order to avoid affecting one or more resources regarded as significant.
Best Management Practice	(BMPs) Measures to control the quantity and quality of stormwater leaving a drainage basin. Local and state jurisdictions have adopted BMPs to counteract physical development and construction activity that may concentrate stormwater or produce soil erosion.
CAAA	Clean Air Act Amendments of 1990 is federal legislation passed to change both federal and state approaches to regulating air quality, mandating programs to curb acid rain, urban air pollution, and toxic emissions. The CAAs call for emission reductions measures in air quality non-attainment areas, including the consideration of transportation control measures (TCMs) as part of transportation improvement projects. Projects in non-attainment areas may not increase the number of vehicle miles traveled (VMTs): the number of cars on the roadways must be reduced by encouraging drivers to use mass transit, ride sharing, and car pooling.
CAL3QHC	California Line Source Emissions Model with Queuing and Highway Capacity Factors (Version 2)
CEQ Regulations	Directives issued by the Federal Council on Environmental Quality (40 CFR 1500-1508) that govern the development and issuance of environmental policy and procedure for federal aid actions by public agencies. The regulations contain definitions, spell out applicability and responsibilities, and mandate certain processes and procedures to be followed by state agencies that administer federally funded programs.
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System is a compilation of sites EPA has investigated or is currently investigating for a release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act.
Champion Tree	The largest tree of its species within the United States, the state, county, or municipality as determined by the Maryland Department of Natural Resources.
Clear Zone	The clear zone is the unobstructed, relatively flat area provided beyond the edge of the traveled way for the recovery of errant vehicles. The width of the clear zone is influenced by the traffic volumes, speed, and side slopes.
CMS	Congestion Management Strategies

CO	Carbon Monoxide
Comment Period	Usually two weeks or longer during which a document (e.g., the Draft and Final Environmental Impact Statements) is reviewed by agencies and the public, who may submit verbal or written comments. It can be applicable to all types of engineering and environmental documents which are circulated, as well as to formal presentations such as those which may be given by Transportation Department officials at a Public Hearing.
Commenting Agency	Agency responsible for reviewing and commenting on Environmental Impact Statements (EISs). Their comments are considered by the lead agency in the preparation of the Final EIS and Record of Decision.
Conceptual Mitigation	The early, generalized identification of design, operational, or construction measures that would minimize or avoid anticipated environmental consequences. Typically, conceptual mitigation ideas are discussed prior to the concluding stages of an environmental study, well before many of the ideas are further worked upon, refined, or committed.
Conformity	The US Clean Air Act stipulates that any approved transportation project, plan, or program must conform to the State Implementation Plan (SIP), a document which prescribes procedures for the implementation, maintenance, and enforcement of primary and secondary pollutants.
Constraints	More commonly described as ‘environmental features’. Significant resources, facilities, or other features or study areas located in or adjacent to an existing or proposed transportation corridor that serve to restrain, restrict, or prevent the ready implementation of proposed transportation improvements in a given area; may include natural or physical resources, important structures, community facilities, or topographic features.
Cooperating Agency	As defined in the Council of Environmental Quality’s <i>Regulations for Implementing the Procedural Provisions of the NEPA</i> , “any organization other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in...[a] major Federal action significantly affecting the quality of the human environmental.” The CEQ emphasizes that agency cooperation should begin early in the NEPA process.
Cumulative Effects	The sum of all direct, indirect, and secondary impacts resulting from a transportation improvement.
dB	decibels
dBA	decibels (A-Weighted scale)
DBH	Diameter of trees at breast height (about 4.5 feet from the ground).

DEIS	Draft Environmental Impact Statement
Design Criteria	Established state and municipal standards and procedures that guide the establishment of roadway layouts, alignments, geometry, and dimensions for specified types of highways in certain defined conditions. The principal design criteria for highways are traffic volume, design speed, the physical characteristics of vehicles, the classification of vehicles, and the percentage of various vehicle classification types that use the highway.
Design Hour Volume	(DHV) The percent of average daily traffic (ADT) generally accepted as criterion used in the geometric design of rural and urban highways. Ideally, the 30 th highest hourly volume during a year, the DHV is commonly found to vary from 8 percent to 12 percent of the ADT.
Design Speed	The design speed is the maximum safe speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern. This speed correlates to the geometric features of a facility, such as curvature and sight distance, which govern safe vehicle operations. A design speed is selected for the proposed facilities prior to design. The speed limit and the operating speed should be less than the design speed.
DHV	Design Hour Volume
Discharge	Stream flow, defined as the volume rate of flow of water and includes any sediment or other solids that may be dissolved or mixed with it.
DNR	Maryland Department of Natural Resources
Ecosystem	A functional system which includes the organisms of a total community together with their environment.
Endangered	An organism of very limited numbers that may be subject to extinction and is protected by law under the endangered species Act.
EPA	US Environmental Protection Agency
EIS	Environmental Impact Statement is a document which must be prepared for major federal actions significantly affecting the quality of the environment.
Fauna	The animal life of an area.
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency

FHWA	Federal Highway Administration
FIRM	Floodplain Insurance Rate Maps provided by the Federal Emergency Management Agency (FEMA).
Floodplain	A flat or nearly flat lowland that borders a stream and is covered by its waters at flood stage.
Flora	The plant life of an area.
FPPA	Farmland Protection Policy Act
Geography	Science of the earth's crust and the arrangement and internal structure of rocks.
Gleying	The process by which wet soils develop a characteristic grey color through the reduction of iron and other elements.
Grade Separation	Bridge structure such as an underpass or overpass that vertically separates two or more intersecting roadways, thus permitting traffic to cross without interference.
Groundwater	Naturally occurring water that moves through the earth's crust, usually at a depth of several feet to several hundred feet below the earth's surface.
Habitat	The physical natural environment, along with its characteristic array of organisms, in which a species lives and reproduces.
Hazardous Waste	Wastes identified by characteristics, sources, or specific substance as found in CFR 40 Chapter 261. A hazardous waste may: 1) cause or significantly contribute to an increase in mortality or morbidity in either an individual or the total population; and 2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed, or otherwise managed.
Housing of Last Resort	A Maryland SHA Program to re-house people who are displaced by right-of-way acquisition for highway projects when the cost to do so exceeds the limits of the Uniform Relocation Act. (See Appendix B.)
HOV	High Occupancy Vehicle
I-70	Interstate and route number
Impervious Surfaces	Any surface which cannot be penetrated freely by water.
Land Use Expert Panel (LUEP)	This panel was formed in 2000 to address concerns raised at the Public Hearing regarding the projects influence on local growth and development.

Levels of Service Levels of Service are a measure of the conditions under which a roadway operates as it accommodates various traffic volumes. Influencing factors include speed, travel time, traffic interruptions, maneuvering freedom, safety, driving comfort, economy and, the volume of traffic.

Levels of Service on expressways and freeways with uninterrupted flow conditions are ranked from A to F (best to worst) as follows:

Level A: free traffic flow; low traffic volumes; high speeds
 Level B: stable traffic flow; some speed restrictions
 Level C: stable traffic flow; increasing traffic volumes;
 Level D: approaching unstable traffic flow; heavy traffic volumes; decreasing speeds
 Level E: high traffic volumes approaching roadway capacity; temporary delays; low speeds
 Level F: forced traffic flow at low speeds; high traffic volumes and densities; frequent delays

For interrupted flow conditions, such as major highways and arterials with traffic signals, the following Levels of Service apply:

Level A: free traffic flow; no delay at traffic signals
 Level B: occasional delays at traffic signals
 Level C: increasing traffic volumes; moderate delays at traffic signals
 Level D: increasing traffic volumes; frequent delays at traffic signals; lower speeds
 Level E: high traffic volumes; signal backups almost to the previous light; low speeds
 Level F: forced traffic flow; successive backups between signals

MARC	Maryland Rail Commuter
MBSS	Maryland Biological Survey of MDNR Monitoring & Non-Tidal Assessment Division.
MDE	Maryland Department of the Environment
Median	The center portion of a divided highway separating opposing lanes of traffic.
MGS	Maryland Geological Survey
MHT	Maryland Historical Trust
Mitigation	Specified design commitments made during the environmental evaluation and

Measures	study process that serve to moderate or lessen impacts deriving from the proposed action. These measures may include planning and development commitments, environmental measures, right of way improvements, and agreements with resource or other agencies to effect construction or post construction action.
MOA	Memorandum of Agreement
MSHA	Maryland State Highway Administration
MTA	Maryland Transit Administration
NR	National Register. Cultural Resources (e.g., historic or archeological sites) which are on the National Register of Historic Places.
NRE	National Register Eligible. Cultural resources (e.g., historic or archeological sites) which are eligible for listing on the National Register of Historic Places.
NEPA	National Environmental Policy Act of 1969 establishes a legislative mandate to federal agencies to consider the environment in all major federal actions. The NEPA process involves the detailed study of alternatives and the evaluation of environmental impacts and mitigation measures.
NMFS	National Marine Fisheries Service (U.S. Department of Commerce)
NRCS	Natural Resources Conservation Service
NSA	Noise Sensitive Area
Operating Speed	The operating speed is the highest overall speed at which a driver can travel on a given highway under favorable weather conditions and under prevailing traffic conditions without exceeding the safe speed as determined by the design speed.
OPTIMA	Optimizing Noise Barrier Design Model
Option	Alternative designs for a specific project location.
Peak Hour	Time when a highway carries its highest volume of traffic, usually the morning or evening 'rush' period when commuters travel to and from work.
Project Limits	The physical end points of a proposed project, usually designated at geographic or municipal boundaries, at intersections, at roadway segments where cross sections change, or at the beginning or end of numbered state traffic routes.

PSS	Palustrine scrub-shrub wetlands
Public Hearing	A meeting designed to afford the public the fullest opportunity to express support of or opposition to a transportation project in an open forum at which a verbatim record (transcript) of the proceeding is kept.
Public Involvement	Coordination events and informational materials geared at encouraging the public to participate in the Transportation Project development Process. A successful Public Involvement Plan facilitates the exchange of information among project sponsors and outside groups and the general public, and may include meetings, surveys, committees, presentations, etc.
Public Meeting	A meeting conducted by transportation officials designed to facilitate participation in the decision making process and to assist the public in gaining an informed view of a proposed project at any level of the Transportation Project development Process. Also, such a gathering may be referred to as Public Information Meeting.
RCRA	Resource Conservation and Recovery Act program identifies and tracks hazardous wastes from the point of generation to the point of disposal.
Record of Decision	A document prepared by the Division Office of the Federal Highway Administration that presents the basis for selecting a specific transportation proposal that has been evaluated through the various environmental and engineering studies of the Transportation Project Development Process. Typically, the Record of Decision (ROD) identifies the alternative selected in the Final EIS, the alternatives considered, measures to minimize harm, monitoring or enforcement programs, and itemized commitments and mitigation measures.
Riffle	Shallow rapids where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.
Right-of-Way	Land purchased by state and/or local jurisdictions that is used to accommodate construction, drainage, and proper maintenance of transportation or other public facilities.
Riparian	Pertaining to anything connected with or immediately adjacent to the banks of a stream.
RTE	Rare, threatened, or endangered plant and animal species.
Section 106 Procedures	Derived from Section 106 of the National Historic Preservation Act of 1996 which governs the identification, evaluation, and protection of historical and archeological resources affected by state and federal transportation projects. Principal areas identified included required evaluations to determine the presence or absence of sites, the eligibility based on National Register of

	Historic Places criteria and the significance and effect of a proposed project upon such site.
Section 404	Section 404 of the Clean Water Act permit for Waters of the US (including wetlands)
Shoulder	The portion of a highway adjacent and parallel to the traveled lanes for the accommodation of stopped vehicles for emergency use and for lateral support of the travel lanes. May or may not be fully paved.
SHPO	State Historic Preservation Officer
Side Slope	The earth slope permissible outside of the roadway pavement in a given location, as a ratio of the horizontal to vertical measurement (2:1, 4:1, 6:1).
SIP	State Implementation Program
Slope	The degree of deviation from horizontal, measured by rise/run for a particular distance.
S/NAAQS	State/National Ambient Air Quality Standards
Specimen Tree	A tree with greater than 30 inch Diameter at Breast Height (DBH) or at least 75 percent of the DBH of the state champion of that species.
STAMINA	Standard Method of Noise Analysis
Stream Relocation	The process involving the movement of a flowing stream from its present channel to a different channel.
Study Area	A geographic area selected and defined at the outset of engineering or environmental evaluations, which is sufficiently adequate in size to address all pertinent project matters occurring within it.
System Linkage	Interconnection of roadway segments that comprise an overall transportation network. Also, a discussion of how a proposed project fits into the existing and future transportation system (network) and how it contributes to developing a sound transportation network in an area or region. The terms connector road, missing link, gap completion, circumferential link, or beltway segment are sometimes used to describe this concept.
Terrestrial	Living or growing on land.
Title IV	Nondiscrimination Provision of the Civil Rights Act of 1964
Topography	The configuration of the surface features of the region including relief, position of streams, lakes, roads, cities, etc.

TAZ	Transportation Analysis Zones (TAZs) are small areas used in transportation planning to summarize demographic characteristics and travel data. TAZs follow census geography boundaries and are generally one or more block groups. Occasionally, however, TAZs are defined at a sub-block group level, e.g., collections of census blocks. TAZs are identified by 1- to 4-digit numbers, ranging from 1 to 1151.
TDM	Transportation Demand Management. A program consisting of strategies, which seek to reduce travel demand rather than increase capacity. Examples of strategies included in a TDM program are regional telecommuting programs, ridesharing programs, public transit options, and non-intensive physical changes to existing infrastructure. TCM and TSM strategies are specific components of a Travel Demand Management program.
TSM	Transportation System Management. A transportation alternative which seeks to reduce traffic congestion without altering the existing roadway. This alternative considers options such as improvements to the mass transit system, minor intersection improvements, and traffic management. These are non-capital intensive strategies that seek to reduce travel demand.
USF&WS	US Fish & Wildlife Service
USGS	United States Geological Survey (Department of the Interior)
UST	Underground Storage Tank
VMT	Vehicle Miles Traveled
Watershed	The area of land which drains to a particular body of water.
Wetlands	Lands that are inundated or saturated by surface or groundwater with a frequency and duration sufficient to support and, under normal circumstances, do support a prevalence of vegetation typically adapted for life un saturated soil conditions. Wetlands generally include swamps, marches, bogs, and similar areas.

Appendix F

Index

MD 32 Planning Study
MD 108 to I-70, Howard County, Maryland



Office of Planning and Preliminary Engineering
Maryland State Highway Administration

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