



final environmental statement

SECTION 4 (f) STATEMENT

F O R

CONTRACT No. AA 739-001-571
HO 292-000-771

F.A.P. No. 915-1(1-4)
RELOCATED MARYLAND ROUTE 32
MARYLAND ROUTE 108 TO THE
BALTIMORE/WASHINGTON PARKWAY
IN ANNE ARUNDEL AND HOWARD
COUNTIES, MARYLAND

prepared by
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION



Maryland Department of Transportation

State Highway Administration

Harry R. Hughes
Secretary
Bernard M. Evans
Administrator

July 9, 1975

Mr. Richard Ackroyd
Division Engineer
Federal Highway Administration
The Rotunda Building
711 W. 40th Street
Suite 220
Baltimore, Maryland 21211

Contract No. AA 739-1-571 ✓
Contract No. HO 292- -771 ✓
Maryland Route 32
Maryland Route 108 to Balto./
Washington Parkway -

RE: Final Environmental State-
ment - Third Edition -

Dear Mr. Ackroyd:

On November 8, 1974, a conference was held at the Rotunda with Miss Sonia Hill and Mr. Gary Larsen of your office and various members of our staff to discuss three (3) environmental statements concerned with proposed highway improvements connecting to Interstate Route 95 interchanges in Howard County.

As concerns the subject project, FHWA comments on the 2nd Edition Final Environmental Statement were contained in Region 2's memorandum to you dated October 10 and 23, 1973. Due to the age of those comments, regulatory revisions and current practices, we were requested to furnish six (6) copies of the same document for a more contemporary review. These documents were furnished your staff at the November 8, 1974 conference; however, no further comments have yet been received.

In the meantime, we are proceeding with preparation of a Supplemental Draft Environmental Statement relative to air quality and we will shortly solicit your comments.

It is hereby requested that we be furnished your current comments on the 2nd Edition FES to assist with our preparation of the Third Edition.

Very truly yours,
Bernard M. Evans
State Highway Administrator

RECEIVED

JUL 15 1975

Robert J. Hajzyk
C. R. ANDERSON

By: Robert J. Hajzyk, Director
Office of Planning & Preliminary Engineering

bcc: Mr. A. W. Tate
Mr. E. T. Carponeschi
Mr. C. R. Anderson ✓
Century Engineering, Inc.

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning

July 12, 1974

Mr. Charles R. Anderson, Chief
Bureau of Landscape Architecture

Contract No. HO 292-043-774
Patuxent Freeway

Attention: Mr. Frank J. Koller, Jr.

Please refer to your July 9, 1974 memo regarding revisions to line and grade, and possible changes in the impact upon Noise Sensitive areas 1-6. The only significant change would be that the design noise level at area no. 4 would be reduced from 73 to 69dBA. Even though this brings the design level below FHWA standards, the earth mound contemplated should still be constructed due to the large increase in ambient noise levels which will occur. The other areas will not be affected by the line shifts to a degree where change would be significant.

CRA:jlb

Selected Alt 5

- ~~37 - Noise barriers~~ ✓
- ~~9 miles HOT lanes~~
- 4 - Park-n-ride lots ✓
- 3 - carpool lots ✓
- 5,150 LF Stream realignment ✓
- ~~0 wetlands~~
- 77.7 acres floodplain impacts ✓
- ~~610 acres forestland impact~~
- Wildlife impact (swamp) S-9 (e)

PARK-N-RIDE lots

- Dorsey Rd. Fig II-19 ✓
- Fitchie Highway + Ordinance Rd. Fig II-39 ✓
- Patapsco Ave. Fig II-40 ✓
- Patrol - along Riva Rd. Fig II-66 ✓

Carpool lots

- Benfield Boulevard Fig II-23 ✓
- Hahn Dr. Fig II-51 ✓
- MD Rtes 100/10 Fig II-48 ✓

5150 L.F. Stream realignment

Section II-D

Alt	Description	Length (ft)	Fig	Status
MD-6	MD 2 Re 100 to US 50/301	1090	II-19	✓
MD-51	MD 3 695 to New Cut Rd	240	II-20	✓
MD-FAI	MD 3 New cut Rd to MD 175	380	II-25	✓
MD-66	MD 32 MD 3 to US 50/301	3180	II-29, 30, 31	✓
MD-36	US 50/301 South Run to MD 70	260	II-36	✓
		<u>5150</u>		

Flood Plain Impacts 77.7 acres ✓ Section II-D

STATE HIGHWAY ADMINISTRATION

P. O. Box 717 / 300 West Preston Street, Baltimore, Maryland 21203

5

MEMORANDUM

TO: Mr. Charles R. Anderson, Chief
Bureau of Landscape Architecture
Attention: Mr. Charles Adams

FROM: Eugene T. Camponeschi, Chief
Bureau of Project Planning

SUBJECT: Contract No. HO 292-043-774
Patuxent Freeway
Maryland Route 108 to U.S. Route 29
Acoustic Impact Analysis

DATE: July 9, 1974

We are transmitting to you 1 print of the revised line and grade on this project. The major revisions horizontally include moving the center line 100' south of the original alignment from Station 540 to 600; 100' North of the original center line from Station 620 to 665 and excluding the Trotter Road Relocation and Interchange from the Study.

Our major concern at this time is if these revisions make any drastic changes in Noise Sensitive Areas 1 through 6 that you submitted to Mr. Miller on February 1, 1973.

We are presently writing the Location Study Report and would appreciate any information you can give us, as soon as possible.

By: Frank J. Kofler, Jr.
Frank J. Kofler, Jr.
Regional Engineer

EFC:FJK:sr
Attachment

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JUL 10 1974

C. R. ANDERSON

6

July 9, 1974

Mr. Charles R. Anderson, Chief
Bureau of Landscape Architecture
Attention: Mr. Charles Adams
Eugene T. Camponeschi, Chief
Bureau of Project Planning

Contract No. HO 292-043-774
Patuxent Freeway
Maryland Route 108 to U.S. Route 29
Acoustic Impact Analysis

We are transmitting to you 1 print of the revised line and grade on this project. The major revisions horizontally include moving the center line 100' south of the original alignment from Station 540 to 600; 100' North of the original center line from Station 620 to 665 and excluding the Trotter Road Relocation and Interchange from the Study.

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We are presently writing the Location Study Report and would appreciate any information you can give us, as soon as possible.

By:

Frank J. Koller, Jr.
Regional Engineer

ETC:FJK:er
Attachment

75 A-1
1

Mr. Charles Lee, Chief
Bureau of Engineering Access Permits
Attn: Mr. William J. Kidwell

July 24, 1974

Mr. William F. Lins, Jr., Chief
Bureau of Highway Design

✓ Contract No 292-34-771
Patuxent Freeway
W. of U. S. Route 29 to I-95

Re: Village of Kings Contrivance
Section 1 Area 1

Reference is made to your memos dated May 9, 1974 and June 5, 1974 transmitting for our review copies of the final development plan of the captioned subdivision for our review.

We have previously reviewed these plans and proposed record plats for right of way requirements and advised you of the absence of conflict thereby allowing your letter response to the County of July 10, 1974.

Our comments on the construction plans follow:

Sheet 1. Suggest the proposed extension of Carlinda Avenue across Beaver Run Creek by this Administration be shown.

Sheet 2. We quote from your letter of April 30, 1974 to the County. Shaker Drive "encroaches upon part of the Atholton Village Shopping Center parking lot north of the subdivision boundary. The alignment of this relocation should be reviewed for compliance with County Standards. As this developer also owns the Atholton Village Shopping Center, it is recommended that the tie-in to Old U. S. Route 29 north of the subdivision boundary be included as incidental to subdivision development." These recommendations have not yet been adopted.

We again recommend that Shaker Drive be constructed to its ultimate tie-in with Old U. S. Route 29 in front of the Atholton Village Shopping Center. The temporary roadway should be realigned to connect at right angle to Shaker Drive. This arrangement would result in less disruption to increased volumes of local traffic when the interchange is constructed by this Administration.

There should be reference to Sheet 35 for grading and drainage construction.

The adjusted location of interchange Ramp 'D' is indicated on the returned plans.

Mr. Charles Lee, Chief

Contract No 292-34-771

-2-

The vertical alignment of Shaker Drive appears to be unnecessarily abrupt at Donleigh Drive. Simply lengthening the crest vertical curve Sta. 3+25 can achieve a stopping sight distance in excess of 40 M.P.H.

Sheet 3. Inlet I-14A is to be relocated closer to Shaker Drive.

Sheet 11. See comments contained in your letter dated April 30, 1974, page 2, para. 4.

Sheet 24. See returned plans for shortening of 24" RCP between inlets 14 and 14a and corrected identification of end walls and inlets.

The location of our proposed Right of Way Line of Through Highway is rubricated on pertinent sheets.

Your letter to Howard County dated April 30, 1974 contained a discussion of probable acoustic impact to the subdivision and the proposed method of attenuation selected by the Administration, namely an earthen mound with a precast panel wall up to 8' in height along the outer perimeter of Ramp D together with a general lowering of grades along the Patuxent Freeway and mounding a minimum height of 12' above the roadway. This remains the intent of the Administration. We reiterate our recommendation that buildings and site should be acoustically designed with the predicted exterior L_{10} noise levels of 66 dBA and 62dBA at distances of 200 and 400 feet from the pavement, respectively, in order that interior L_{10} noise levels cannot exceed the Federal standard of 55 dBA.

Submitted plans are returned herewith.

ELH:DGH:gvd

Attachment

cc: Mr. C. R. Anderson

RECEIVED

JUL 25 1974

C. R. ANDERSON

STATE HIGHWAY ADMINISTRATION

P. O. Box 717 / 300 West Preston Street, Baltimore, Maryland 21203

75A-4
9

MEMORANDUM

TO: Mr. Charles Lee, Chief
Bureau of Engineering Access Permits
Attn: Mr. William J. Kidwell

DATE: April 16, 1974

FROM: Mr. William F. Lins, Jr., Chief
Bureau of Highway Design

SUBJECT: Contract No. HO-292-34-771
Patuxent Freeway
West of U. S. Route 29 to I-95

Re: Village of Kings Contrivance - Section I, Area I

Reference is made to your memo dated October 17, 1973, transmitting two (2) copies of a sketch plan of the proposed subdivision as located east of U. S. Route 29 and along the north side of the proposed Patuxent Freeway (Relocated Maryland Route 32), your second transmittal of February 6, 1974 of a preliminary plan of the same subdivision and your third transmittal of March 21, 1974 of a revised preliminary plan of same.

Status of State Highway Administration Plans:-Preliminary field investigation with 30% complete plans was conducted in the Spring of 1969, and a combined-corridor design public hearing was held August 15, 1973. Plans remain at 30%. A Final Environmental Statement must be prepared together with a Location/Design Study Report which is to recommend design details to be incorporated in the contract drawings; these recommendations would not become effective until issuance of a formal design approval by the Federal Highway Administration. Neither the Final Environmental Statement nor the Location/Design Study Report have yet been initiated. Studies have been made since the public hearing for a) accommodation of the ultimate highway facility including interchange in the vicinity of U. S. Route 29, b) grade adjustments to obtain better earthwork balance, c) noise attenuation measures and d) storm water management in the Beaver Run Creek watershed (see memo 4-23-74).

Coordination:-Meetings were conducted between the State Highway Administration's staff and the Howard Research and Development Corporation, February 21, March 5, and April 3, 1974 in attempt to achieve compatibility between our proposed highway improvements and the captioned development.

The subdivision plans as received for review have been found to be inaccurate (grids don't match, etc.). The Final Development Plan should include accurate location of State Highway Administration base lines to facilitate final review.

We have indicated the proposed Right of Way Line of Through Highway in red on one (1) copy of the revised preliminary subdivision plan which is returned herewith. This line represents requirements for the State Highway including noise attenuation measures, assuming grading to have occurred within the subdivision in accordance with information furnished by the developer.

Acoustics:-Should the development of this residential subdivision precede Federal Highway Administration location approval of the proposed Patuxent Freeway (Relocated Maryland Route 32), which we anticipate to be the case, it is required to apply acoustic analysis as required by Federal Highway Administration's Policy and Procedure Memorandum 90-2 to assure that exterior L_{10} noise levels do not exceed the Federal Standard of 70 dBA. Predicted design hour (1994) L_{10} noise levels to be generated by vehicles using this highway range from 74 to 78 dBA along the mainline 200' from the pavement and ranging from 70 to 74 dBA along Ramp 'D' of the U. S. Route 29 interchange 200' from the pavement, thus requiring either a) attenuation devices such as mounds, walls, barriers, etc., b) acquisition of additional right of way width until 70 dBA is not exceeded at the Right of Way line or c) granting of an exception to the standards on the part of the Federal Highway Administration. An effective earthen mound, which is the usually favored attenuation method, generally requires additional right of way up to 75' in width. Earth mounding a minimum height of 12' above the proposed Patuxent Freeway mainline roadway simulating a continuous cut condition in conjunction with a general lowering of grades has been determined to be the method of noise attenuation between the subdivision and the proposed state highway. Due to the embankment height required to support Ramp 'D' of the U. S. Route 29 Interchange the mounding has been reduced in height to minimize right of way requirements and the mound is to be supplemented by an acoustic wall of precast panels varying in height up to 8 feet. These measures are expected to reduce L_{10} noise levels to 66 dBA at a distance of 200' from the pavement and 62 dBA at a distance of 400 feet. Buildings and site should be acoustically designed with the predicted exterior noise levels in view so that interior L_{10} noise levels cannot exceed the Federal standard of 55 dBA.

Median drainage to be outletted from the Patuxent Freeway left of Station 744 (Road "A" Station 16+) must be received by the subdivision drainage system.

Service Road 'D' (Road 'A' on developers plan) encroaches upon part of the Atholton Village Shopping Center parking lot north of the subdivision boundary. The alignment of this relocation should be reviewed for compliance with County Standards. As this developer also owns the Atholton Village Shopping Center, it is recommended that the tie-in to Old U. S. Route 29 north of the subdivision boundary be included as incidental to subdivision

Mr. Charles Lee, Chief

Contract HO-292-34-771

-3-

development. In the interest of a safer approach to the Kings Contrivance interchange an $8^{\circ} 10'$ curve is recommended in lieu of the $10^{\circ} 25'$ curve now shown.

Road 'B' is shown as a "Proposed Temporary Access Road" crossing the proposed Patuxent Freeway just east of an area now used for embankment storage. Contour elevations appearing on the submitted development plans do not indicate this storage area. If constructed, this road should be removed within the proposed State Highway Administration's right of way at the expense of others, including replacement of embankment, prior to State Highway Administration construction.

State Highway Administration public hearing exhibits proposed a southerly extension of Carlinda Avenue from Allview Drive into Service Road 'D' (developers Road 'A') at a point approximately 900' north of the Patuxent Freeway. Developer indicates Carlinda Ave. intersecting Service Road 'D' at a point approximately 1050' north of the Patuxent Freeway; this point of intersection appears better in all respects for highway safety and economical property development. The State Highway Administration proposes a multi span bridge across Beaver Run Creek and approach roadways in conjunction with the Patuxent Freeway. The alignment of Carlinda Avenue should be adjusted slightly in the vicinity of Beaver Run Creek to conform to the surveyed centerline established by State Highway Administration. The profile of Carlinda Avenue will be established by the State Highway Administration between stations 11 and 16+ (Allview Drive); profile should be adjusted to tie to point of vertical intersection station 11+75 at elevation 288.39. We will furnish details as required to effect coordination in this area. The limit of construction proposed by developer at station 11 appears acceptable. The State Highway Administration will perform construction of Carlinda Avenue south from Allview Drive across Beaver Run Creek to station 11, a distance of approximately 470 linear feet.

Please advise if any additional information is required.

ELH:DGH:gvd

Attachment

cc: Mr. H. G. Downs
Mr. A. W. Tate
Mr. I. C. Hughes
Mr. C. R. Anderson ✓
Green Associates, Inc.
Attn: Mr. Robert G. James

RECEIVED

APR 30 1971

C. R. ANDERSON



Maryland Department of Transportation

State Highway Administration

Harry R. Hughes
Secretary

Bernard M. Evans
Administrator

July 9, 1975

Mr. Richard Ackroyd
Division Engineer
Federal Highway Administration
The Rotunda Building
711 W. 40th Street
Suite 220
Baltimore, Maryland 21211

Contract No. AA 739-1-571 ✓
Contract No. HO 292- -771 ✓
Maryland Route 32
Maryland Route 108 to Balto./
Washington Parkway -

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In the meantime, we are proceeding with preparation of a Supplemental Draft Environmental Statement relative to air quality and we will shortly solicit your comments.

It is hereby requested that we be furnished your current comments on the 2nd Edition FES to assist with our preparation of the Third Edition.

Very truly yours,
Bernard M. Evans
State Highway Administrator

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JUL 15 1975

Robert J. Hajzyk
C. R. ANDERSON

By:

Robert J. Hajzyk, Director
Office of Planning & Preliminary Engineering

cc: Mr. A. W. Tate
Mr. E. T. Camponeschi
Mr. C. R. Anderson ✓
Century Engineering, Inc.

REPORT NUMBER: FHWA-MD-EIS-72-07-(F)

Federal Highway Administration
Region III

Relocated Maryland Route 32
Maryland Route 108 to the Baltimore/Washington Parkway
Anne Arundel and Howard Counties

ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Section 4(f)

U.S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

State of Maryland
Department of Transportation
State Highway Administration

Submitted pursuant to 42 U.S.C. 4332(2) (C), 23 U.S.C. 128(a),
and 49 U.S.C. 1653(f)

Bernard M. Evans
State Highway Administrator

Aug 23, 1976
Date

by: Robert J. Hajzyk
Robert J. Hajzyk, Director
Office of Planning and
Preliminary Engineering

7/7/77
Date

by: R. W. Bergeron
for Federal Highway Administration
Regional Federal Highway
Administrator

SUMMARY SHEET

(1) Check Appropriate Box (es)

Administrative Action

- Draft Final
- Environmental Statement
- Combination Environmental/Section 4(f) Statement

(2) Additional Information May Be Obtained from the Following:

Eugene T. Camponeschi, Chief
Bureau of Project Planning
Maryland State Highway Administration
300 West Preston Street
Baltimore, Maryland 21203

Telephone: (301) 383-6887
Office Hours: Monday - Friday
 8:30 a.m. - 4:30 p.m.

Emil Elinsky
Division Administrator
Federal Highway Administration
The Rotunda
Suite 220
711 West 40th Street
Baltimore, Maryland 21211

Telephone: (301) 962-4440
Office Hours: Monday - Friday
 8:00 a.m. - 4:30 p.m.

(3) Brief Description of Highway Improvements

The construction of the initial two lane/four lane dual roadways of the ultimate four lane/ six lane/ 8 lane dual freeway Relocated Maryland Route 32 and six lane Relocated Maryland Route 32 Spur, a controlled access arterial highway, for a distance of approximately 10.4 miles beginning at Maryland Route 108 at Clarksville in Howard County to the Baltimore-Washington Parkway near Fort George G. Meade in Anne Arundel County, Maryland. Ultimate construction is not planned until the year 2000.

(4) Summary of Environmental Impacts

The expected impact is the acquisition of existing residential and undeveloped lands and the conversion to highway purposes. Traffic using the new facility will be given the opportunity to use a faster, safer, more efficient route on new location with access controls. The displacement of residents appears to be a major adverse environmental effect. Relocation assistance services and payments will be provided in accordance with established procedures. The adoption of erosion and sediment control measures and careful attention to detail drainage design assure minimum affects to water resources.

The study area will realize increased levels of air pollution and ambient noise levels due to the roadway.

The roadway will also speed the current conversion of land to more intensive use. Relocated Maryland Route 32 is depicted in the General Plan for Howard County (adopted December 6, 1971) and the General Development Plan for Anne Arundel County (adopted 1968). Local authorities have planned for the implementation of this facility and its subsequent impacts in their development of county land use plans.

Two historical properties will be affected by this action; yet neither are considered eligible for the National Register of Historic Places. The appropriate 4(f) Statement has been included in this document for the significant property.

(5) Alternatives Considered

The alternatives evaluated for this project fall into two categories. The first category would be the "Construct Freeway"

alternatives, which would involve an eight lane freeway for the study area. Alternatives one through four are in this category, and differ only slightly from the alignment of the roadway.

The other category of alternative considered is the "No Build" Alternative 5. In this alternative, evaluation was based on the assumption that no construction on new alignment would be undertaken. An analysis was also made to determine if adequate improvements could be made within the existing right-of-way of Guilford and Annapolis Junction Roads.

(6) Comments have been Requested from the Following:

- U. S. Department of the Interior*
- U. S. Department of Housing and Urban Development
- U. S. Department of Health, Education, and Welfare
- U. S. Department of Commerce
- U. S. Department of Defense*
- U. S. Department of Agriculture*
- U. S. Environmental Protection Agency*
- State Clearinghouse*
- Regional Planning Council*
- Anne Arundel County*
- Howard County*
- Local Elected Officials

* denotes written response.

A detailed distribution list for the Draft Environmental Impact Statement is presented in Appendix "E" of this report.

(7) Draft Mailed to Council on Environmental Quality

May 24, 1972 - A supplement 4(f) statement was mailed to CEQ on April 27, 1976.

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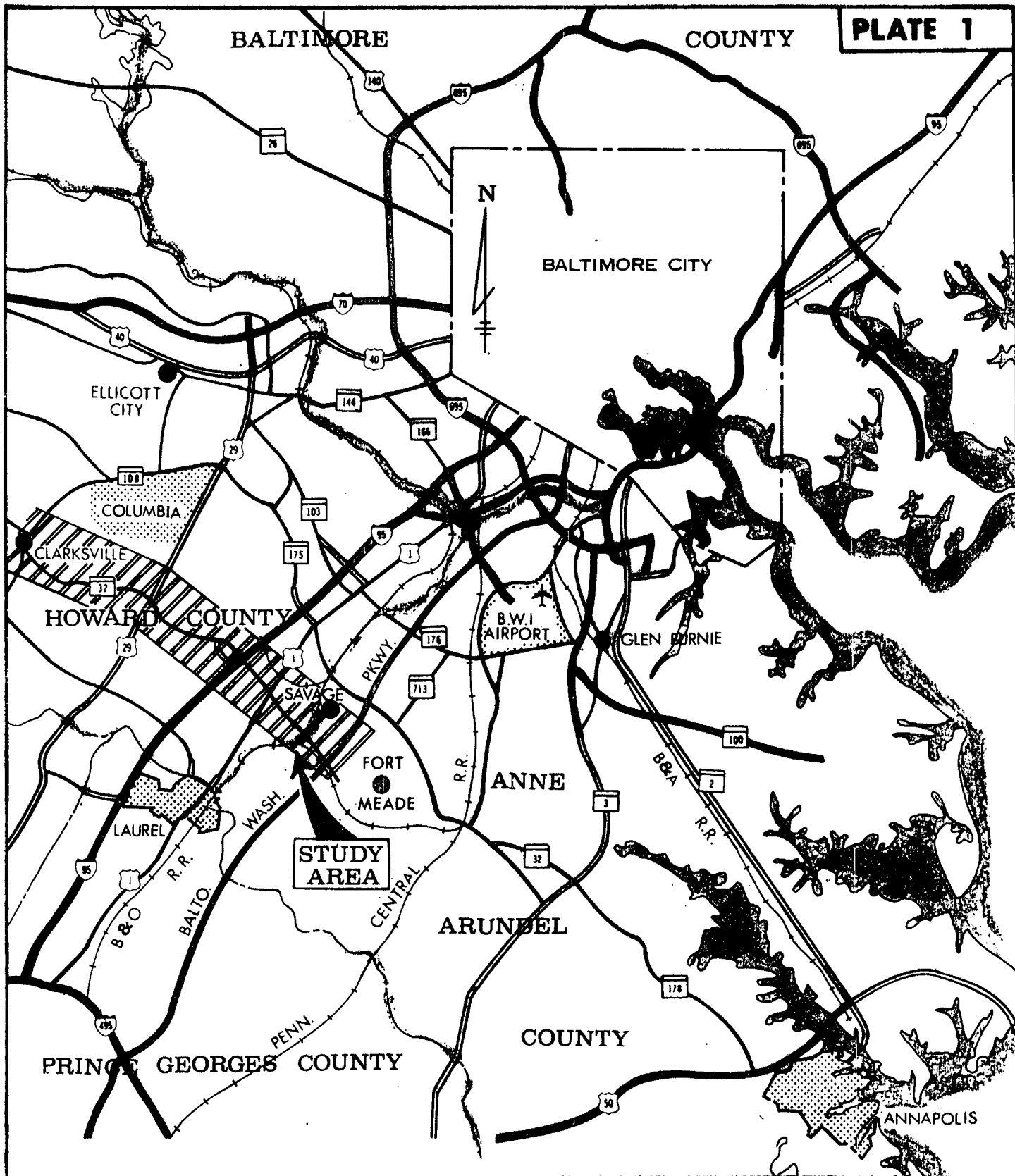
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BALTIMORE

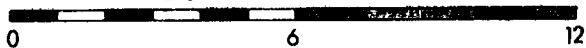
COUNTY

PLATE 1

22



SCALE IN MILES



TAKEN FROM :

MARYLAND STATE HIGHWAY SYSTEM MAP

RELOCATED MARYLAND
 ROUTE 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION
 LOCATION MAP

DESCRIPTION OF THE PROPOSED ACTION

Proposed Project

The proposed Relocated Maryland Route 32 (Patuxent Freeway) is designed to stretch from I-70 near Cooksville in Howard County to the City of Annapolis, the State Capital, in Anne Arundel County, a total distance of approximately 40 miles (see Location Map). The purpose of this high volume expressway is to provide a safe, fast, and efficient route between the Eastern Shore and Western Maryland, which bypasses the more densely populated areas of Baltimore and Washington, D.C.

This project is concerned with a 10.4 mile segment of Relocated Maryland Route 32 between the logical termini of Maryland Route 108 near Clarksville in Howard County and the Baltimore-Washington Parkway near Fort George G. Meade in Anne Arundel County (see Plate 1). Maryland Route 32 between I-70 and Maryland Route 108 has previously been reconstructed to a two lane facility with adequate design standards for anticipated traffic demand to the year 2000. Additional construction will not be completed until after the year 2000.

The exhibits and discussion in this Final Environmental Impact Statement reflect that Relocated Maryland Route 32 may be relocated south of existing Maryland Route 32 beginning at a point between U.S. 1 and the Baltimore-Washington Parkway. Until separate corridor studies in Anne Arundel County are completed, the future location of Relocated Maryland Route 32 east of U.S. 1 cannot be determined. The Maryland Route 32 Spur as shown between U.S. 1 and the Baltimore-Washington Parkway is essential in the future and to the Phase I construction do to the conditions of existing Maryland Route 32 and traffic demands.

The segment of Relocated Maryland Route 32 would serve important local traffic meovements in Howard and Anne Arundel Counties in the interim period before the entire freeway is completed. The

completion of this freeway segment would connect the principal north-south arterials (U.S. 29, I-95, U.S. 1, and the Baltimore-Washington Parkway) within the Baltimore-Washington Corridor, with the City of Columbia, Fort George G. Meade, the industrial areas along U.S. 1, and various commuter communities in both counties. The access created by this roadway would be useful for the transportation of goods to the Port of Baltimore, to airport facilities, and to the resale market in general. In addition, local commuter traffic would have an efficient tie-in to these north-south arterials leading to the major employment centers of Baltimore, Maryland and Washington, D.C.

The schedule for completion of the various segments of Relocated Maryland Route 32 is shown below:

<u>Segment</u>	<u>Estimated Completion Date</u>
Interstate Route 70 to Maryland Route 108	After 2000
Pindell School Road to Baltimore-Washington Parkway - Phase I	1980
Maryland Route 108 to Baltimore-Washington Parkway - Phase II	2000
Baltimore-Washington Parkway to Maryland Route 175	1990
Maryland Route 175 to Discus Mill Road	1990
Discus Mill Road to Maryland Route 3	Completed
Maryland Route 3 to Maryland Route 178	Completed
Maryland Route 178 to Annapolis - (Maryland Route 665)	1985

For study purposes, the estimated time of completion (ETC) for this project is the year 1980. The design year is then the year 2000 or ETC + 20.

The entire Relocated Maryland Route 32 is designed for the traffic conditions expected through the year 2000 or ETC + 20. Thus, it will be able to accommodate these projected traffic flows efficiently. The full right-of-way (approximately 400 feet in width) for the project will be acquired initially. However, only those lanes and interchanges needed in the near future will be constructed initially, then as traffic demand increases, additional lanes will be added to bring the facility to full capacity. These lanes will not be added on a year to year basis, but rather this construction will take place in two phases during the

project. See page 6 for a more detailed description of the construction phasing and number of lanes.

The existing Maryland Route 32 (Guilford Road and Annapolis Junction Road), which Relocated Maryland Route 32 will replace, is an important arterial road serving both local and through east-west traffic. This existing roadway is a sub-standard two-lane facility varying in width from 18 to 24 feet, with uncontrolled access. Except for an 0.83 mile segment, which was constructed as a part of the interchange with Interstate 95, the existing roadway is generally contained within a 30 foot wide uncontrolled right-of-way.

Adjacent industrial, commercial, and residential properties have created numerous entrances along the route, and together with the poor horizontal and vertical alignments have constrained the posted speed limits to 15 to 50 mph. However, during peak hours portions of the roadway operate under unstable flow conditions. A small, one lane bridge on Guilford Road near Berger Road further disrupts the normal flow of traffic, causing some delays during peak hours.

Alternatives Considered

Several alternatives were considered and evaluated in the planning of this project. Basically, the alternatives fall into two categories: "Construct a New Facility" or "No Build". These alternatives are defined as follows:

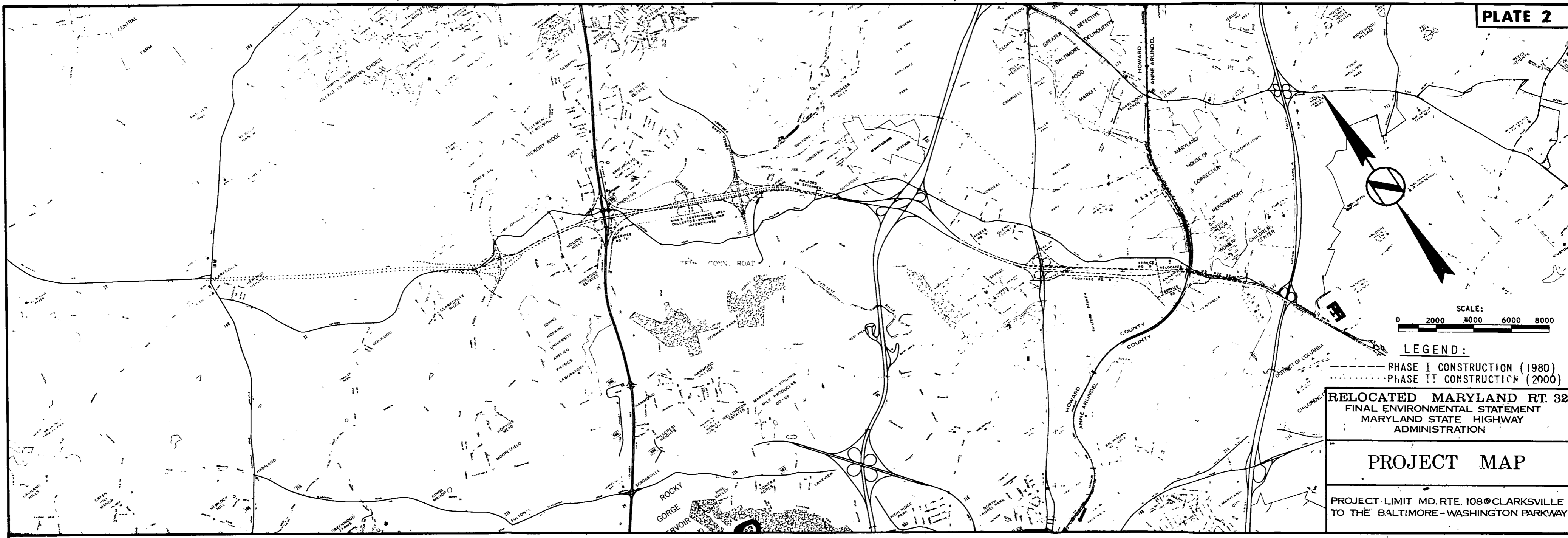
1. No Build - This alternative assumes that the existing roadway characteristics would be maintained through the year 2000, including the performance of necessary maintenance services.

- 2. Construct New Facility - A new facility would be constructed as a freeway between Maryland Route 108 and the Anne Arundel County Line, and as a controlled-access arterial highway from west of the Anne Arundel County Line to the Baltimore-Washington Parkway. Modifications to the alignments and access roads constitute some of the four alternatives falling into this classification.

For a detailed discussion of all alternatives considered and the ameliorative and adverse impact of each, see the section entitled "Alternatives".

As a result of the planning process and environmental review of this project, the Construct Facility or Freeway Alternative has been selected for implementation. The decision variables and selection process is discussed in a later section of this report, entitled "Current Status of the Project".

Plate 2 shows the plan of the selected alternative. This project is known as Relocated Maryland Route 32. At a point near Dorsey Run Road, Relocated Maryland Route 32 and Relocated Maryland Route 32 Spur split, with Relocated Maryland Route 32 Spur terminating at the interchange with the Baltimore-Washington Parkway. Relocated Maryland Route 32 will deflect in a southeasterly direction, eventually passing through the southern portion of Fort Meade. As noted on page 1, the future location of Relocated Maryland Route 32 from a terminus between U.S. 1 and the Baltimore-Washington Parkway to Maryland Route 75 is being considered under a separate study.



SCALE:
0 2000 4000 6000 8000

LEGEND:
 - - - PHASE I CONSTRUCTION (1980)
 . . . PHASE II CONSTRUCTION (2000)

RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

PROJECT MAP

PROJECT LIMIT MD. RTE. 108 @ CLARKSVILLE
 TO THE BALTIMORE - WASHINGTON PARKWAY

Traffic

The volume of traffic using Guilford and Annapolis Junction Roads is limited by the size of the roadways, their poor alignment, and uncontrolled access. The 1973 traffic volumes on Guilford and Annapolis Junction Roads are shown on Plate 3.

Traffic projections for 1980 (ETC) and 2000 (ETC + 20) have been made by the Maryland State Highway Administration. The following two alternates are considered:

1. No Build - This alternate assumes the existing roadway characteristics to remain through the year 2000. The traffic volumes are presented as predicted Average Daily Traffic (ADT) for the year 1980 (ETC) and 2000 (ETC + 20), and are shown on Plate 3. Trucks constitute seven (7%) percent of the daily volumes. The average speeds during the peak hour are shown on Plate 4. These average speeds were derived from the manual, "A Policy On Design of Urban Highways and Arterial Streets" by American Association of State Highway and Transportation Officials. Peak hour speeds were based on peak hour traffic; calculated as 10 percent of ADT.

This existing two-lane roadway will not be able to accommodate the projected traffic volume, as shown by the levels of traffic service during peak hours given on Plate 5. The definitions of the level of service are given in Appendix "A".

AVERAGE DAILY TRAFFIC NO BUILD

YEAR 1973	2500	3750	6000	7000	4800	5300	4850	4700
ETC	3240	4890	7840	9340	6410	7080	6470	6300
ETC +20	6850	10,250	16,400	19,100	13,100	14,400	13,150	12,800

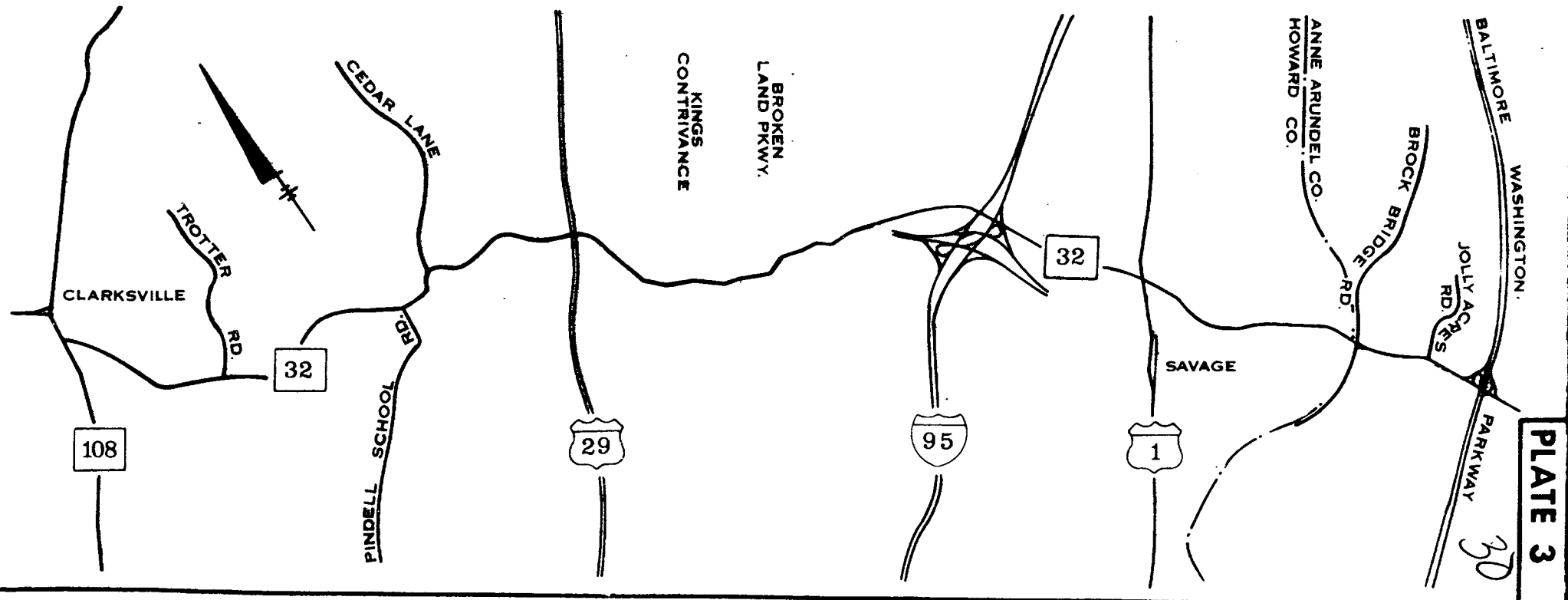
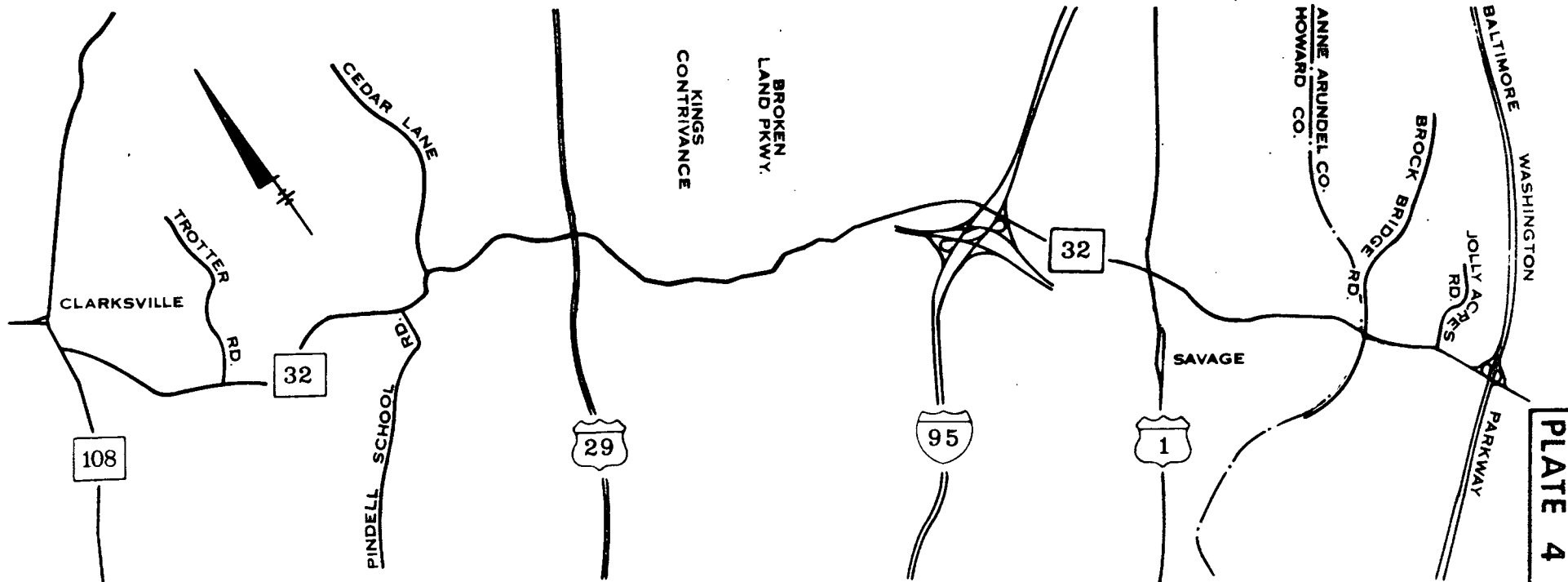


PLATE 3

PEAK HOUR VEHICLE SPEEDS NO BUILD

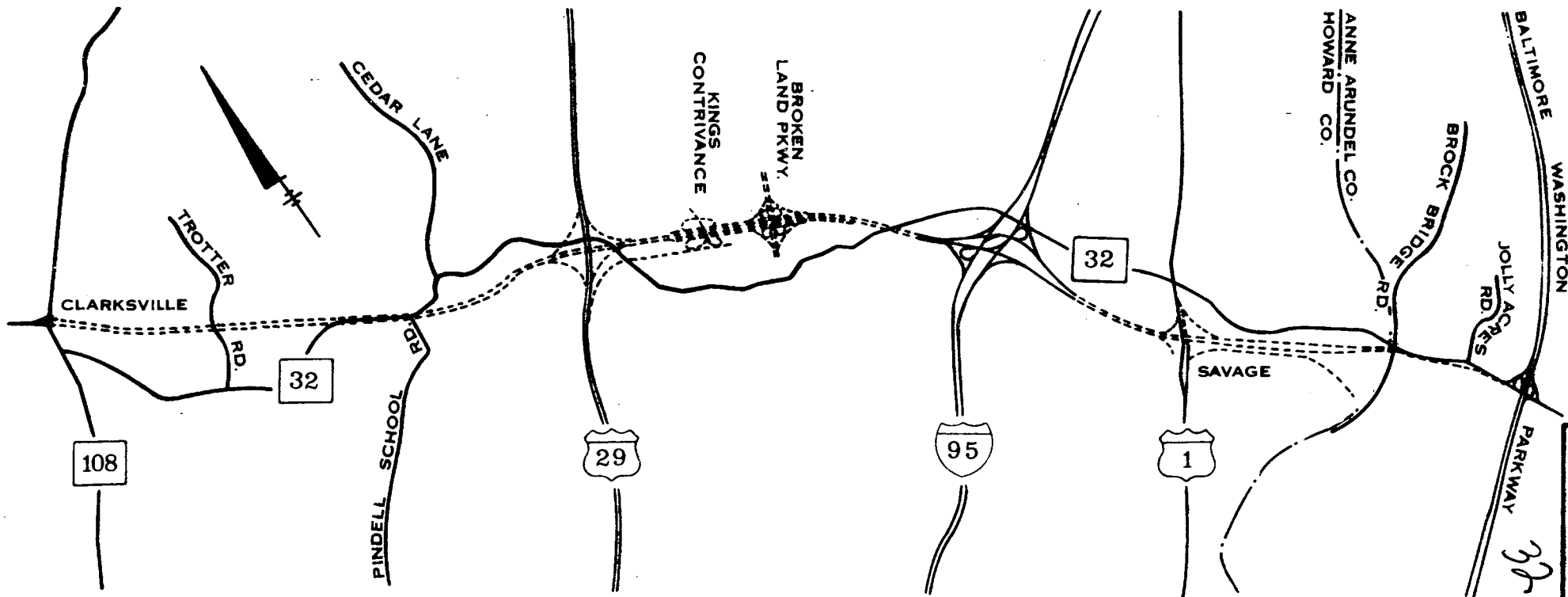
ETC	36	36	34	32	27	26	27	27
ETC +20	35	32	30	30	24	24	24	24



PEAK HOUR LEVEL OF SERVICE NO BUILD

ETC	D	D	D-E	D-E	D	D-E	D-E	D
ETC +20	D	D-E	EXCEED CAPACITY	EXCEED CAPACITY	EXCEED CAPACITY	EXCEED CAPACITY	EXCEED CAPACITY	E

FOR EXPLANATION OF LEVEL OF SERVICE, SEE DEFINITION IN APPENDIX "A".



- 2. Construct New Facility - The proposed facility is designed as a freeway between Maryland Route 108 and the Anne Arundel County line, and as a controlled access arterial highway from west of the Anne Arundel County line to the Baltimore-Washington Parkway.

The construction of the new facility is proposed in two phases. Phase I construction is expected to be completed by the year 1980, and the number of lanes for each segment will be:

- a. Pindell School Road to west of U. S. Rte. 29 - two lanes.
- b. West of U. S. Rte. 29 to I-95 - Utilizing Collector-Distributor Roads - four lanes divided.
- c. I-95 to U. S. Route 1 - four lanes divided.
- d. U. S. Rte. 1 to Anne Arundel County Line -
 - * Main Roadway - four lanes divided;
 - * Annapolis Junction Road (Frontage Road - two lanes).
- e. Anne Arundel County line to Baltimore-Washington Parkway - four lanes divided.

Phase II Construction--to be operational by the year 2000--will consist of the following number of lanes:

- a. Maryland Route 108 to U. S. Route 29 - four lanes divided.
- b. U. S. Route 29 to I-95.
 - * Main Roadway - six lanes divided.

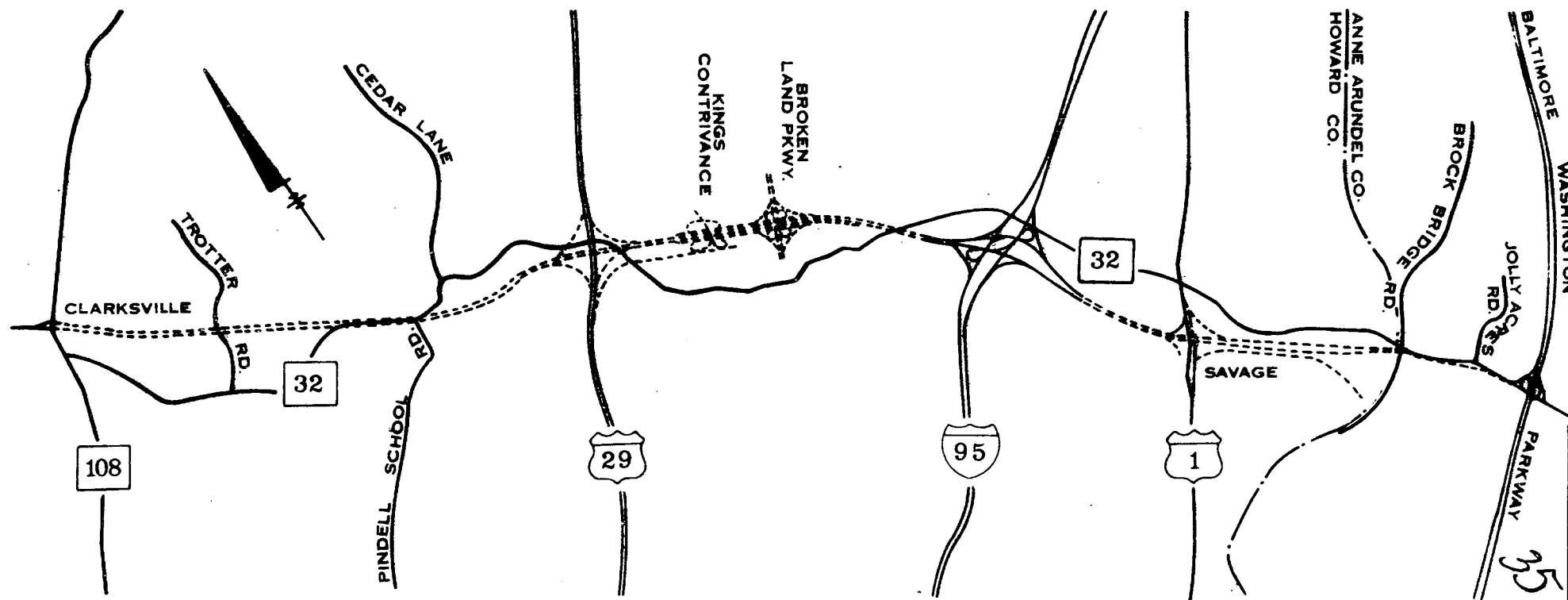
- * Collector-Distributor - one lane in each direction.
- c. I-95 to U. S. Route 1 - six lanes divided.
- d. U. S. Route 1 to west of the Anne Arundel County line.
- * Main Roadway - six lanes.
- * Annapolis Junction Road (Frontage Road) - two lanes.
- e. West of the Anne Arundel County Line to Baltimore/Washington Parkway - four lanes.

The sequenced addition to the number of lanes of the freeway would insure that a "C" level of traffic service can be maintained along the route as the traffic volumes grow. See definitions of level of service in Appendix "A".

The traffic volumes for the Construct Alternate are shown as predicted Average Daily Traffic (ADT) for the year 1980 (ETC) and 2000 (ETC + 20) on Plate 6. These volumes represent both local and through traffic, with trucks constituting seven (7%) percent of the daily volumes. The design speeds on the main roadway and the collector-distributor road will be 70 and 50 mph respectively, although current maximum speed limits are 55 mph. The average speeds during the peak hour are shown on Plate 7. These average speeds were also derived from the charts in "A Policy on Design of Urban Highways and Arterial Streets", by the American Association of State Highway and Transportation Officials. Peak hour traffic was calculated as 10 percent of ADT. The levels of service of the new roadway during peak hours are shown on Plate 8. See definitions in Appendix "A".

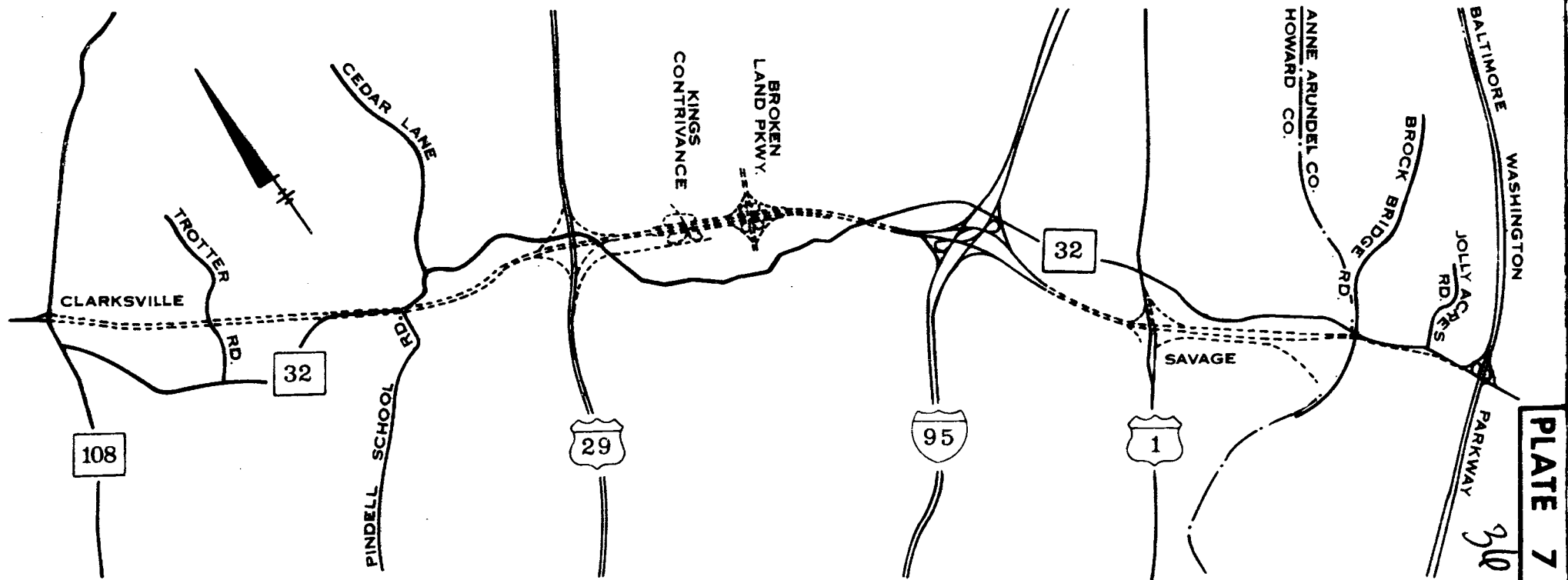
AVERAGE DAILY TRAFFIC CONSTRUCT

ETC	10,988	12,050	14,031	20,681	22,439	28,161	23,411	37,088	19,422	17,600	17,111
ETC+20	19,100	20,800	24,250	35,650	38,650	48,650	40,400	66,100	33,500	30,600	30,600



PEAK HOUR VEHICLE SPEEDS CONSTRUCT

ETC	32	31	50	41	41	41	54	54	50	50	50
ETC+20	54	54	54	54	54	54	54	54	45	45	45

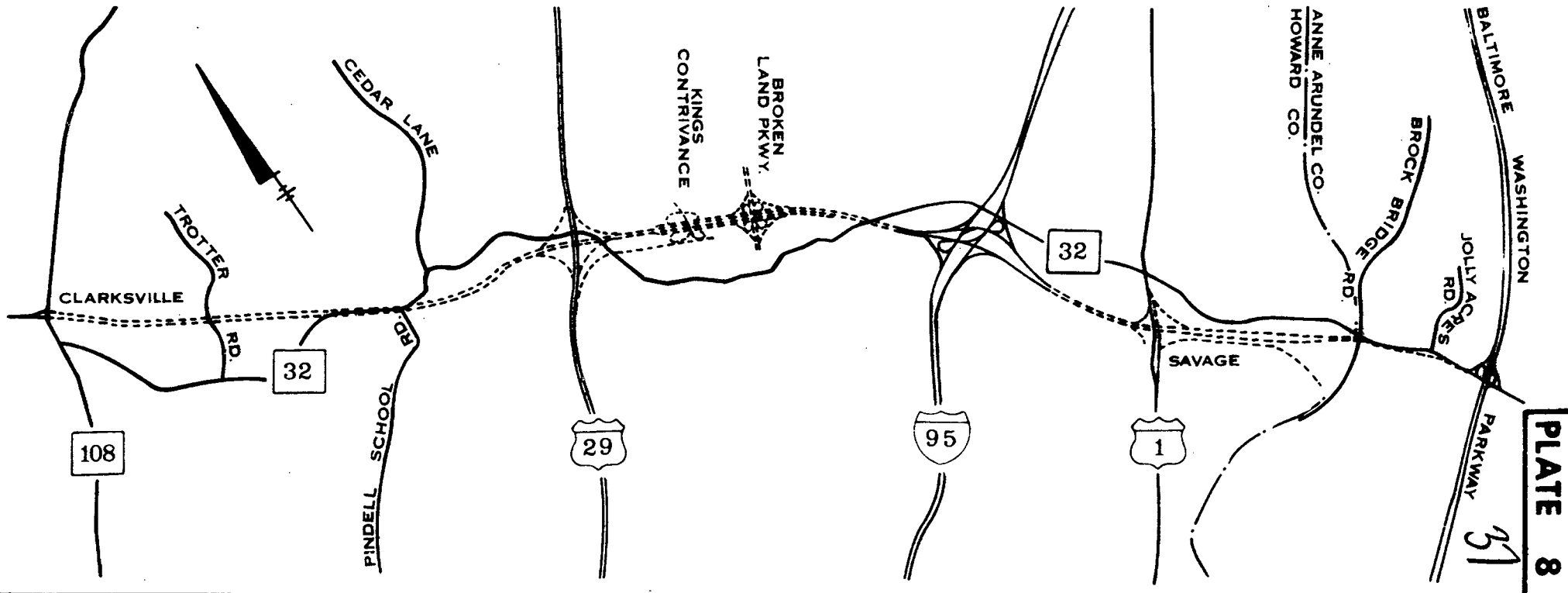


PEAK HOUR LEVEL OF SERVICE CONSTRUCT

ETC	D-E	E	C	C-D	C-D	C-D	B	B	B-C	B-C	B-C
ETC +20	A	A	A	C	A	C	B	B	C-D	C-D	C-D

FREEWAY
CONTROLLED ACCESS
ARTERIAL HIGHWAY

FOR EXPLANATION OF LEVEL OF SERVICE, SEE DEFINITION IN APPENDIX "A".



Right-of-Way and Access Control

Guilford and Annapolis Junction Roads are generally contained in a 30 foot wide right-of-way. There is no control of access to this road throughout the corridor, with numerous entrances from industrial, commercial, and residential properties evident along the roadway.

The proposed Relocated Maryland Route 32 would have a right-of-way of approximately 400 feet, plus additional right-of-way for interchange areas. The only entrances to the freeway would be at designated interchanges with major crossroads (fully-controlled access). Grade separation structures would be provided along the roadway at these interchanges, and for any other crossroads. The facility design would provide for wide, level shoulders, adequate ramps for smooth traffic mix of both exiting and entering traffic, and would avoid the placement of any obstruction in close proximity to the roadway.

Some existing local roads would be severed by the new freeway as necessary to control access. In areas where severance of these roads may deny or impair access to properties or through traffic, additional access roads would be constructed. The location and extent of these access roads is shown on Plates 9A, 9B, and 9C. The State Highway Administration would petition the counties for the closure of these roads in accordance with local laws.

Current Status of Project

Relocated Maryland Route 32 is a part of the proposed State Primary System as designated in the Maryland Department of Transportation's 1976-1980 Consolidated Transportation Program. It is an ultimate six-lane/eight-lane dual highway.

A combined corridor design public hearing was conducted on October 19, 1970 at the Savage Elementary School for the segment of the project between I-95 and the Baltimore-Washington Parkway. A combined corridor-design public hearing for that portion of the project from I-95 to just west of U. S. 29, and a corridor location public hearing for the segment from just west of U. S. 29 to Maryland Route 108 was held jointly at the Atholton High School on August 15, 1973. A more detailed discussion of these public hearings and the comments received is contained in the "Comments and Coordination" section of this report.

A Draft Environmental Impact Statement was completed and circulated on April 14, 1972. An Air Quality Analysis was circulated to the Environmental Protection Agency, and the Maryland Bureau of Air Quality and Noise Control on August 12, 1975. A technical noise report was also completed on December 10, 1975. Both of these reports are available at the State Highway Administration.

The comments resulting from the Draft Environmental Impact Statement and the air and noise technical reports are addressed in a further section of this report entitled "Comments and Coordination".

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The proposed Relocated Maryland Route 32 has been incorporated into the General Plan of Highways for Howard County 1960, which was revised in 1966 and adopted in 1971, and also in the General Development Plan for Anne Arundel County, adopted in 1968.

The notification and review process for this project required by the Federal Office of Management and Budget (Circular A-95), was initiated in July 1968.

This project first appeared in 1952 in the State Highway Administration's Twelve Year Road Construction and Reconstruction Program for 1954 through 1965. At that time it was envisioned simply as a replacement of a typical rural highway to improve the poor geometrics. However, with the advent of more sophisticated planning techniques, and the rapid growth of the Baltimore and Washington metropolitan areas, the need was recognized for an east-west facility capable of connecting the eastern and western regions of the state.

The status of the various portions of the project to be constructed are shown in Table 1. The table shows when the construction was first listed in the State's fiscal program, the present status of design work, and the date when field reviews were conducted, with preliminary construction drawings (30%).

It can be noted from Table 1 that the section of the project (Relocated Maryland Route 32 Spur) from the Anne Arundel County line to the Baltimore-Washington Parkway, was only listed in the fiscal program in 1970, whereas the other sections had been placed in the program at earlier dates. This occurred due to a decision by the Federal Highway Administration in April 1967 that Annapolis Junction Road should be improved to serve the needs of Fort

Relocated Maryland Route 32
Environmental Impact Statement

Table 1

CURRENT STATUS OF PROJECT

<u>Section</u>	<u>Fiscal Year*</u>	<u>Design**</u>	<u>Field Review***</u>
Maryland Rte. 108 to U. S. 29	1969-1970	Not Begun	--
U. S. 29 to I-95	1967-1968	Initiated 1968	January 1969 May 1969
I-95 to U. S. 1	1967-1968	Initiated 1968	March 1969
U. S. 1 to Anne Arundel County	1965-1966	Initiated 1968	March 1969
Anne Arundel County to Baltimore-Washington Parkway	1970	Initiated 1968	February 1969

* First appeared in program for construction in this fiscal year.

** Preliminary Design initiated prior to the enactment of the National Environmental Policy Act of 1969.

*** Field Review undertaken with plans 30% complete.

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Meade and the National Security Agency. Subsequently, this section was transferred to the State highway system in May, 1968, and placed in the fiscal program in 1970.

Additional local roadway development has occurred during the planning of Relocated Maryland Route 32. At the western terminus of this project near Clarksville, connection will be made to the existing single 24-foot roadway of Relocated Maryland Route 32, construction of which was completed in November 1964.

U. S. Route 29 through the proposed interchange area with Relocated Maryland Route 32 was reconstructed as a four lane, rural dual highway. This action was completed in September 1971.

Construction of Interstate Route 95 between the Baltimore Beltway (I-695) and the Washington Beltway (I-495) was completed as an eight lane expressway in July 1971. A complete interchange for Relocated Maryland Route 32 as an ultimate six-lane expressway (four lanes constructed) was included in this construction.

Currently, a study is under way by the State Highway Administration to determine the extent of the improvements that will be required on the Baltimore-Washington Parkway.

The rapid growth of the Baltimore-Washington area over the last two decades has spurred the expansion of these north-south transportation links, as well as creating a need for better access between these routes. Relocated Maryland Route 32 will provide a needed cross-link to these routes, at the same time assisting traffic movements between the Eastern Shore and the Western Maryland region.

On September 8, 1975, an administrative review session was held by the Maryland State Highway Administration to decide which alternative was to be selected for implementation in regard to the Relocated Maryland Route 32 project. At this meeting, the SHA staff members reviewed the various studies concerning this project and the comments from Federal, State, and local government agencies, as well as the general public. The decision was made to build Relocated Maryland Route 32, as described in the following section of this Statement ("Major Design Features").

Major Design Features

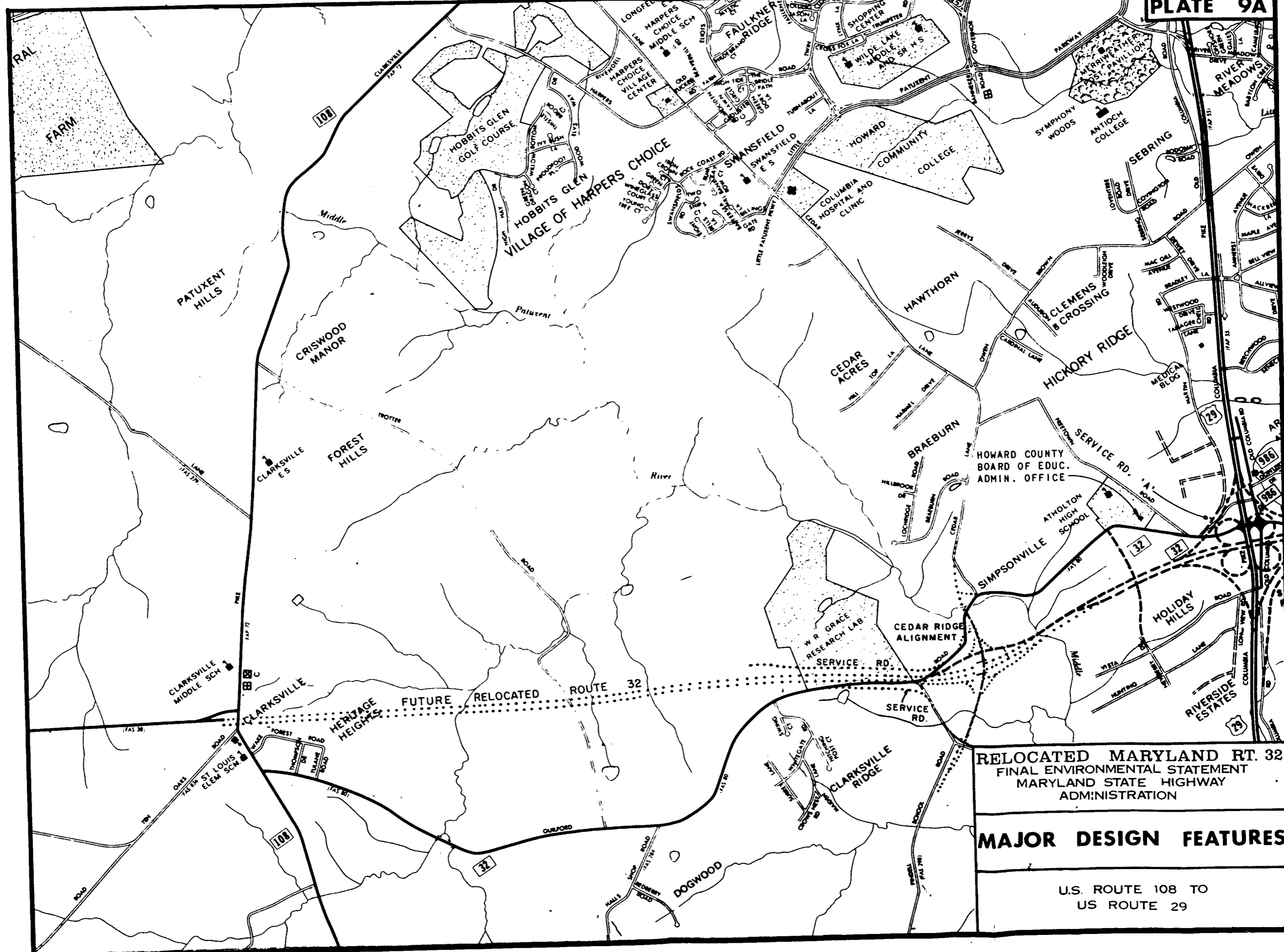
Relocated Maryland Route 32 between the limits of Maryland Route 108 and the Baltimore-Washington Parkway would be constructed in two phases. Phase I would be completed by 1980, while Phase II development would not be finished until 2000. The design features of both phases are discussed in this section. (See Plates 9A, B, and C).

The roadway profiles and typical sections are shown in Appendix "B".

Beginning at the western terminus of the project, the freeway extends in a general southeasterly direction to the Baltimore-Washington Parkway. (See Plate 9A).

An interchange with Maryland Route 108 is currently being evaluated by the State Highway Administration in conjunction with their study of the relocation of Maryland Route 108. This relocation may involve bypassing Clarksville, and a final decision has not been reached at this time concerning the type and location of an interchange at Maryland Route 108. In any case, no construction would take place in this section of roadway before 1980. All improvements programmed for the Relocated Maryland Route 32 and Maryland Route 108 interchange would occur during Phase II construction.

From Maryland Route 108 to Cedar Lane, the existing roadway characteristics (two lanes) will be maintained through 1980. In the second phase of freeway development, a four lane, dual roadway on a new alignment would be completed through this section. These improvements would consist of dual 24-foot roadways with a 112-foot median, ten foot outer shoulders, and four foot median shoulders.

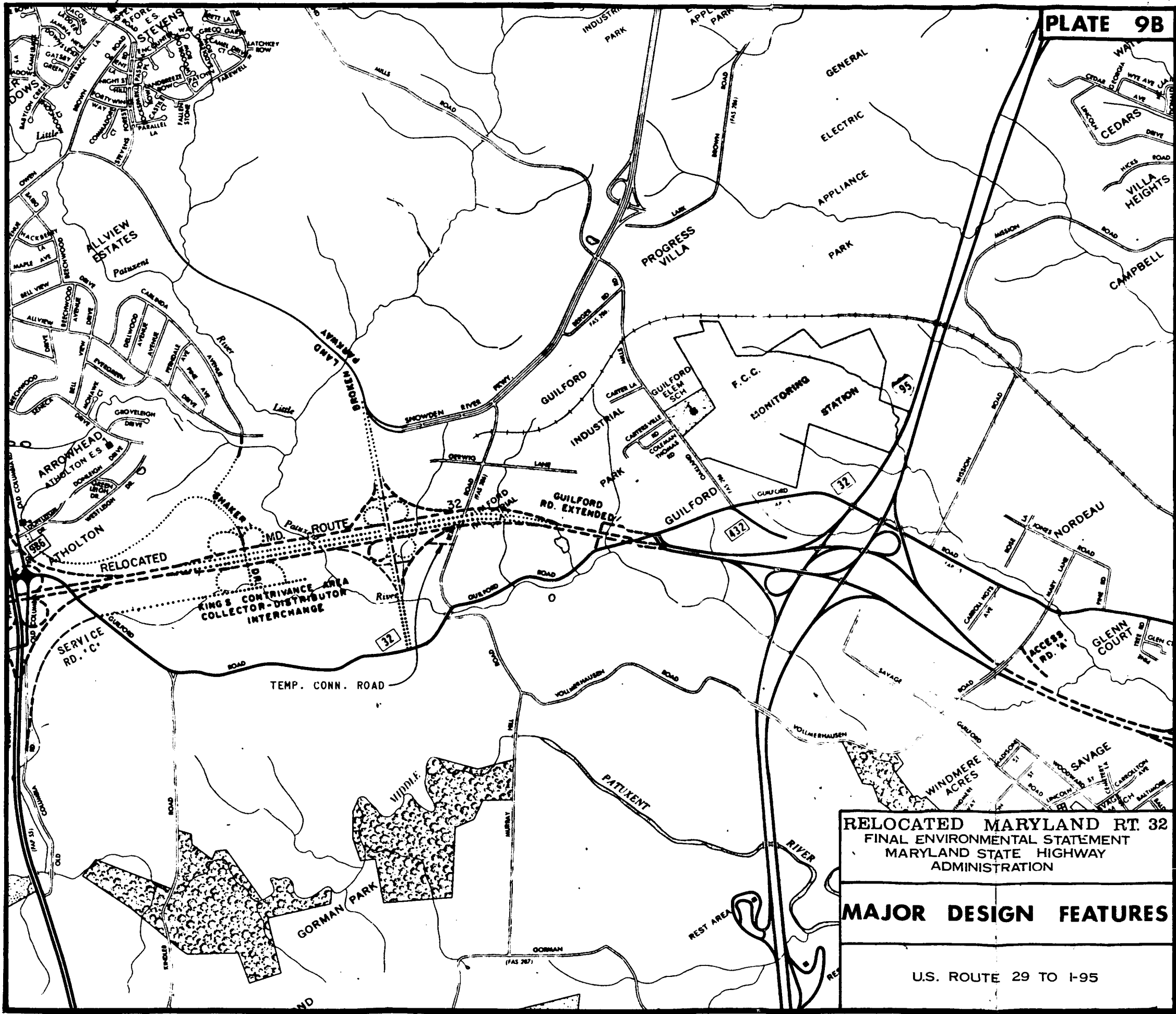


RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

MAJOR DESIGN FEATURES

U.S. ROUTE 108 TO
 US ROUTE 29

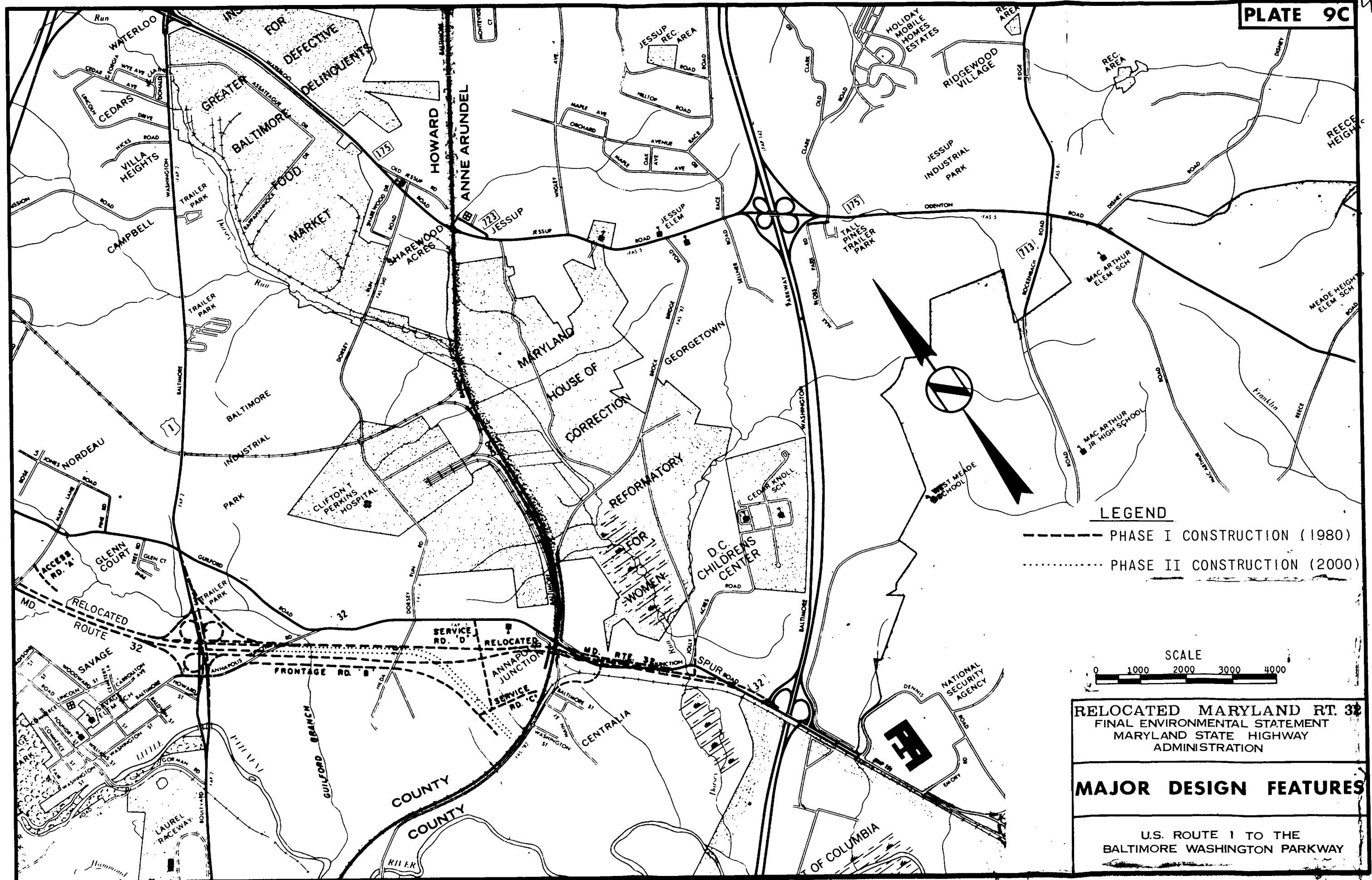
PIA



RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

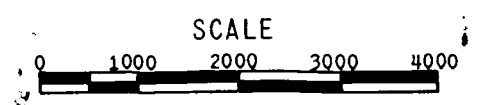
MAJOR DESIGN FEATURES

U.S. ROUTE 29 TO I-95



LEGEND

- PHASE I CONSTRUCTION (1980)
- PHASE II CONSTRUCTION (2000)



RELOCATED MARYLAND RT. 32
FINAL ENVIRONMENTAL STATEMENT
MARYLAND STATE HIGHWAY
ADMINISTRATION

MAJOR DESIGN FEATURES

U.S. ROUTE 1 TO THE
BALTIMORE WASHINGTON PARKWAY

9B

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Proposed Trotter Road Relocation and interchange is no longer being considered.

Phase I construction begins at Pindell School Road with an interim connection to the existing road. This connection would be a single 24' roadway and includes an at-grade intersection at Cedar Lane, using the northern ramps of the ultimate diamond interchange. The interim connection, on a new alignment, would be constructed as the westbound lane of Relocated Maryland Route 32 across the Middle Patuxent River. A bridge structure would cross the river, and just east of the river, the single roadway would split into dual 24-foot roadways (one eastbound and one westbound). Also, a single 24' roadway of Cedar Lane would be constructed from Sanner Road to existing Maryland Route 32. Newberry Drive, from the Holiday Hills subdivision, would be extended northward to Guilford Road to provide access to this community. It would be carried over Relocated Maryland Route 32 by a grade separation structure, consisting of two lanes.

The four lane Relocated Maryland Route 32 would proceed eastward to U. S. Route 29, where a cloverleaf interchange would be completed, consisting of four inner loops and four outer connecting ramps. Service Road "A" (two lanes) would be constructed in the northwest quadrant of the interchange, providing access from Martin Road to Guilford Road. Also, Service Road "C" (two lanes) would be completed to connect Old Columbia Pike with Guilford Road east of U. S. Route 29.

The Phase II Construction of Relocated Maryland Route 32 from Cedar Lane to U. S. Route 29 would include an additional 24-foot roadway to make the facility a four-lane dual roadway. This would involve the construction of a diamond interchange at Cedar Lane, and another bridge structure over the Middle Patuxent

River. As part of the construction of the Cedar Lane Interchange, portions of Pindell School Road and Sanner Road would be reconnected via a frontage road to existing Maryland Route 32. Also, a two-lane frontage road would be provided to allow traffic movement from the Riverhill Game Farm and W. R. Grace Company to Cedar Lane.

Phase I Construction for Relocated Maryland Route 32 proposes a total of four lanes east of U. S. Route 29 to I-95. (See Plate 9B). These lanes would be provided on the outer eastbound and westbound collector-distributor roadways. These collector-distributor roads would be 15 feet wide, having ten foot outer shoulders and four foot median shoulders. The paved shoulder areas would be utilized until Phase II is constructed to provide two traffic lanes. The collector-distributor roads would be separated from the outer lane of the ultimate eight lane Patuxent Freeway by a 54-foot buffer. Temporary at-grade access would be provided at Shaker Drive (King's Contrivance), but only the westbound lane would be accessible, since no median cross-over would be provided. Apart from the main roadway, a two lane bridge would be constructed over Beaver Run to extend Carlinda Avenue, thereby affording a southern connection to the freeway from the Allview Estates subdivision.

Bridges would be constructed to carry the eastbound and westbound collector-distributor roads over the Little Patuxent River between the King's Contrivance and the Broken Land Parkway interchanges.

The extension of Carlinda Drive and the construction of a two-lane access road from Guilford Road in the vicinity of the southeast quadrant of Relocated Maryland Route 32 and U. S. Route 29 Interchange to Shaker Drive will be performed by others.

At Broken Land Parkway, only a single structure would be built over Relocated Maryland Route 32 during Phase I Construction. Phase II Construction would ultimately be a full cloverleaf interchange, but initially only the four outer ramps and the southwest inner ramp would be constructed. A temporary connection would be made from Broken Land Parkway south of Relocated Maryland Route 32 to Berger Road.

Just west of the I-95 Interchange, Guilford Road would be relocated and routed beneath Relocated Maryland Route 32 to afford continuity for local traffic.

The freeway would tie into the existing I-95 interchange which provides full access between Relocated Maryland Route 32 and I-95, with minimal disruption of traffic flow on either road.

Phase II Construction of Relocated Maryland Route 32 between U. S. Route 29 and I-95 would be as a six lane roadway with one lane collector-distributor roads for eastbound and westbound traffic.

In Phase II, a modified cloverleaf interchange would be provided at Shaker Drive (King's Contrivance) consisting of four inner loops with no outer ramps. A grade separation structure would be constructed to carry Shaker Drive over Relocated Maryland Route 32 to make this interchange fully operational.

During Phase II Construction at Broken Land Parkway, the full cloverleaf interchange would be completed and a second bridge (parallel to the first) would be constructed to enable all four lanes of Broken Land Parkway to pass over Relocated Maryland Route 32. Broken Land Parkway, in the vicinity of Snowden River Parkway, would be extended by others, to Relocated Maryland Route 32 and Guilford Road at this time.

Relocated Maryland Route 32 from I-95 to U. S. Route 1 would be constructed as a four lane divided roadway by 1980.

East of I-95, Relocated Maryland Route 32 would pass under the recently constructed (August 1971) Vollmerhausen Road Bridge. Access Road "A" (two lanes) would be constructed north of the freeway off of Vollmerhausen Road, providing access to landlocked properties.

At U. S. Route 1, a modified cloverleaf interchange would provide access to and from the freeway. The construction of the U. S. Route 1 interchange would involve the relocation of Route 1 as a divided roadway for approximately 3,400 feet, and the use of grade separation structures to carry Relocated Maryland Route 32 over U. S. Route 1. (See Plate 9C). Approximately 700 linear feet of Baltimore Street, the main access route into the town of Savage, would be rebuilt as a result of involvement with ramp movements at the U. S. Route 1 interchange.

In Phase I, Relocated Maryland Route 32 would continue as a four lane divided roadway east of U. S. 1, terminating at the existing Annapolis Junction Road interchange with the Baltimore-Washington Parkway. There are no plans under this project to modify this interchange either initially or ultimately. Access in this area would be provided by three (3) at-grade intersections: at new service road "D", located one-quarter mile west of the county line, at Brockbridge Road, and at Jolly Acres Road, as well as the existing Baltimore-Washington Parkway interchange. The Maryland Route 32 spur would be constructed as a controlled-access arterial highway.

Frontage Road "B" (two lanes) would be constructed south of and parallel to the freeway from Annapolis Junction Road through Hilda Avenue to the Howard/Anne Arundel County Line. Service Road "C" (two lanes) would extend from this frontage road in an eastward direction to provide access to the Annapolis Junction area. Also, Service Road "D" will connect Service Road "C" and existing Maryland Route 32 in a north-south direction across Relocated Maryland Route 32 Spur.

Phase II improvements for the portion of Relocated Maryland Route 32 between I-95 and the Baltimore-Washington Parkway call for a six lane divided roadway. From U. S. Route 1 east to the Howard/Anne Arundel County Line, the two lanes added under the second phase of construction would diverge from the main roadway, with a wye interchange near Hilda Avenue, and turn to the south. These lanes would constitute Relocated Maryland Route 32, while those lanes constructed under the initial phase to the Baltimore-Washington Parkway will be designated Relocated Maryland Route 32 Spur, a controlled access arterial highway.

Guilford and Annapolis Junction Roads would be maintained throughout the study area as local service roads, with minor improvements as previously noted.

The design speeds for Relocated Maryland Route 32 and Relocated Maryland Route 32 Spur are 70 mph and 60 mph, respectively, although the current maximum speed limit in the State of Maryland is 55 mph. The maximum horizontal curvature of the roadway is three degrees, and the maximum gradient 3.8 percent.

Major waterway crossings occur near Trotter Road at the tributary of the Middle Patuxent River known as Cricket Creek, where a bridge is proposed; at the Middle Patuxent River where a bridge would be constructed, Guilford Branch approximately one-half mile

east of U. S. Route 1, where a double cell box culvert is proposed, and at Dorsey Run, where a bridge is proposed. The Middle Patuxent River and Little Patuxent River crossings would provide for the initial roadways only, thus necessitating additional construction activities when the highway is ultimately expanded. The detail considerations of location and the dimensions of these structures during the design phase would include provisions to preserve the natural integrity of streams and river, and to perpetuate free passage of aquatic life at low water flow. These structures would be designed to accommodate the 100 year storm.

Relocated Maryland Route 32 would terminate at the Howard/Anne Arundel County Line under this action. However, at a future date, the freeway would be extended eastward to connect with those portions of the roadway already constructed near Annapolis. A discussion of the extension of this roadway into Anne Arundel County is given in the section entitled "Land Use Planning".

Currently, the Baltimore-Annapolis Transportation Corridor Study, which is investigating transportation problems between the Baltimore Beltway (I-695) and the Annapolis area, is analyzing the requirements of Relocated Maryland Route 32 between Maryland Route 3 and the City of Annapolis. This study will recommend what action should be pursued in the Maryland Route 32 Corridor near Annapolis, pertaining to the size, type, and location of any improvements. It is expected that a public hearing will be held in early 1977, along with the completed Final Environmental Statement.

A summary of the project costs is shown on Table 2. These cost estimates include only those items scheduled for Phase I Construction.

Relocated Maryland Route 32
Environmental Impact Statement

Table 2

PROJECT COST (PHASE I CONSTRUCTION ONLY)*

<u>Segment</u>	<u>Identifier</u>	<u>Construction</u>	<u>Engineering and Overhead</u>	<u>Right-of-Way</u>	<u>Total</u>
Pindell School Road to Interstate Rte. 95	HO 292-034-770 F.A.P. #F-915-1-(4)	\$12,557,000	\$ 3,595,300	\$ 2,800,000	\$18,952,300
Interstate Rte. 95 to U. S. Rte. 1	HO 292-33-771 F.A.P. #F-915-1-(3)	5,760,000	1,688,800	1,100,000	8,548,800
U. S. Rte. 1 to Howard/Anne Arun- del County Line	HO 292-027-770 F.A.P. #F-915-1-(2)	7,100,000	2,081,700	2,100,000	11,281,700
Howard/Anne Arun- del County Line to Baltimore- Washington Parkway	AA 739-1-571 F.A.P. #F-915-1-(1)	2,000,000	586,000	520,000	<u>3,106,000</u>
TOTAL					<u>\$41,888,800</u>

* Taken from the 1976-1980 Maryland Department of Transportation's "Consolidated Transportation Program" and modified to reflect current construction, engineering, and right-of-way cost estimates.

Existing Deficiencies and Expected Benefits

Existing Maryland Route 32 (Guilford And Annapolis Junction Roads) from Maryland Route 108 to the Baltimore-Washington Parkway is a sub-standard highway with dangerous operating conditions caused by serious physical deficiencies at several locations. It is narrow in width (18 to 24 feet), has narrow--if any--shoulders, poor sight distances caused by sharp horizontal curves and short vertical curves, and is bordered by numerous fixed objects such as bridge parapets, poles, trees, signs, and fence posts. The right-of-way width is 30 feet over most of its length. The portion between U. S. Route 29 and Interstate Route 95 and between U. S. Route 1 and the Baltimore-Washington Parkway are particularly unsafe, and provide very few passing opportunities. Although most of the existing road has a posted speed limit of 40 mph, there are five locations within this portion that have lower posted speeds. Portions of the highway are located within the Little and Middle Patuxent River floodplains, and are often flooded. During Hurricane Agnes (June 1972), Guilford Road was under eleven feet of water in the vicinity of Berger Road. Dorsey Run also floods frequently, inundating the existing road at that crossing. Flooding has also been observed on Guilford Road at Cedar Lane, where the roadway crosses the Middle Patuxent River.

A narrow single lane bridge carries Guilford Road over the Little Patuxent River just west of Berger Road. This bridge, a bottleneck, is the scene of numerous accidents (twelve between 1970 and 1974), and will become an even more serious hazard when Hammond High School is completed in mid-1976. This new school will serve up to 1,200 students, commencing with approximately 125 to 150 daily school bus trips plus numerous other motor vehicles. A similar bottleneck exists at the Middle Patuxent River Bridge near Cedar Lane.

Records maintained by the State Highway Administration reveal that the largest number of accidents occur on the segment of existing Maryland Route 32 between U. S. Route 29 and Interstate Route 95. The majority of these accidents occur during clear weather and under dry surface conditions. As traffic becomes more congested on Guilford and Annapolis Junction Roads, many motorists may switch to parallel secondary roads, causing similar problems on these roads.

The construction of Relocated Maryland Route 32 would alleviate the problems encountered on the existing road, and the even more serious future complications if no improvements are made. This accident rate (see "Safety Benefits") would be considerably reduced, providing far safer travel through the corridor. Traffic, both commuter and commercial, would flow more smoothly and rapidly without the delays presently caused by peak hour congestion, slow moving vehicles, school bus stops, and turning vehicles. Faster fire, ambulance and police emergency service would be available to many neighborhoods within the corridor.

While U. S. Route 29, Interstate 95, U. S. Route 1, and the Baltimore-Washington Parkway all cross the area in a north-south direction, connecting Baltimore and the District of Columbia, there are no major east-west arteries through this portion of Howard County. Relocated Maryland Route 32, which would ultimately extend from Annapolis to Interstate Route 70 near Cooksville, would serve not only the southern portions of Howard County, but would also provide a connecting link between the state capital and the central and western parts of the state. It would accommodate planned growth in the project corridor, as set forth in the 1971 General Plan for Howard County. Residents of the new town of Columbia, a major population center, would have

safe and easy access to the commercial and industrial complexes planned for the U. S. Route 1 Corridor, and the National Security Agency and Fort Meade just east of the Baltimore-Washington Parkway. However, existing Route 32 would continue to serve local traffic within the corridor, without becoming overburdened by large movements of through traffic. The proposed Relocated Maryland Route 32 would help to facilitate the growth and development projected for Anne Arundel and Howard Counties.

Safety Benefits

During the years of 1971, 1972, and 1973, the study section of Guilford and Annapolis Junction Roads experienced an average accident rate of 457.12 accidents per 100 million vehicle miles of travel, with the greatest number of accidents occurring between U. S. Route 29 and Interstate Route 95. This rate exceeds the calculated statewide rate of 320.50 accidents per 100 million vehicle miles for all rural two-lane highways, with no control of access, under state maintenance.

The State Highway Administration recorded the following number of injuries and fatalities on Guilford Road and Annapolis Junction during 1973 and 1974:

	<u>1973</u>	<u>1974</u>
Fatal Accidents	2	0
Number of Fatalities	2	0
Injury Accidents	29	36
Number of Injured	36	54
Property Damage Accidents	<u>61</u>	<u>66</u>
Total Accidents	92	102

If no improvements are made to the existing roadway, an increase can be expected in the vehicular conflicts which are normally associated with congestion of highways of this type, in addition to those caused by an increased amount of traffic. This rise in the accident rate will be accompanied by a corresponding increase in motor vehicle accident costs, exceeding the present rate of \$1,887,484 per 100 million vehicle miles traveled on this portion of Guilford Road.

However, according to state-wide studies, the proposed divided highway with full access controls would experience an accident rate of not more than 139.39 accidents per 100 million vehicle miles, resulting in an accident cost to the motorist of approximately \$604,415, or a net savings of \$1,283,069 per 100 million vehicle miles. More important than the monetary savings would be the decrease in lives lost and human misery brought about by a reduction of 317.73 accidents per 100 million vehicle miles traveled.

The accident costs indicated include present worth of future earning of persons killed, losses resulting from injury, and property losses. The unit cost used in the above computations was based upon figures--updated to 1973 prices--obtained from three independent accident cost studies conducted in the District of Columbia, Illinois, and California. The full accident rate study for this project is available at the Maryland State Highway Administration Offices, 301 West Preston Street, Baltimore, Maryland, during normal business hours.

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Description of Surrounding Terrain

The topography along the Maryland Route 32 corridor grades from gently rolling plateau lands near Clarksville to the flatter Coastal Plain lands in the vicinity of the Baltimore-Washington Parkway. There are some areas of the Middle Patuxent River Valley near Guilford Road and Cedar Lane where the ground slopes exceed 15 percent.

The study area lies within two physiographic provinces, the Piedmont Plateau in the western section and the Coastal Plain in the eastern section of the highway corridor. A transition zone, known as the Fall Line, separates the higher Piedmont from the low-lying Coastal Plain. The two physiographic provinces represented in the study area have very distinguishable characteristics. The Coastal Plain, lying generally east of U. S. Route 1, is below 500 feet in elevation, is very flat in topography, and has unconsolidated sedimentary deposits overlaying the crystalline bedrock formations. The Piedmont Province is an uplifted geologic formation of metamorphic rocks that have been extensively folded and faulted, resulting in surface topography that has considerable relief.

Elevations above mean sea level range from almost 500 feet at the western edge of the study area near Clarksville, to 200-300 feet between Interstate Route 95 and U. S. Route 29 and drop down to less than 150 feet at the eastern end near Fort Meade.

The study area along the highway corridor is dissected by tributaries of the Patuxent River system. Many of these are small, intermittent streams. Drainage is generally in a southeasterly direction, flowing toward the Chesapeake Bay.

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Soils




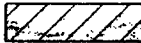



The Soil Survey, Howard County, Maryland, conducted cooperatively by the U. S. Soil Conservation Service and the Maryland Agricultural Experiment Station, has classified and mapped all the soils found in Howard County. All of these have been grouped into eight major soil associations which re-occur throughout the county. Based upon this survey, there are five soil associations that would be encountered in the proposed Patuxent Freeway Corridor. These associations, as they occur from east to west, are Glenelg-Chester-Manor, Glenelg-Manor-Chester, Neshaminy-Montalto, Beltsville-Chillum-Sassafrass and Sassafrass-Chillum-Aura. (See Plate 10). In the same manner, seven (7) major soil associations have been identified in Anne Arundel County. Two of these, the Evesboro-Rumford-Sassafras and the Muirkirk-Evesboro, are encountered in the study area.

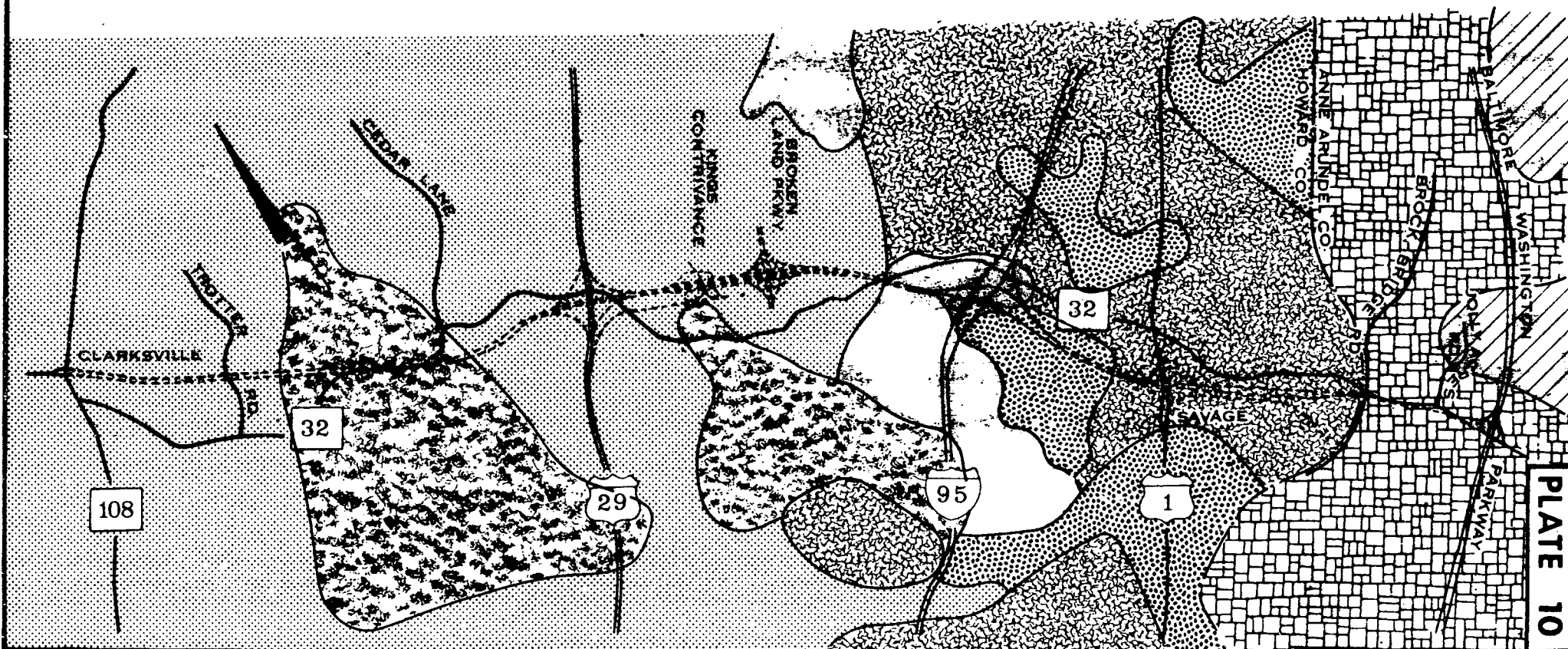
Breaking these associations down into component soil series, they are generally acceptable for highway construction. There are, however, some limitations that must be considered during the design and construction processes. Seasonally high water tables may be encountered in Chillum, Sassafrass and particularly Beltsville soils. The Beltsville, Chillum, and Sassafrass soils are Coastal Plain deposits, and the depth to bedrock is usually great but difficult to determine. Corrosion potential of concrete and untreated steel structures is moderate in all but Beltsville, Chillum, and Sassafras soils, where it is high. Both Beltsville and Chillum soils are highly susceptible to frost action, which can result in road bed damage if not compensated for in structural design.

GENERAL SOIL MAP

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL ASSOCIATIONS

- | | | | |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Beltsville-Chillum-Sassafras association: Deep, moderately well drained and well drained, gently sloping to strongly sloping soils of the Coastal Plain |  | Sassafras-Chillum-Aura association: Deep, well-drained soils that have a moderately permeable subsoil, and moderately deep, well-drained soils that have a compact subsoil or substratum |
|  | Glenelg-Chester-Manor association: Deep, well-drained, gently sloping and sloping soils |  | Evesboro-Rumford-Sassafras association: Gently sloping to moderately steep, excessively drained and well-drained, sandy and loamy soils |
|  | Glenelg-Manor-Chester association: Deep, well-drained, moderately steep and steep soils |  | Loamy and clayey land-Muirkirk-Evesboro association: Nearly level to steep, well-drained, loamy and clayey soils and excessively drained, sandy soils |
|  | Neshaminy-Montalto association: Deep, well-drained, moderately slowly permeable, gently sloping to steep soils | | |



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The most serious limitation is the moderate to high erosion potential of these soils. The probability of severe erosion is increased by the steep slopes and hilly terrain that comprise the western portion of the study area. Several agencies have expressed concern over the threat to water quality and aquatic life due to erosion and sedimentation. Particular care would have to be exercised to avoid this problem (see "Stream Modification and Water Quality").

The soils in the study area are well-suited for agriculture and residential and commercial development. Many rural areas are being subdivided for residential development and the soils are able to handle these demands as well as the attendant suburban facilities.

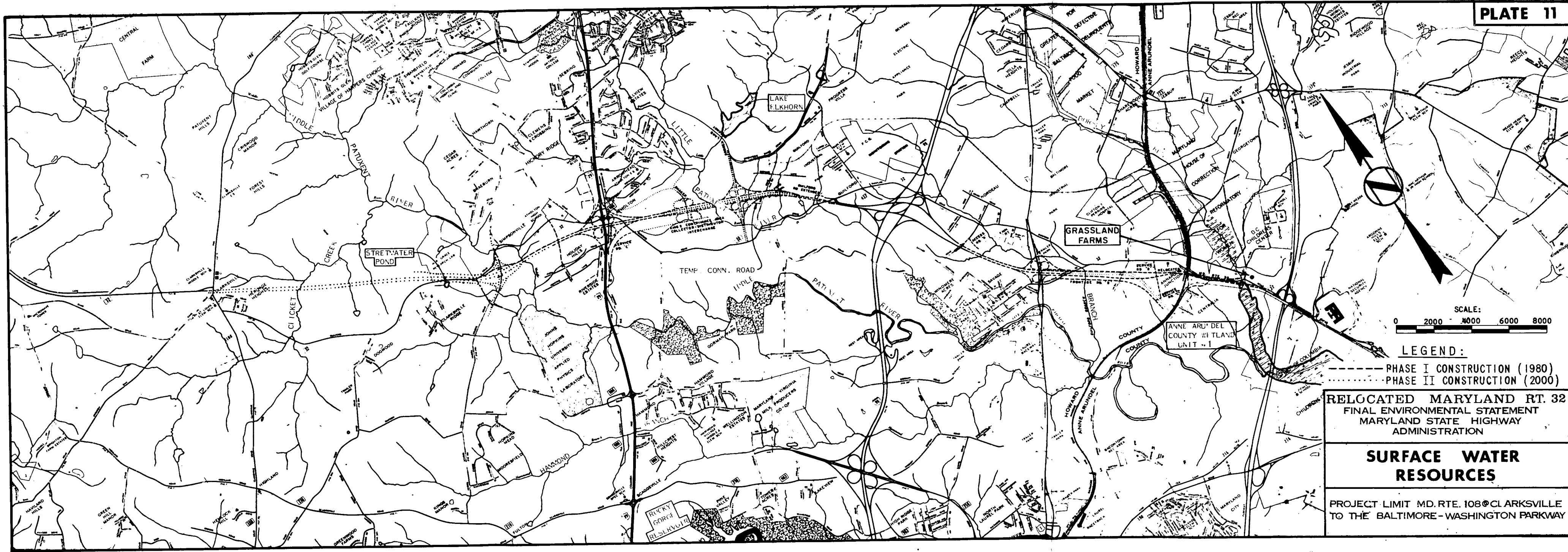
Near the Little Patuxent River and west of I-95 lie deposits of Guilford Granite which were quarried at one time. The quarries were of local economic significance and were served by a spur of the B & O Railroad. Several other granite quarries in the area of the Town of Savage have also been in operation from time to time.

Streams and Lakes

Numerous streams and their headwater tributaries criss-cross the study area, generally flowing in a southeasterly direction toward the Patuxent River and ultimately emptying into the Chesapeake Bay. Most notable are the Little and Middle Patuxent Rivers and Dorsey Run. Generally, the streams flow swiftly and are of the pool and riffle type in the Piedmont, gradually becoming flatter and slower as they flow into and through the coastal plain. (See Plate 11).

The Fisheries Administration conducted a survey on Hammond Branch, a small stream in Howard County, just south of the study area, which is representative of many of the streams in the study area. While analyses were not performed for chemical parameters, the physical parameters (temperature, flow, volume, pool/riffle ratio, etc.) were noted and an extensive study of the aquatic life was made. Based upon the physical parameters, the stream rates a Code 4 classification according to the VanDeusen System. This classification, which is "fair" in terms of habitat/production for aquatic life, was further substantiated by the biological sampling. Both sedimentation and septic leaching were evident; consequently, the stream is considered to be "severely stressed". Increased siltation would place it dangerously close to ruination.

There are many man-made ponds and lakes in and near the Route 32 corridor. They range in size from farm ponds of an acre or less in size, to Lake Kittamaqundi, Lake Elkhorn, and Wilde Lake in Columbia, to the municipal water supply reservoirs of Tridelphia and Rocky Gorge.



LEGEND:
 - - - - - PHASE I CONSTRUCTION (1980)
 PHASE II CONSTRUCTION (2000)

**RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION**

**SURFACE WATER
 RESOURCES**

PROJECT LIMIT MD. RTE. 108@CLARKSVILLE
 TO THE BALTIMORE-WASHINGTON PARKWAY

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Across Guilford Road from the W. R. Grace Company on the eastern edge of the Clarksville Ridge Subdivision is a large farm pond on the Stretmater property. As originally proposed, the highway would have infringed upon this pond. The alignment has since been shifted further to the north and would not disturb the pond.

While wetlands are uncommon in the Piedmont, they abound in the Coastal Plain. Both the Patuxent and Little Patuxent flow through extensive marshy areas after they cross into the Coastal Plain. Dorsey Run flows through the only wetlands lying within the corridor. This area covers 119 acres, and has been designated by the Water Resources Administration of the Maryland Department of Natural Resources as Anne Arundel County Wetland Unit No. 1. (See "Wetlands Impact" for a more detailed discussion of this subject).

During 1968, the Soil Conservation Service developed a plan for the Little and Middle Patuxent Rivers which would have entailed the construction of ten flood control dams at various locations in the two watersheds. Site No. 1A was on Cricket Creek, approximately 1,000 feet downstream from Guilford Road, and would have impounded a lake covering 125 acres. More recently, however, due to an unfavorable cost/benefit ratio, the proposed project at this site has been abandoned by the U. S. Soil Conservation Service.

The Little and Middle Patuxent Rivers, along with their tributaries, are the predominant water resources in the study area. The study area itself lies wholly within the Patuxent River drainage area. The Patuxent River, including the Little and Middle Patuxent Rivers, was declared a Scenic River by the the Maryland General Assembly in 1972. This Act placed the river under the

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auspices of the State, which monitors all modifications and construction in order to maintain the river in its natural state.

At present, the Little and Middle Patuxent River valleys are mainly in private ownership, and remain relatively undeveloped. These valleys have become valuable natural areas which maintain a wide variety of flora and fauna.

The use of these water resources and the stream valleys has been limited because of private ownership. In order to overcome this limitation, and in keeping with the Maryland Scenic Rivers Act of 1972, Howard County has proposed an extensive park system for the stream valleys. The objective of this park system is to preserve these natural areas in the stream valleys, while allowing public access for hiking, horseback riding, and other activities which would be compatible with this unique environment.

Vegetation

The humid, temperate climate and accommodating topography of the study area favor high growth rates for a wide variety of vegetative cover types. The study area is composed of approximately 40 percent woodland, 20 percent agricultural or open land, 25 percent residential, and the remaining 15 percent a combination of commercial, industrial, and institutional.

Most of the woodland is of the central hardwood association, composed chiefly of oak, hickory, tulip, maple, walnut, locust, and beech. In the Coastal Plain region are some nearly pure stands of Virginia pine, a specie having the reputation of growing where nothing else will grow. The forest land is divided into four general categories: old growth hardwoods, cutover woodland, poorly-drained woods, and early seral stages in abandoned areas.

The agricultural areas are composed mainly of pasture, hay fields, and grain crops, with the emphasis on cash grains due to present high prices. There are also some truck farms, orchards, and nurseries in the project area.

Recent years have seen tremendous residential and commercial growth in the area, which has changed the vegetative character of much of the land. Though some of this has been left undisturbed, with its native trees, shrubs, and grasses, most of the area has been transformed into lawns and gardens, made up of grasses, ground covers, flowers, vegetables, and a wide variety of ornamental trees and shrubs.

The coralroot orchid, which is on the protected species list, was found growing in the wooded area immediately north of Heritage Heights subdivision.

Wildlife

Birds

Due to the great variety of habitat types, the study area hosts a very diverse population of resident and migratory birds, matched by few other areas of the State. None of the habitat types are in extensive blocks, but rather in a diffuse array of woodland, brush, open grassland and tilled crops. This arrangement provides a considerable amount of "edge" effect between two or more cover types, greatly increasing its productivity as wildlife habitat. An "edge" habitat is created where two distinctly different ecosystems abut, such as a woodland and an open field. The "edge" or boundary between these ecosystems is highly desirable for wildlife habitat because it allows the wildlife to take advantage of the benefits of both ecosystems.

Records maintained at the Migratory Bird Population Station, U. S. Department of the Interior, in Laurel indicate that 167 different species of birds are known to use the Middle Patuxent River Valley. While no endangered species are known to nest within the area, several birds--rare in Maryland--such as the willow flycatcher, are known to nest here. A few of the up-land game species, most notably quail and doves, are plentiful enough to provide good hunting. Other species of game and non-game birds occur in varying degrees of abundance.

Mammals

The diverse habitat of the area provides an environment suitable to a great many mammals both large and small. Many of

these are nocturnal and therefore seldom seen. They range in size from the tiny pigmy shrew to the white-tailed deer. Most abundant are the smaller rodents such as mice and voles, while the river otter is probably the least plentiful mammal known to inhabit the area. Several small game species, such as rabbits, squirrels, raccoons, and opossums are reasonably abundant in the more rural areas and do afford some hunting opportunities. No endangered species are known to exist in the study area.

Reptiles and Amphibians

The study area maintains a moderate population of both reptiles and amphibians, including snakes, turtles, lizards, salamanders, toads, and frogs. Many of these are most frequently found in and around streams, marshes, and ponds. Copperheads and possibly timber rattlesnakes are the only poisonous snakes that could be expected to be found in the more remote areas throughout the corridor. However, neither is plentiful. No known endangered species exist in the project area.

Fish

The aquatic inventories that have been performed by the Maryland Fisheries Administration on the Little and Middle Patuxent Rivers and Hammond Branch indicate that dace, darters, shiners, and suckers are the predominant species inhabiting these streams, while lesser numbers of smallmouth bass, sunfish, and eels are also present in certain stretches. The lower reaches of the Little Patuxent probably contain a substantial carp population. The many farm ponds located within the area have been stocked--primarily with largemouth bass and bluegills. No endangered fish species are known to exist in any of the waters within the corridor.

Economic Inventory

As the population of the area has risen, much new industry has been attracted to Howard and Anne Arundel Counties, creating a balanced community of businesses, farms, industries, and residences. Particularly in recent years, this has been in accordance with the General Plans of Howard and Anne Arundel Counties. Due to the new industry, increase in overall employment throughout the area has closely paralleled the population increase. According to the Maryland Department of State Planning, employment has risen from 20,410 in 1970 to 36,930 in 1975 for Howard County, and is expected to climb to 45,540 by 1980. At the same time, employment in Anne Arundel County rose from 84,960 to 101,730, and it is anticipated that this will increase to 118,430 by 1980. The present ratio of employment to total population is approximately 30 percent, and is predicted to remain relatively constant in the corridor through 1990.

The increase in employment in Howard County over the period 1970-1980 is predicted to be 123 percent, while Anne Arundel County employment will grow by 39 percent. For a similar period, employment growth projected for the entire State of Maryland is only 24 percent. This comparison points out the rapid development that is anticipated in the Howard/Anne Arundel County area.

With the influx of a large number of professionals and other white collar workers into Columbia and nearby suburbs, the median family income has risen well above the national, State, and regional levels. The Census Bureau reported that the Baltimore Standard Metropolitan Statistical Area had a median level of \$14,700 in 1975; 14.5 percent above the national level of \$12,836. This region includes Anne Arundel, Baltimore, Carroll,

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Harford and Howard Counties, plus Baltimore City. Of these, Howard and Anne Arundel Counties had median family incomes of \$19,850 and \$16,550 respectively. These 1975 figures represent a 47.4 percent increase over the 1970 levels for Howard County, and a 44.2 percent increase for Anne Arundel County, which compare to a five year increase of 39.1 percent for the Baltimore Region, as a whole.

The property tax rate per \$100 of assessed value is \$2.51 in Anne Arundel County, and is approximately \$3.00 in Howard County, where it varies from district to district. In both counties, assessed values are 50 percent of fair market value.

Real estate values, and consequently the assessed values, have climbed sharply in recent years. This can be attributed not only to escalating land values, but also to the large amount of development that has taken place on previously undeveloped land. In 1960, the assessed value of all land and buildings in Anne Arundel County was listed as \$346,514,000; by 1970 it had more than doubled, reaching \$829,524,000. By 1975, it had again doubled, now totaling \$1,685,973,000. The increase in assessed values in Howard County has been even more dramatic, jumping from \$78,698,000 in 1960, to \$315,820,000 in 1970, and by 1975 climbing to \$811,525,000. Looking further back, Anne Arundel County land values have increased 780 percent from 1955 to 1975, while those in Howard County increased 2,064 percent over the same period of time. These figures were provided by tax assessment offices in Anne Arundel and Howard Counties.

Surrounding Neighborhoods

Lying within the fast-developing Baltimore-Washington corridor, the study area has experienced rapid growth since 1960, particularly in recent years. Large areas of agricultural land and woodlands have been developed for varying densities of residential usage. Additionally, many tracts have been developed into shopping centers and industrial parks. This transformation from an agricultural community into a suburban/urban complex is expected to continue at a rapid rate in the foreseeable future.

In order to assure an orderly pattern of growth consistent with the needs and well-being of area residents, both Howard and Anne Arundel Counties have adopted General Development Plans (see "Land Use Planning"). These concepts not only delineate ultimate land uses, consisting of a balanced mixture of residential, commercial, industrial, institutional, and open space, but also to plan the development of the necessary transportation network, utilities and public services.

The major population center in the study area is the new town of Columbia, located along U. S. Route 29 just north of Guilford Road. This new town will provide housing, shopping, employment, recreation and educational facilities for its residents. Under current projections of the Regional Planning Council, Columbia will account for approximately 20 percent of the total growth for the two counties over the next 20 years. Other key population centers within the Guilford Road/Annapolis Junction Road corridor are Savage, Laurel, and Fort George G. Meade. These will also experience population increases, but not to the same degree as Columbia. The Regional Planning Council predicts a three-fold population increase in Anne Arundel and Howard Counties from 1960 to 1990. Table 3 shows the present and projected populations for Howard and Anne Arundel Counties, as well as Columbia.

Columbia has concentrated much of the growth in Howard County within the limits of the new town, or in adjacent areas. This community has sparked a rapid growth of not only residential properties, but commercial and light industrial development as well.

In the past, most of the industry has developed in the U. S. Route 1 corridor because of access to both Baltimore and Washington via this arterial. Due to the completion of other major arterials, the development of industrial parks has begun in other areas. Most notable among these are the Oakland Mills Industrial Center, the General Electric Appliance Park, and the Guilford Industrial Park. Others are in various stages of planning and development.

The lack of a well-defined public transit system, combined with the relatively large distances between homes, jobs, schools, churches, and social functions, has necessitated a dependence on automobile transportation by local residents.

While the study area is comprised mainly of Caucasians, there are some members of minority groups within the two counties. The total ethnic composition of Howard and Anne Arundel Counties, according to the U. S. Census Bureau, includes eleven percent Blacks, a few Spanish-Americans, and a small percentage of people of Oriental extraction. The highest concentration of Blacks is in the Fort Meade area, where many are either in military service or employed by various government agencies.

Relocated Maryland Route 32
Environmental Impact Statement

Table 3

POPULATION DATA

<u>Jurisdiction</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1990</u>
Columbia	13,288	35,900	83,300	110,000
Howard County	61,911	91,000	154,500	226,200
Anne Arundel County	297,539	345,000	411,000	529,000
Baltimore Region	2,070,670	2,169,000	2,425,600	2,800,800

Reference: Baltimore Regional Planning Council Estimates.

Public Facilities and Services

Throughout the project area, there are several Protestant and Roman Catholic churches, providing a variety of religious services. In addition, St. Louis Roman Catholic Church, Clarksville, operates an elementary school. Most of the churches in the immediate vicinity of the proposed project are listed in the Air Quality Analysis as Sensitive Receptors. (See Plate D-20, Table D-21).

The project area is located in both Howard County and Anne Arundel County, and consequently is served by two county public school systems. The buses to these schools use the local highways. There are currently a number of public elementary, middle and high schools situated throughout the corridor, and a Vocational Technical Center is located near Clarksville. Other schools, including Hammond High School, are in various stages of planning and construction and will augment educational opportunities for the residents of the area. Higher educational facilities available include adult education curriculums, evening colleges and community colleges in addition to the many colleges and universities located in Baltimore, Annapolis and Washington. Antioch College, The Johns Hopkins University, Loyola College, and Howard Community College offer courses in Columbia.

Both Howard and Anne Arundel Counties provide police protection in their respective portions of the study area. Each maintains a fleet of patrol cars, and K-9 units, all of which are radio-equipped. Fire protection, rescue, and ambulance services are provided on a 24-hour basis through a network of volunteer and paid fire departments, all linked by a central alarm system.

Throughout the corridor, regular trash collection services are provided in the residential areas. For the most part, commercial establishments must make arrangements with contract haulers for their refuse removal. Presently, Howard County operates sanitary landfills at Carrs Mill and New Cut Roads.

Along with several health clinics, there are the Howard County General Hospital, North Arundel General Hospital and Anne Arundel General Hospital to serve the needs of the area residents.

Electricity is supplied throughout the project area by the Baltimore Gas and Electric Company, who also provides natural gas in a large part of the corridor. Outlying areas, however, are served with bottled gas available from local distributors. Telephone service from the Chesapeake and Potomac Telephone Company is available throughout the study area.

To comply with the Maryland State Department of Health Regulations, Water and Sewer Plans for Howard County were formulated in 1970. These were based upon projected growth in the county to the year 2000. Both a Ten-Year (Initial) Plan and a Thirty-Year (Comprehensive) Plan were developed and will be reviewed annually and modified where necessary to keep pace with the expanding population.

The Ten-Year (Initial) Plan for both public water and sewage covers most of the eastern portion of the county, extending west to the vicinity of Clarksville. The Baltimore City Bureau of Water Supply serves most of the County's eastern area, while water from the Washington Suburban Sanitary Commission is available near Laurel. Fort Meade operates its own filtration plant, drawing raw water from the Little Patuxent River. This water

system also supplies the National Security Agency and the District of Columbia Childrens Center. In 1970, half of the water used in Howard County was still drawn from individual or community wells, one-quarter was supplied by surface water sources, and the remaining one-quarter was drawn from the Baltimore and Washington systems.

In 1970, one-quarter of Howard County's sewage was treated by public systems and remainder through private disposal systems. The Patapsco drainage and the upper portion of the Little Patuxent drainage areas are handled by Baltimore City, while the Savage Treatment Plant receives sewage from the Middle Patuxent, lower Little Patuxent and a small portion of the Main Patuxent. A sewage treatment plant at Jessup treats the effluent from the Perkins Hospital, the House of Correction, and the Reformatory for Women. Fort Meade operates its own treatment facilities, which serve the post, the National Security Agency and the District of Columbia Childrens Center.

Many public utilities are located within the highway rights-of-way, particularly in the north-south arterials of U. S. 1 and U. S. 29.

There are numerous shopping facilities available to the residents of the Guilford Road/Annapolis Junction Road corridor, ranging in size from large malls and shopping centers to small stores and specialty shops. The majority of these are located in the Columbia, Ellicott City and Laurel areas, while Baltimore and Washington furnish many additional shopping opportunities.

Located near the Chesapeake Bay and midway between the ocean and the mountains, the recreational opportunities for the area resi-

dents are many and varied. Water-oriented sports such as swimming, boating and fishing are popular activities on the Bay as well as the rivers and inland lakes and reservoirs in the area. Waterfowl hunting is unsurpassed on the Bay, while upland game is plentiful throughout much of the central part of the state. The River Hill Game Farm provides fee type hunting for pheasants, quail, mallards, and chukars for a large number of people. Golfers have their choice of a number of fine public and private courses close by, including Hobbit's Glen and Allview Golf Courses in Columbia. Laurel, Bowie and Pimlico Race Tracks provide a long season of racing days for the horse race enthusiast. Both Baltimore and Washington host professional football and hockey teams, while Washington has a basketball team, and Baltimore has a baseball team. The study area is sandwiched between the Patapsco State Park and the Patuxent State Park, both of which furnish picnicking, hiking and camping areas. Planned development in these parks will ultimately expand the opportunities for other forms of family-oriented recreation.

Within the General Plan for Howard County is the Park and Open Space Plan, which will provide for a network of tot lots, neighborhood school-recreational centers, high school and middle school recreational areas, locality parks, area parks, and stream valley corridor parks. The eventual implementation of this plan will greatly increase the outdoor recreational facilities within the area.

Additional public facilities, as might be found in typical suburban areas, such as libraries, are provided by both Howard and Anne Arundel Counties.

Land Use Planning

The implementation of Relocated Maryland Route 32 is in accordance with all existing land use planning.

On a regional level, the Baltimore Regional Planning Council is the designated planning agency. The 1972 General Development Plan of the Regional Planning Council included Relocated Maryland Route 32 in the transportation needs in Howard and Anne Arundel Counties. However, it is considered of inter-regional significance in providing an efficient route between Western Maryland and the Eastern Shore region.

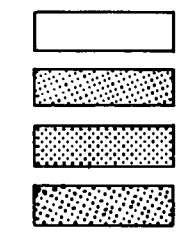
In Anne Arundel County, the concept of Relocated Maryland Route 32 has been incorporated in the County's General Development Plan. This local plan for the organized growth and development of Anne Arundel County was adopted by the County Council on April 26, 1968. Plate 12 shows the land uses expected in the western portion of Anne Arundel County, adjacent to the Patuxent Freeway, as delineated by the General Development Plan. The land uses in this area of the County are primarily associated with Fort George G. Meade and consist of heavy industrial, commercial, open space, and mixed residential.

The alignment of this section of the proposed Relocated Maryland Route 32 through Anne Arundel County is in agreement with the General Development Plan. However, the future extension of the freeway eastward to the Baltimore-Washington Parkway has caused some disagreement. The Anne Arundel County Office of Planning & Zoning has notified the State Highway Administration that they would like to have a Relocated Maryland Route 32/B-W Parkway interchange. The State Highway Administration has reviewed the

GENERAL DEVELOPMENT PLAN
ANNE ARUNDEL COUNTY

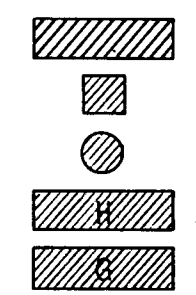
RESIDENTIAL

- RURAL DENSITY (less than 0.5 dwelling units per acre)
- LOW DENSITY (0.5 to 2 dwelling units per acre)
- MEDIUM-LOW DENSITY (2 to 4 dwelling units per acre)
- MEDIUM DENSITY (over 4 dwelling units per acre)



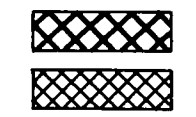
COMMERCIAL

- MAJOR REGIONAL MULTI-PURPOSE CENTERS
- COMMUNITY SHOPPING CENTERS
- NEIGHBORHOOD SHOPPING CENTERS
- HIGHWAY SERVICE AREAS
- GENERAL COMMERCIAL AREAS



INDUSTRIAL

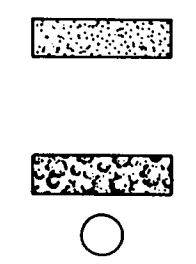
- HEAVY
- LIGHT



MILITARY AND INSTITUTIONAL

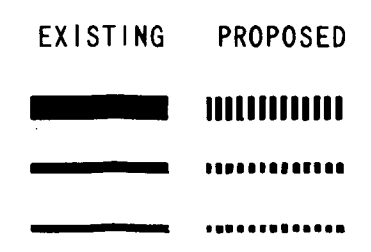
OTHER

- OPEN SPACE
- MARINE ACTIVITY CENTERS



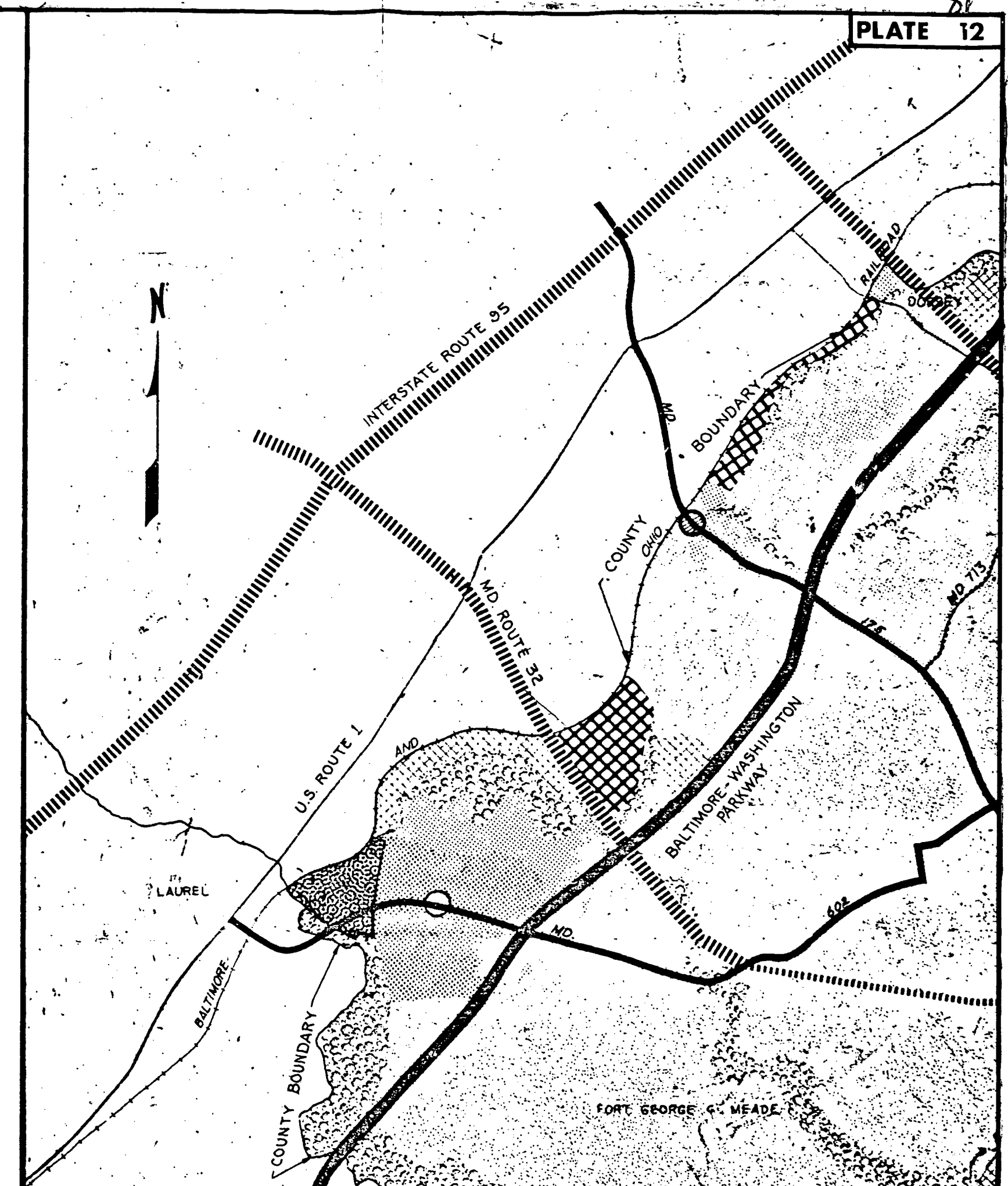
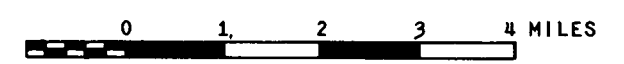
ROADS

- FREEWAYS
- EXPRESSWAYS AND MAJOR ARTERIALS
- SECONDARY ARTERIALS



NOTE: SYMBOLS DENOTE APPROXIMATE LOCATIONS

MAY, 1967



Anne Arundel County comment, in light of previous alignment and traffic studies, and concluded that a Relocated Maryland Route 32/B-W Parkway interchange would result in three interchanges (Relocated Maryland Route 32, Relocated Maryland Route 32 Spur, and Md. Rte. 198) within a linear distance of approximately 1-1/2 miles, which would cause significant traffic disruptions on the Parkway.

As a result of the comment by Anne Arundel County, the State Highway Administration is currently reappraising the proposed interchanges along the Parkway in a separate study. This study has not been completed at this date, and several alternatives are under consideration for relocating interchanges along the Baltimore-Washington Parkway.

The current plans of the State are to initially provide access to Relocated Maryland Route 32 in this area by the existing Annapolis Junction Road interchange only. However, the ultimate development of Relocated Maryland Route 32 at the Baltimore-Washington Parkway is pending the outcome of the Parkway study.

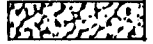






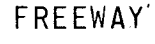
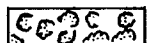

















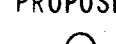


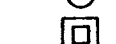









































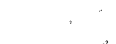














The Howard County portion of the Relocated Maryland Route 32 project has been incorporated into both the General Plan for Highways and the General Plan for Howard County, which were adopted by the County Council on December 6, 1971. The General Plan for Highways designates those roadways which are necessary to serve the needs of the County for the next 20 to 30 years. These roads are also necessary to facilitate the land uses proposed in the General Plan. The type of roadway and the location of Relocated Maryland Route 32 are in agreement with the Howard County Plan-

ning efforts. Plate 13 shows the land uses as specified in Howard County General Plan along Relocated Maryland Route 32 corridor from the County line to Clarksville.

The Howard County Office of Planning and Zoning has recently proposed a land use plan for the Guilford area; bounded by Berger Road on the west, the Baltimore and Ohio Railroad spur (Chessie System) on the north, U. S. 1 on the east, and proposed Relocated Maryland Route 32 on the south. This land use plan is still being formulated and would differ somewhat from the Howard County General Plan (1971). Basically, the new land use proposal would favor greater areas for open space, and medium and high density residential use. Smaller areas would be designated for low density and stable residential, and basic employment. The purpose of this revised land use plan is to protect the residential characteristics of the Guilford community, which is currently surrounded by a great deal of industrial development. The overall land use plan proposed for Guilford is still compatible with Relocated Maryland Route 32.

The current and proposed land uses along the freeway corridor are diversified, but generally follow a pattern of development. U. S. Route 1 was the original north-south arterial in this area, consequently many commercial and industrial land uses are located along this route. The next major road to be constructed was the Baltimore-Washington Parkway, parallel to U. S. Route 1. Additional commercial and industrial development occurred adjacent to this roadway. Similar patterns have been evidenced since I-95 was opened to traffic in 1971.

LEGEND

	CONSERVATION AREAS		EXISTING		PROPOSED		HIGHWAYS
	PROTECTION		EXISTING		PROPOSED		PRINCIPAL ARTERIAL
	RURAL CONSERVATION		EXISTING		PROPOSED		FREEWAY
	CONSERVATION RESERVE		EXISTING		PROPOSED		MULTI-LANE DIVIDED
			EXISTING		PROPOSED		MINOR ARTERIAL
			EXISTING		PROPOSED		COLLECTOR
			EXISTING		PROPOSED		INTERCHANGE
			EXISTING		PROPOSED		GRADE SEPARATION
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SCALE IN MILES
0 1 2

CLARKSVILLE COLUMBIA SAVAGE

GENERAL PLAN FOR HOWARD COUNTY
ADOPTED DECEMBER 6, 1971



P47

The Washington Branch of the Baltimore and Ohio Railroad, now part of the Chessie System, crosses the study area enroute from Washington to Baltimore. Forming the Howard/Anne Arundel County line from Laurel to the vicinity of Dorsey, this railroad line has been a major factor in the industrial development throughout the Baltimore/Washington corridor. Its spurs have long served Fort George G. Meade and Savage, which was originally a mill town. Most of the recently developed industrial parks, such as the Guilford Industrial Center, the Corridor Industrial Park, and the G. E. Appliance Center, rely heavily upon this rail service.

Concentrations of industrial, institutional, and commercial land uses have developed in the eastern section of Howard County near the proposed Relocated Maryland Route 32, and near Fort George G. Meade in Anne Arundel County. These industrial land uses create a large number of jobs and attract workers from the surrounding area. The land uses west of I-95 in Howard County, and east of Fort Meade in Anne Arundel County are predominantly residential. These are the prime areas that supply the work force to the industrial/institutional land uses. Relocated Maryland Route 32 will help to transport these workers along the east-west corridor to their jobs and homes. The present north-south arterials (U. S. 29, I-95, U. S. 1, and the B-W Parkway) provide excellent access to and from Baltimore and Washington.

Both Howard and Anne Arundel Counties have experienced rapid population growth in the last 10-20 years as a result of their locations adjacent to the metropolitan areas of Baltimore and Washington. This development was primarily residential as residents from the city looked to the suburbs for less crowded and congested life styles. However, these counties are no longer considered bedroom communities, but are developing commercial,

institutional, and industrial land uses of their own. Formerly, it was sufficient to provide primary access to the Baltimore and Washington job market. Today and in the future, intra- and intercounty travel will become more important as a full range of land uses are developed locally. Relocated Maryland Route 32 is one of the roadways that will attend to these needs.

Land development along the proposed Relocated Maryland Route 32 has been progressing during the last few years, with the construction of many industrial parks and increased residential density. If Relocated Maryland Route 32 is built as proposed, it can be expected that a more rapid development of adjacent land will be realized. Land values should increase, providing more pressure to develop the parcels of land that are currently idle or being used for less intensive uses. However, this development will be in accordance with the general development and land use plans of both Howard and Anne Arundel Counties. These jurisdictions have anticipated this development and have planned sufficient support facilities to service these land uses. Both Counties have prepared water and sewer master plans, as well as implementing parks and recreation plans.

PROBABLE IMPACT ON THE ENVIRONMENT

Natural, Ecological, and Scenic Resources Impact

Throughout most of its length, the proposed Patuxent Freeway traverses relatively undeveloped land. While much of the area is still fairly rural, this alignment purposely skirts developed areas to avoid relocating any more families or business than absolutely necessary. Consequently, with a right-of-way of approximately 400 feet, and several major interchanges, many hundreds of acres of wooded, fallow, and agricultural land would be required for the construction of this project.

While logging is not a major industry in this portion of Maryland, some timber is harvested periodically within the corridor, providing some income for woodlot owners. It is doubtful that the loss of these woodlands would have any significant effect upon the state's timber industry. From the standpoint of wildlife habitat, recreation and aesthetics, some of these wooded areas do have substantial value. Just north of Heritage Height subdivision is a tract of approximately 22 acres of woodland containing near record size hickories, very large black gums and the coralroot orchid, which is on the protected species list. If the alignment was moved to the north a much larger amount of acreage of woodland would be required. If the alignment was shifted to the south, there would be an impact on the Heritage Heights Subdivision. None of the woodlands affected are in public ownership.

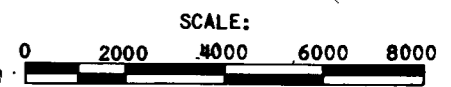
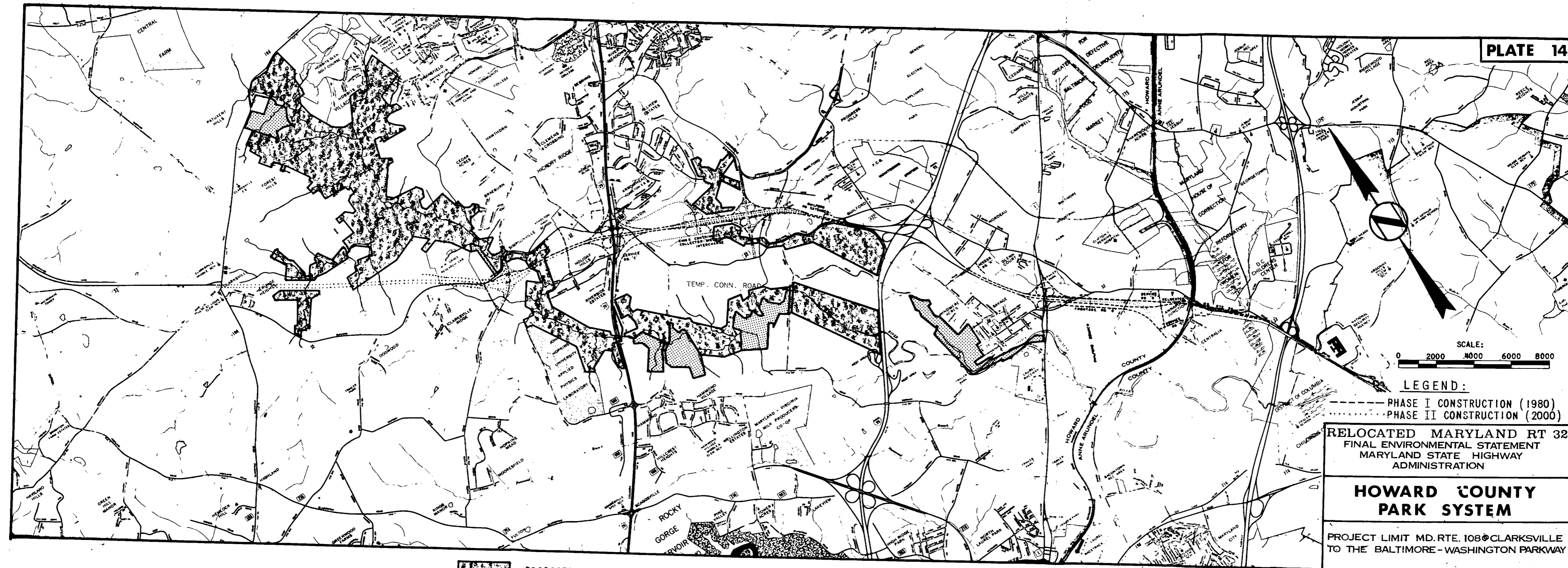
An earlier proposal entailed the relocation of Trotter Road and an interchange with Relocated Maryland Route 32. This would have destroyed a rather unique wooded area along Crickett Creek. Due to strong opposition, this proposal has been abandoned and this particular area will be unaffected by Relocated Maryland Route 32.

The Middle Patuxent River Valley has long been recognized as a unique natural area, characterized by a very wide variety of flora and fauna. Personnel from the Patuxent Research Center have for years conducted studies in this area, for it has a diversity of bird life matched by few other areas in the State. Increasing development, and particularly the beginning of the new town of Columbia, has prompted studies of the valley by concerned groups, including Antioch College and the U. S. Fish and Wildlife Service. All concur that this area should be preserved as some form of a natural area.

While the entire Middle and Little Patuxent Rivers are shown as stream valley parks in the 1971 General Plan for Howard County, only recently did the Howard County Department of Recreation and Parks formulate specific plans for acquisition of the Little and Middle Patuxent River Valleys (see Plate 14). Present plans for the park system call for land acquisition as shown on Plate 14.

Proposed Relocated Maryland Route 32 would adjoin the Middle Patuxent Environmental Area park between Trotter Road and Cedar Lane. The principal impacts would be traffic noise and the view of the highway from points within the park. Both impacts not only detract from an otherwise wilderness setting, but would also tend to reduce the usage of these areas by some more sensitive species of wildlife.

Relocated Maryland Route 32 would also cross the Little Patuxent, which is ultimately designated as park land. The section crossed would be within the flood plain management area, which is soon to be cleared of flow retarding vegetation (see "Flood Hazard Evaluation"). To be maintained in sod-forming grasses, this





LEGEND:
 - - - PHASE I CONSTRUCTION (1980)
 PHASE II CONSTRUCTION (2000)

RELOCATED MARYLAND RT 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

**HOWARD COUNTY
 PARK SYSTEM**

PROJECT LIMIT MD. RTE. 108@CLARKVILLE
 TO THE BALTIMORE - WASHINGTON PARKWAY

 PROPOSED COUNTY ACQUISITION
 COUNTY OWNED

SOURCE: HOWARD COUNTY DEPARTMENT OF RECREATION & PARKS

stream valley would not be as unique a natural area and consequently would not be as adversely affected as would the Middle Patuxent River Valley.

At the present time, the County owns only a few small parcels of the proposed park system, but have plans to acquire all the areas outlined on Plate 14 at some future date. The State Highway Administration is continuing to work with Howard County to resolve any potential conflicts that may arise between the proposed freeway and their eventual park system. (See memorandum from Howard County dated February 27, 1976 in Appendix "E".)

Another environmentally significant and highly vulnerable natural area is that portion of the Dorsey Run flood plain designated as Anne Arundel County Wetland Unit Number 1. This is discussed in greater depth in "Wetlands Impact".

The construction of the project will necessitate the acquisition of approximately 766 acres. About 616 acres of the total acreage consist of wildlife habitat. The quality of the habitat ranges from good to rather marginal. Although some of this land is designated for residential and commercial development on the 1971 General Plans and would ultimately be lost as wildlife habitat, many areas have been set aside as conservation areas. These at least would insure residual wildlife populations in the fast developing Baltimore-Washington Corridor. Given sufficient areas of suitable habitat, many sensitive species such as the whitetail deer can exist surprisingly close to suburban areas. By severing these areas with freeways and breaking them down into land units of insufficient size, many of these species can no longer be expected to exist here. The reports by Antioch College (1971) and the U.S. Department of Agriculture, Soil Conservation (1968) on the Middle Patuxent River Valley stress the importance of maintaining the integrity of this area as a balanced ecosystem.

Esthetics

The study area derives its esthetics from the natural surroundings--the rolling hills, green trees, stream valleys, farm fields, and the wildlife. This area provides a "green" respite from the surrounding urban and suburban developments. The entire Little and Middle Patuxent Rivers are classified as scenic rivers by the State of Maryland. These two stream valleys represent quality environment for a wide spectrum of vegetation and wildlife.

The construction of the roadway itself would not significantly alter the esthetics of the study area, but the secondary development of residential, commercial, and industrial land uses expected to accompany the new roadway would eliminate many of the existing natural features. A conversion of the study area from largely rural to largely suburban would occur, resulting in loss of vegetation and wildlife in favor of paved surfaces.

However, this process of suburbanization does not have to be totally devastating to the esthetics of an area, as is demonstrated by the development of the new town of Columbia. This development was well-planned, and green space and open space were programmed as part of the overall plan, resulting in an appealing blend with and adaptation to the existing environment.

In recognition of the impending development of the study area, with or without the construction of Relocated Maryland Route 32, both Anne Arundel and Howard Counties enacted county-wide development plans to ensure that the esthetic quality of the environment could be maintained. As part of the Howard County plan, the Little and Middle Patuxent River valleys will be preserved as park and recreation areas.

Wetlands Impact

The proposed project would infringe upon one wetland area, Anne Arundel County Wetland Unit Number 1. This freshwater wetlands lies along Dorsey Run from just downstream of Annapolis Junction Road to Maryland Route 198 east of the Baltimore/Washington Parkway. It encompasses a total area of 119 acres, all under private ownership (see Plate 11 in "Streams and Lakes" section of this report). Although much of the Dorsey Run floodplain between Brock Bridge Road and Annapolis Junction Road is wetland, it has not been officially designated as such by the Water Resources Administration. Wetland Unit Number 1 is classified on the Water Resources Administration's Wetland Habitat Data Inventory Sheet as "presently a wilderness" and as being highly vulnerable. The ultimate construction of Relocated Maryland Route 32 as described in "Major Design Features", for study purposes, would end at the Anne Arundel County Line, and would not intrude upon this area. While the exact alignment of the freeway from the Anne Arundel County line to Maryland Route 175 has not yet been determined, it would cross the wetland unit at some point between the Anne Arundel County line and Maryland Route 198 when this section is built.

Relocated Maryland Route 32 Spur (Phase I Construction) will cross this wetland at its northern extremity. Closely paralleling the Fort Meade Spur of the B & O Railroad, the highway would cross Dorsey Run on a bridge between Annapolis Junction Road and the railroad, where the wetland is extremely narrow. Due to the narrow width of the floodplain and the close proximity to the existing railroad embankment, crossing the wetland at this location would have much less impact than a crossing further upstream or

downstream. A minimum of fill would be required, and the bridge would offer no obstruction to the free passage of aquatic life.

The railroad spur crosses the wetland on an earthfill embankment, with masonry headwalls and a timber trestle over Dorsey Run. This structure is approximately sixteen feet wide and has an impounding effect when the stream is in the flood stage. It is responsible for some of the flooding which occurs upstream. The existing Annapolis Junction Road crosses Dorsey Run on a low bridge which is also inadequate during periods of high water. Consequently, frequent flooding of the roadway is experienced at this location. This existing structure would be replaced by a bridge on the new Frontage road.

Both the Relocated Maryland Route 32 Spur and the frontage road bridges would be designed for the 100 year storm and would have no impounding effect upon Dorsey Run. Permits would be required from both the Water Resources Administration and the U. S. Army Corps of Engineers for the crossing structures. Since this wetland is non-tidal, the Water Resources Administration requires only a Waterway Construction Permit. A Wetland Permit is unnecessary.

This tract of wetlands is of considerable value as a unique wildlife area. It provides suitable habitat for a wide variety of songbirds, game birds, small mammals, and deer. It is also used extensively by nesting wood ducks. While there are no known endangered species residing within this area, some of the species presently using the area, such as deer and wood ducks, require the seclusion now afforded. A large number of reptiles and amphibians are also found in this area.

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The vegetation is dominated by white ash, red maple, and tulip, with lesser numbers of river birch, willow, sweetgum, American Elm and pin oak as the overstory. The understory is composed of hornbeam, pawpaw, and arrowwood, while Japanese honeysuckle, poison ivy, jewelweed, joe pye weed and cattail are some of the ground cover species.

The initial construction of Relocated Maryland Route 32 Spur would require approximately 3.5 acres of this wetland. The effects upon some of the more sensitive species of wildlife would extend beyond the construction limits of the project, and the populations of these species would be reduced in the vicinity of the roadway. However, since the project would be located at the northern extremity of the wetland unit, at a narrow spot, and between an existing road and an existing railroad, the effects would not be as profound as if an alternate route across the wetland were selected.

The future extension of Relocated Maryland Route 32 across the area could have a far greater effect, since the wetland unit is considerably wider downstream, and further removed from human activity.

The planned commercial development in the upper reaches of the Dorsey Run watershed, which could be stimulated by the implementation of Relocated Maryland Route 32, could also have a significant effect upon the wetland unit. The increased runoff from large areas of impervious surfaces, both paved and under roof, will cause an increase in damaging sedimentation throughout much of this wetland/floodplain. Strict sedimentation control measures could mitigate this impact.

Stream Modification and Water Quality

After the circulation of the Draft Environmental Impact Statement some concern was voiced as to whether the proposed alignment would pre-empt the PL-566 Patuxent Watershed Project Site No. 1A. This Project has since been abandoned due to an unfavorable cost/benefit ratio, and is no longer of any concern. There are no other known impoundments planned by the Soil Conservation Service within the area, and there would be no waters impounded by the proposed Relocated Maryland Route 32. In compliance with the State Highway Administration Design Criteria, all stream crossing structures would be designed to cause no more than a one foot increase in water surface elevation of the 100 year storm.

Minor stream channel alterations are anticipated at most of the stream crossings. Since the proposed project has not progressed beyond the preliminary design stage, the exact nature of these alterations has not been determined. Generally, they consist of channel straightening in the immediate vicinity of the crossing structure, along with the placing of stone rip-rap to protect the structures from flood damage. Improvements or alterations to the stream channels would be designed to provide for a low flow channel to assure free passage for stream biota. Permits from both the Maryland Water Resources Administration and the U.S. Army Corps of Engineers are required for such actions, and are granted only after careful review of plans and specifications. The specific type of stream alteration will be determined during the design phase of the project. Normally, the damage is short-term, in the form of sedimentation and loss of some bottom dwelling organisms. The U.S. Fish and Welfare Administration will be contacted and coordinated with during the design phase of the project. If damages are minimized during construction, most streambeds will revert to normal natural conditions in time. However, staged construction, or construction of future parallel structures, would tend to disrupt this healing process.

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Initial construction of Relocated Maryland Route 32 would include a full interchange at U. S. Route 1. This would necessitate the rechannelization of approximately 1,300 feet of Guilford Branch, a small stream that presently crosses Route 1 just north of Savage. Further downstream, Guilford Branch would again cross the freeway alignment. A double cell box culvert is proposed at this location. Although it drains a fairly large area and carries a substantial amount of runoff, there are times when the flow is very low and almost non-existent. The stream channel is choked with discarded tires, shopping carts, and other debris. Consequently, it appears to be of comparatively low value as an aquatic ecosystem. Aside from construction sedimentation, which would be kept to a minimum, it is doubtful that the rechannelization of this stream would bring about any environmentally significant changes. Again, permits would be required from both the Water Resources Administration and the U. S. Army Corps of Engineers before any rechannelization could be done.

The Draft Environmental Impact Statement evoked numerous comments on the possibility of severe erosion and resultant sedimentation. Since most of the soils that would be encountered in the project area (see "Soils") have a high erodibility potential, this is a very valid concern. Most of the sedimentation would occur during the construction process--as vegetation became reestablished, the probability of erosion would decrease to natural levels. In order to avoid and/or minimize stream damage, Maryland law requires the formulation and implementation of an approved Sediment Control Plan (see "Construction Impact").

The SHA, in conjunction with the Maryland Department of Natural Resources, has developed stormwater management practices to control the volume and peaking of runoff from highways. An investigation of the applicability of these practices to Relocated Maryland Route 32 would be undertaken during the design phase of the project.

It is probable that the large areas of commercial and industrial development planned for the U.S. 1 corridor will have a greater effect than that which would be caused by Relocated Maryland Route 32.

The combined or cumulative effect of Relocated Maryland Route 32 and the attendant private development would increase stormwater runoff in the Little and Middle Patuxent River Valleys -- areas where periodic flooding is already a problem.

Many studies have been performed on the effects of road wash upon the receiving waters, but most results are inconclusive. It is accepted that storms have a flushing effect upon roadways; that oils, grease, heavy metals, asbestos particles and other road

dirt are washed from the highway and frequently end up in receiving streams. To date, no adverse impact upon local streams has been noted from I-95 and other corridor highways.

Highway maintenance in Maryland involves the application of herbicides and de-icing compounds, both of which may find their way into local streams. Herbicides are used mainly around guard rails, structures, and other hard-to-mow areas. The State Highway Administration has established very rigid standards controlling the use of herbicides. When used in compliance with these guidelines, the possibility of surface water contamination is extremely remote. However, de-icing compounds are widely used on all major roads throughout the state to implement the "bare roadway" policy of the SHA, whose purpose is to keep all state highways open and safe for travel at all times. Salt is the most commonly used, but lesser quantities of abrasives (sand or cinders) are also applied at times. Very little calcium chloride is used in Maryland. Sand and cinders seldom contribute significant loads to streams, but can clog catch basins and storm drains to some extent. Runoff from melting snow frequently carries concentrations of salt into receiving waters. Many studies on the effects of salt have been done, principally in those northern states which experience more severe winters than Maryland. There have been several recorded instances of municipal water supply contamination in suburban areas due to salt. There is evidence that sodium stimulates algal blooms. Groundwater contamination has been a problem in some areas due to the leaching of salt piles, but there have been no recorded cases in Howard or Anne Arundel Counties. The increased use of "beehive" salt storage structures may eliminate this problem entirely.

A potential source of pollution to local streams would be the accidental spill of oil, chemicals, or pesticides from tanker trucks using the highway. Although these accidents are impossible to predict and difficult to control, a system will be established to deal with these occurrences. The State of Maryland has emergency, technical personnel available to handle these problems when they are notified by the State Police. These people determine the nature of the chemicals involved, the potential danger to the environment, and the most feasible means of cleaning up the spill.

Flood Hazard Evaluation

Guilford Road is subject to frequent and severe flooding at both the Middle Patuxent River in the vicinity of Cedar Lane, and at the Little Patuxent River just west of Berger Road, while Dorsey Run frequently floods Annapolis Junction Road near Jolly Acres Road. In 1972, during tropical storm Agnes, Dorsey Run crested six feet above the road, while the Little Patuxent River inundated Guilford Road with eleven feet of water. Over the years, many lesser storms have flooded the roadway at these locations, causing much damage and making the road impassable to motor vehicles. Relocated Maryland Route 32 will cross the Middle Patuxent River on two high level bridges (one initially), but Guilford Road, which would continue to serve local traffic in this area, would still be subject to periodic inundation. Since the bridge of the Little Patuxent is several feet higher than the bed of the roadway immediately to the east, it will not be altered. In this instance, the road is flooded far more frequently and severely than the bridge itself. This is not the case at Dorsey Run. Here, the existing bridge will be replaced by a new structure on the frontage road.

All stream crossings would be in accordance with the Federal Aid Highway Program Manual, Volume 6, Chapter 7, Section 3, Subsection 2, "Hydraulic Design of Highway Encroachment on Flood Plains".

In compliance with the State Highway Administration's bridge policy, all new and/or rehabilitated hydraulic structures on the State Highway system and on county roads having the 100 year Federal Flood Insurance would be designed so as not to cause more than a one foot increase in the water surface elevation of the "100 Year Flood" for the waterway and its floodplain affected by the proposed construction. Therefore, the design storm for this

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project shall be a "100 Year Storm". All transverse pipe culverts would then be designed for the 100 year storm. The Relocated Maryland Route 32 Spur crossing of Dorsey Run, which was initially proposed as a triple-cell box culvert, would now be dual bridges to accommodate the 100 year storm. In like manner, the bridges over Crickett Creek, the Middle Patuxent River, the Little Patuxent River and Beaver Run (Carlinda Avenue) would also be designed for this 100 year storm.

The community of Allview Estates, located on the west bank of the Little Patuxent River north of Guilford Road, has been subjected to a series of floods, with damages documented as far back as 1963. Brought to a head by tropical storm Agnes, the Howard County Department of Public Works contracted with a consulting firm to investigate the feasibility of improving stormwater conveyance in the Little Patuxent River - Beaver Run Floodplain. The report recommends the implementation of a program of floodplain management based upon vegetation modification between Allview Estates and Guilford Road. It is projected that the removal of flow retarding vegetation would increase the rate of runoff and would reduce the 100 year flood crest by three feet. Hydraulic computations indicate that the downstream effects of this action would be minimal. Approximately twenty houses would no longer be subjected to substantial basement flooding during the 100 year storm. This project, Capital Project D-5-1031, Improvement of Storm Water Conveyance in the Little Patuxent River - Beaver Run Floodplain, is scheduled to begin in early 1976. Since the proposed Relocated Maryland Route 32 would cross the Little Patuxent Floodplain through this area, particular care in structure design would be exercised to avoid negating the effects of this flood control project.

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Air Quality

The impact upon air quality was addressed in the Draft Environmental Impact Statement, but due to the unavailability of sufficient data, all aspects of this problem were not adequately covered. Consequently, an Air Quality Technical Report was prepared and circulated in August, 1975. This report has been reviewed by the Federal Highway Administration, the U. S. Environmental Protection Agency, and the Maryland Bureau of Air Quality and Noise Control. The full text is available for review by interested parties at the State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21203, during normal working hours.

In assessing the impact of this project upon ambient air quality, two alternates were considered. The "Construct" alternate involves the staged construction of the proposed Relocated Maryland Route 32, while the "No Build" alternate would not alter existing Guilford or Annapolis Junction Roads. Under the "Construct" alternate, the Estimated Time of Completion (ETC) of the Phase I Construction would be 1980. The Phase II Construction of this project would not be completed until 2000 (ETC + 20).

The projected traffic volumes throughout the corridor will exceed the capacity of Guilford and Annapolis Junction Roads after 1980. Along certain sections of the existing road design capacities are presently being exceeded during periods of peak traffic. The proposed Relocated Maryland Route 32 would accommodate a far greater volume of traffic.

Stationary sources, such as homes, institutions, commercial and industrial establishments, contribute to the pollution of ambient

air. Most of these sources use relatively clean-burning fuels such as oil and gas; therefore, their contribution to air pollution problems is minor. The bulk of pollutants generated within the corridor can be attributed to motor vehicles, both private and commercial.

Some impact from air pollution will be realized during the construction of the roadway, but will be of a minor and temporary nature. For a more detailed discussion of these impacts, see "Construction Impacts".

Background levels of carbon monoxide in ambient air were derived from data collected at the Clifton T. Perkins Hospital over the period from December, 1974 through April, 1975. Using the "roll back" technique, the 1980 and 2000 levels were then calculated. The background concentrations are as follows:

	<u>1980</u>	<u>2000</u>
1 hour maximum	2.1 ppm	1.8 ppm
8 hour maximum	1.7 ppm	1.5 ppm

To predict future carbon monoxide concentrations and dispersion patterns generated by vehicles using the highway, a mathematical model commonly known as the California Line Source Model was used. This model has proven to be the most reliable under open, rural conditions such as those encountered in the project area. A sub-model known as Windros was utilized for meteorological data input.

In modeling the worst case carbon monoxide conditions for Relocated Maryland Route 32, the following variables were utilized:

1. "Worst case" traffic conditions - peak hour (10% of ADT)
2. "Worst case" meteorological data - Stability Class F, one meter per second wind speed
3. "Worst case" vehicle emission factors - 1980 (ETC), 2000 (ETC + 20)
4. "Worst case" receptors - Receptors at right-of-way line with 22.5° critical wind angle and sensitive receptors near roadway.

Receptor points for which pollutant concentrations were predicted were designated along six section lines, beginning at the right-of-way line and extending out approximately 2,500 feet from the highway. The location of these section lines are shown in Appendix "D", (Plate D-1). Sections A, B, and C, all "No Build", correspond respectively to Sections D, E, and F, which are all "Construct". Since the horizontal alignment and location of right-of-way lines for the two alternates are not necessarily the same, pairs of corresponding section lines had to be designated. The computed concentration levels include the background levels determined previously. In all cases, the highest levels will occur at the highway right-of-way line, but none will exceed 11 percent of the one-hour National Air Quality Standard of 35 ppm, or 29 percent of the eight-hour standard of 9 ppm. The pollutant concentrations would be greater under the "Construct" alternate than under the "No Build". Although the carbon monoxide emission factors are generally less for vehicles traveling at more efficient speeds on the proposed freeway, the increase in traffic volumes would negate any benefits derived.

The predicted carbon monoxide levels at the edge of the right-of-way under the worst possible meteorological conditions are shown below:

	Peak Hour		8-Hour Average	
	1980	2000	1980	2000
Section A (No Build)	2.6 ppm	2.4 ppm	1.9 ppm	1.8 ppm
Section B (No Build)	3.1 ppm	2.9 ppm	2.2 ppm	2.1 ppm
Section C (No Build)	2.8 ppm	2.6 ppm	2.0 ppm	1.9 ppm
Section D (Construct)	2.8 ppm	3.0 ppm	2.0 ppm	2.1 ppm
Section E (Construct)	3.9 ppm	3.6 ppm	2.6 ppm	2.4 ppm
Section F (Construct)	3.1 ppm	2.9 ppm	2.2 ppm	2.2 ppm

Twenty-three sensitive receptors, including schools, churches, parks, libraries, and institutions, were also computer modeled. These, depending upon their proximity to the existing and proposed highways, would be generally subjected to slightly higher levels of carbon monoxide under the "Construct" alternate. One exception would be the new Hammond High School, which would experience improved air quality, since it would be located 2,400 feet further from the proposed Relocated Maryland Route 32 than it is from existing Guilford Road. None of these sensitive receptors would be subjected to carbon monoxide concentrations exceeding nine percent of the one-hour, or 25 percent of the eight-hour National Ambient Air Quality Standards.

As a means of assessing the impact upon ambient air quality of hydrocarbons and oxides of nitrogen, and as an alternate means for measuring carbon monoxide, the total weight of each of these pollutants (CO₂, NO_x, and hydrocarbons) generated by vehicular

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traffic on the proposed highway was calculated. This Total Burden Analysis predicts the total quantity generated per day. It does not show concentration levels at any location or dispersion patterns. The results of the Total Burden Analysis are shown below:

	<u>Tons Generated Per Day</u>			
	1980		2000	
	<u>No Build</u>	<u>Construct</u>	<u>No Build</u>	<u>Construct</u>
Carbon Monoxide	1.064	2.688	1.180	3.044
Total Hydrocarbons	0.119	0.307	0.150	0.386
Nitrogen Oxides	0.402	1.279	0.463	1.193

Having reviewed the Air Quality Analysis, the U. S. Environmental Protection Agency requested an analysis of the effects of both the I-95/Relocated Maryland Route 32 and the Baltimore-Washington Parkway/Relocated Maryland Route 32 Spur interchanges upon ambient air quality, taking into consideration the cumulative effects of the volumes of traffic on both roads, and the varying speeds and emission factors on the ramps. The location of section lines through the interchanges are shown on Plate D-1. These were then modeled using the California Line Source Model, and the computed concentrations were added to the background level concentrations. Like the section lines, the highest concentrations occurred at the right-of-way lines, and decreased gradually as the distance from the interchange increased. (See Plates D-10 through D-17 in Appendix D, and Tables 4 and 5). In all instances, the carbon monoxide levels are predicted to be higher under the "Construct" alternate than under the "No Build". The greatest concentrations predicted for the peak hour would be 7.5 ppm, or 21 percent of

Table 4

Relocated Maryland Route 32-Interstate Route 95 Interchange
Peak Hour Carbon Monoxide (ppm)

Distance from Center of Inter- change (feet)	1980		2000	
	No Build	Construct	No Build	Construct
R.O.W. 1,000	6.0	7.5	6.4	7.5
1,100	5.6	7.1	6.0	7.1
1,200	5.4	6.9	5.8	6.8
1,300	5.5	6.6	5.8	6.6
1,400	5.3	6.6	5.6	6.4
1,500	5.2	6.4	5.5	6.3
2,000	4.9	5.9	5.1	5.8
2,500	4.6	5.7	4.8	5.5

Eight-Hour Average Carbon Monoxide (ppm)

Distance From Center of Inter- change (feet)	1980		2000	
	No Build	Construct	No Build	Construct
R.O.W. 1,000	3.8	4.6	4.0	4.6
1,100	3.6	4.4	3.8	4.3
1,200	3.5	4.3	3.6	4.0
1,300	3.5	4.2	3.7	4.1
1,400	3.4	4.1	3.6	4.0
1,500	3.4	4.0	3.5	3.9
2,000	3.2	3.8	3.3	3.7
2,500	3.1	3.6	3.1	3.5

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Table 5

Relocated Maryland Route 32/Baltimore-Washington Parkway Interchange
Peak Hour Carbon Monoxide (ppm)

Distance from Center of Inter- change (feet)	1980		2000	
	No Build	Construct	No Build	Construct
R.O.W. 850	4.7	5.2	3.9	5.0
900	4.6	5.2	3.8	4.9
1,000	4.5	5.1	3.8	4.8
1,100	4.4	5.0	3.7	4.8
1,200	4.4	4.9	3.7	4.7
1,300	4.4	4.9	3.6	4.6
1,400	4.4	4.8	3.6	4.6
1,500	4.3	4.8	3.6	4.5
2,000	4.1	4.6	3.4	4.3
2,500	4.0	4.4	3.3	4.1

Eight-Hour Average Carbon Monoxide (ppm)

Distance from Center of Inter- change (feet)	1980		2000	
	No Build	Construct	No Build	Construct
R.O.W. 850	3.1	3.4	2.6	3.2
900	3.1	3.4	2.6	3.2
1,000	3.0	3.3	2.6	3.1
1,100	3.0	3.3	2.5	3.1
1,200	3.0	3.2	2.5	3.1
1,300	2.9	3.2	2.5	3.0
1,400	2.9	3.2	2.5	3.0
1,500	2.9	3.1	2.5	3.0
2,000	2.8	3.0	2.4	2.9
2,500	2.7	2.9	2.3	2.8

the standard, while the highest 8-hour average would not exceed 4.6 ppm, or 51 percent of the National Ambient Air Quality Standards. The predicted CO concentrations at the right-of-way lines are shown below:

	<u>1980</u>		<u>2000</u>	
	<u>No Build</u>	<u>Construct</u>	<u>No Build</u>	<u>Construct</u>
B-W Parkway Interchange - Peak Hr.	4.7 ppm	5.2 ppm	3.9 ppm	5.0 ppm
8-Hr.	3.1 ppm	3.4 ppm	2.6 ppm	3.2 ppm
I-95 Interchange - Peak Hr.	6.0 ppm	7.5 ppm	6.4 ppm	7.5 ppm
- 8-Hr.	3.8 ppm	4.6 ppm	4.0 ppm	4.6 ppm

From July 22, 1974 to October 4, 1974, a Mobile Environmental Laboratory was used to continuously monitor ambient air quality within the study area. Five sites were monitored continually for approximately two weeks each. These sites were located along existing Guilford and Annapolis Junction Roads at their intersections with the Baltimore-Washington Parkway, U. S. Route 1, Interstate Route 95, U. S. Route 29, and Maryland Route 108. Very high ozone levels were observed to occur during the summer--the season of highest oxidant readings, when oxidant standards are violated at most air sampling stations throughout the Baltimore Metropolitan Area. Ozone concentrations ranged up to 0.17 ppm during this time, more than doubling the National Ambient Air Quality Standard of 0.08 ppm. During this same period, carbon monoxide levels rose as high as 6.9 ppm, or 19.7 percent of the one-hour standard of 35 ppm.

The Bureau of Air Quality and Noise Control, a division of the Maryland State Department of Health and Mental Hygiene, has non-continuously monitored several air quality parameters at Simpsonville in Howard County. Of greatest concern among these pollutants are suspended particulates and nitrogen dioxide. Although suspended particulates have been monitored in Maryland since the late 1950's, only during the last several years has a definite trend toward improvement been noted. While there are still areas of high particulate levels, there has been a sharp reduction in the number of sites where the State's Serious and More Adverse Standards are exceeded. The Simpsonville site recorded an annual geometric mean of 48 ug/m^3 in 1973, which is well below the State's More Adverse level of 65 ug/m^3 . The maximum recorded at Simpsonville that year was 135 ug/m^3 , 5 ug/m^3 below the More Adverse level of 140.

Nitrogen dioxide, which reacts with non-methane hydrocarbons in the presence of intense sunlight to form photochemical oxidants, had been monitored for several years using the Jacobs-Hochhuser method. Due to the recently discovered inherent inaccuracies of this system, the results were invalidated, and the state switched to the Arsenite Addition method in July 1973. Consequently, long-term data are not available to indicate specific trends. The data collected at Simpsonville for the second half of 1973 show an arithmetic mean of 29 ug/m^3 and a maximum daily average of 48 ug/m^3 . Both are considerably less than the State More Adverse level of 100 ug/m^3 .

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Consistency with Transportation Control Plan: The consistency of the proposed project with the Maryland State Implementation Plan (SIP) and the Transportation Control Plan for the Metropolitan Baltimore Intrastate Air Quality Control Region (TCP) has been reviewed in relation to three areas of possible impact upon ambient air quality: the impact of construction activities, the micro-scale carbon monoxide concentrations adjacent to the roadway, and the relationship of the project to the VMT reduction measures contained in the SIP and TCP.

The consistency of State Highway Administration projects in relation to construction activities was addressed through consultation with the Maryland Bureau of Air Quality and Noise Control. The Administration has established Specifications for Materials, Highways, Bridges, and Incidental Structures which specify procedures to be followed by contractors involved in State work. The Maryland Bureau of Air Quality and Noise Control has reviewed these Specifications and has found them consistent with the Regulations Governing the Control of Air Pollution in the State of Maryland.

The project Air Quality Analysis assessed microscale carbon monoxide impact of the facility. This analysis determined that no violation of State or Federal Ambient Air Quality Standards for carbon monoxide would occur adjacent to the existing or proposed roadway during completion and design years. As a result of that finding, this aspect of the proposed project is considered as being consistent with SIP.

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The effect of the project on regional VMT was evaluated due to the effect that emissions from the highway transportation system have on the area-wide ambient air quality. This relationship has been addressed in the SIP and TCP through VMT reduction strategies which are designed to reduce the regional concentrations of carbon monoxide and photochemical oxidants.

The consistency of the subject project with the SIP and TCP was determined through the use of the Baltimore Regional Environmental Impact Statement (BREIS). The system analyzed in BREIS has been found to be consistent, therefore, it is assumed that any link included in that system is also consistent. A review of the inputs used in the BREIS analysis indicates that a system similar to Phase I of the subject project was included in the 1995 GDP System and, as such, is included in local land-use plans which are based on the GDP.

Therefore, the subject project is considered consistent with the objectives of the Maryland State Implementation Plan.

Noise

The impact on ambient noise conditions can be a significant impact associated with the development of a freeway. For this reason, a computer modeling of these effects has been completed to determine if a significant impact on the ambient noise levels of the study area would be created by Relocated Maryland Route 32.

A detailed technical report on the noise impact of Relocated Maryland Route 32 has been performed by the Maryland State Highway Administration, and was circulated to those agencies with specific expertise in this area for comments on December 10, 1975. The results of this study are summarized in this E.I.S. However, the full text of the technical report is available for review by all interested parties at the State Highway Administration offices located at 300 West Preston Street, Baltimore, Maryland, during normal business hours.

The Federal Highway Administration has established standards concerning noise levels for specific land use categories which may be affected by highway development. These standards are shown in Table 6. If these exterior noise levels are expected to be exceeded as a result of highway construction, then a review is made to determine the feasibility of mitigating measures. If the ameliorative measures would prove unfeasible, then an exception would have to be granted by the FHWA before construction could proceed.

As a means of evaluating these guidelines, a noise level profile is presented in Table 7, which shows the range of common noise generators encountered on a daily basis.

RELOCATED MARYLAND ROUTE 32
ENVIRONMENTAL IMPACT STATEMENT

Table 6
Noise Standards

Noise Level	Land Use Category
60 dBA*	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. For example, such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
70 dBA	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
75 dBA	Developed lands, properties, or activities not included in the above categories.
Unlimited	Undeveloped lands.
55 dBA	Public meeting rooms, schools, churches, libraries, hospitals, and other such public buildings.

* See definition of dBA in Appendix "A".

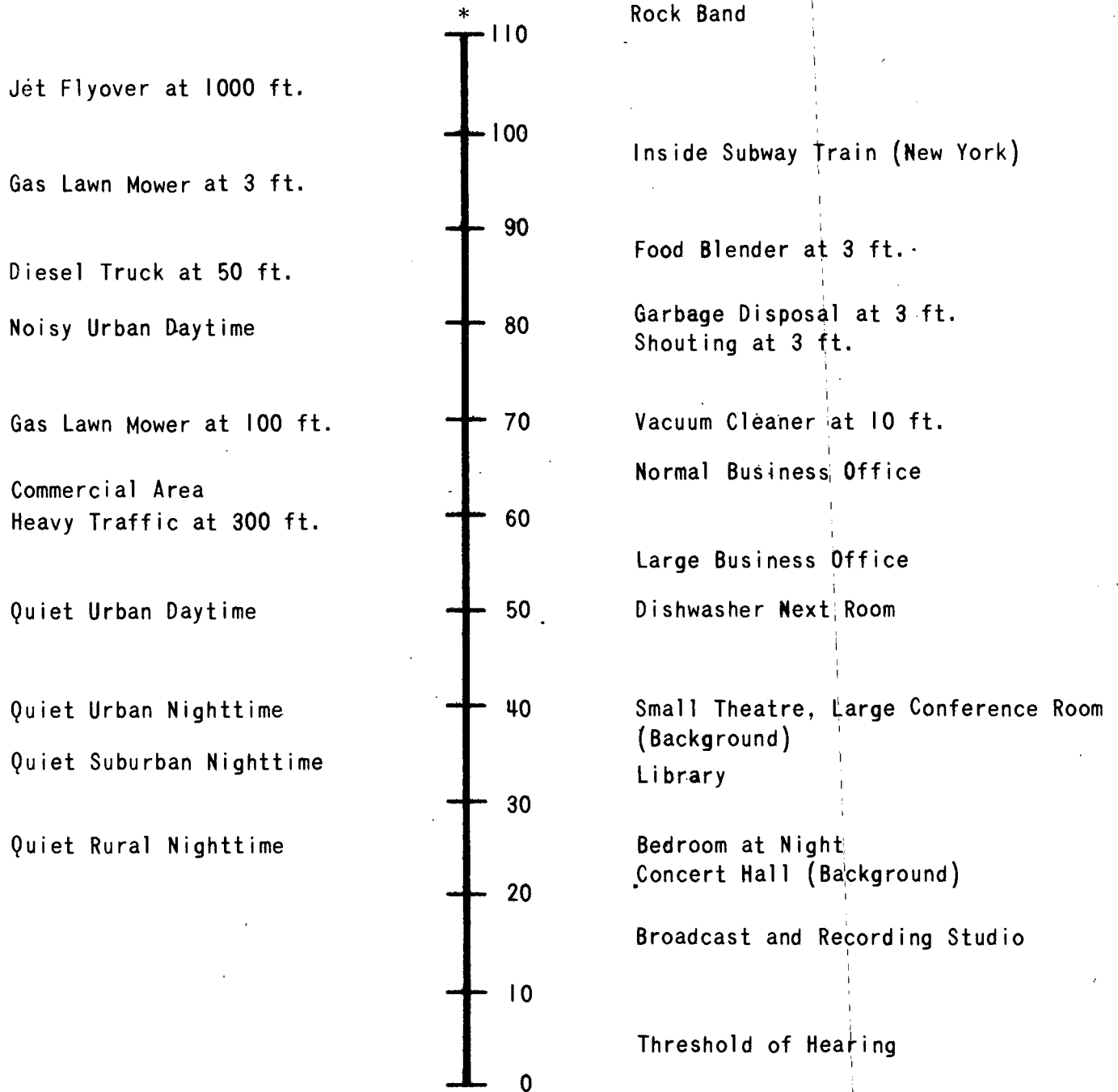
115

STATE HIGHWAY ADMINISTRATION
OF MARYLAND

COMMON OUTDOOR
NOISE LEVELS

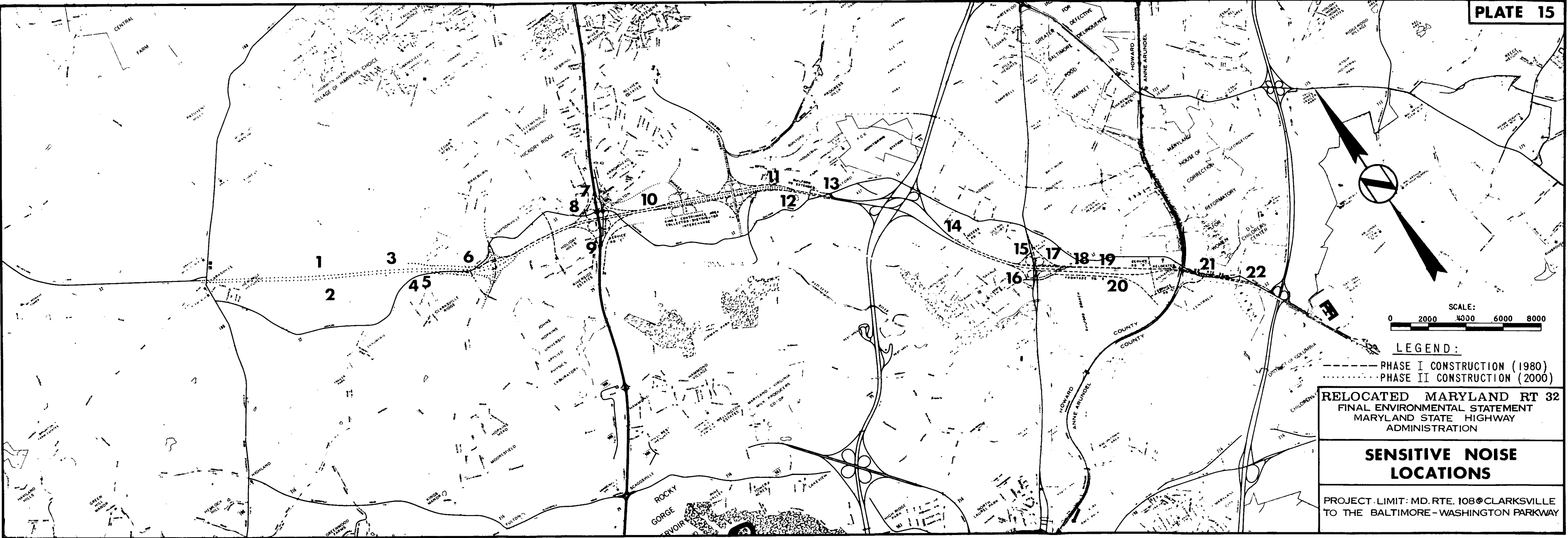
NOISE LEVEL
(dBA)

COMMON INDOOR
NOISE LEVELS



COMMON INDOOR AND OUTDOOR NOISE LEVELS.

* HEARING DISCOMFORT 100-120 dB(A)
HEARING PAIN THRESHOLD 135 dB(A)



LEGEND:
 - - - PHASE I CONSTRUCTION (1980)
 PHASE II CONSTRUCTION (2000)

**RELOCATED MARYLAND RT 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION**

**SENSITIVE NOISE
 LOCATIONS**

PROJECT LIMIT: MD. RTE. 108@CLARKSVILLE
 TO THE BALTIMORE-WASHINGTON PARKWAY

Twenty-two noise sensitive areas have been identified for this project, twenty of which are residential land uses, and two religious land uses. The following is a description of each area. (See Plate 15).

1. Single family residence on Trotter Road approximately 600 feet north of the proposed alignment. Ambient noise levels are predominantly noises associated with an isolated dwelling in a rural area, i.e., birds, rustling leaves, etc.
2. Single story residence on the west side of Trotter Road south of proposed Relocated Maryland Route 32. Ambient noise levels are comprised of noise sources consistent with those identified for Area 1.
3. Two story frame residence north of the proposed alignment approximately 4,000 feet east of Trotter Road. Ambient noise sources are similar to those described for the first two noise sensitive areas. None of these three areas experiences a significant amount of traffic generated noise.
4. Suburban residential development, Clarksville Ridge, of single family residences along Guilford Road. Ambient noise levels are influenced by traffic noise from Guilford Road.
5. Same as No. 4.
6. Single family residence along Guilford Road north of the proposed alignment. This area does not experience any degree of traffic noise.

7. Portion of the Village of Hickory Ridge within the City of Columbia, particularly the area of Halfcrown Court. Ambient levels are generally low, reflecting the lack of any degree of traffic noise.

8. The Locust United Methodist Church, located adjacent to the northwest quadrant of the proposed interchange of U. S. Route 29 and Guilford Road. Noise levels are influenced by traffic noise generated from U. S. Route 29.

9. A portion of the residential development of Holiday Hills. Ambient levels are influenced by traffic noise from U. S. Route 29.

10. The future Village of King's Contrivance, located adjacent to the northeast quadrant of proposed U. S. 29/Maryland 32 Interchange. This area is presently undeveloped.

11. A single family residence on Berger Road north of the proposed alignment. Ambient levels are influenced by traffic noise generated from Berger Road.

12. Two single family residences on the north side of Guilford Road south of the proposed alignment. These residences are set back from Guilford Road and do not experience any degree of traffic noise.

13. The Guilford United Methodist Church, located on Guilford Road. This area presently experiences traffic noise generated from Guilford Road.

- 14. Two single family residences on Carroll Heights Avenue, a dead-end street. This area does not experience any degree of traffic noise.
- 15. A single family residence located west of U. S. Route 1 south of its intersection with Guilford Road. The proposed interchange of U. S. Route 1 and Guilford Road will be located immediately south of this area. Currently, this area experiences traffic noise generated from U. S. 1.
- 16. Single family two-story frame residence on Baltimore Street in Savage. The aforementioned interchange of U. S. 1/Guilford Road would be immediately north of this area. No degree of traffic noise is presently experienced.
- 17. A two story, frame, single family residence somewhat removed from Guilford Road east of U. S. Route 1. No significant degree of traffic noise is presently experienced.
- 18. Three single family residences, located at the intersection of Annapolis Junction Road and Guilford Road. Ambient noise levels are controlled by traffic noise generated from these two highways.
- 19. A single family frame residence located on the south side of Annapolis Junction Road. Ambient levels reflect partial influence by traffic noise from this road.

- 20. A large two and one-half story residence located on Hilda Road south of the proposed alignment. Ambient noise levels reflect some influence from traffic on Hilda Road.
- 21. Two single family residences on the north side of Annapolis Junction Road. Ambient noise levels are controlled by traffic noise generated from Annapolis Junction Road.
- 22. A large two and one-half story brick and frame residence on the north side of Annapolis Junction Road. As with area 21, ambient noise levels are controlled by traffic noise generated from Annapolis Junction Road.

A measurement program was conducted to determine ambient L_{10} noise levels at each noise sensitive area. (L_{10} is defined in Appendix "A"). A tabulation of the results of the measurement program is presented in Table 8. Noise levels measured generally reflect the fact that at present the majority of the noise sensitive areas do not experience any degree of traffic noise.

This Table also shows the predicted noise levels expected when Relocated Maryland Route 32 is in operation. These predictions were made using the National Cooperative Highway Research Program Report 117, as modified in Report 144. The traffic volumes and speeds used as input to this program were similar to those utilized in the air quality modeling.

COMPARISON OF PREDICTED NOISE LEVELS WITH AMBIENT AND DESIGN GOALS (FHPM 7.7-3)

TABLE 8

NOISE SENS. AREA	LAND USE	AMBIENT L ₁₀	DESIGN YR. L ₁₀ (2001)	CHANGE IN L ₁₀	RELATION TO DESIGN GOAL	ASSESSMENT
1	Residential	49dBA	63dBA	+14	-7	Significant impact; FHWA standard not exceeded
2	Residential	49dBA	67dBA	+18	-3	Severe impact; FHWA standard not exceeded
3	Residential	42dBA	70dBA	+18	equal	Severe impact
4	Residential	64dBA	62dBA	-2	-8	Positive impact
5	Residential	64dBA	67dBA	+3	-3	Negligible impact
6	Residential	45dBA	60dBA	+15	-10	Severe impact; FHWA standard not exceeded
7	Residential	58dBA	68dBA	+10	-2	Minor impact; FHWA standard not exceeded
8	Religious	69dBA	66dBA	-3	-4	Positive impact
9	Residential	62dBA	75dBA	+13	+5	Significant impact; FHWA standard exceeded
10	Residential/ Undeveloped	54dBA	68dBA	+14	-2	Significant impact; FHWA standard not exceeded
11	Residential	61dBA	69dBA	+8	-1	Minor impact; FHWA standard not exceeded
12	Residential	45dBA	72dBA	+27	+2	Severe impact
13	Religious	65dBA	68dBA	+3	-2	Negligible impact
14	Residential	50dBA	70dBA	+20	equal	Severe impact

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COMPARISON OF PREDICTED NOISE LEVELS WITH AMBIENT AND DESIGN GOALS (FHMP 7.7-3)

TABLE 8

NOISE SENS. AREA	LAND USE	AMBIENT L ₁₀	DESIGN YR. L ₁₀ (2001)	CHANGE IN L ₁₀	RELATION TO DESIGN GOAL	ASSESSMENT
15	Residential	71dBA	78dBA	+7	+8	Minor impact; FHWA standard exceeded
16	Residential	52dBA	69dBA	+17	-1	Severe impact; FHWA standard not exceeded
17	Residential	54dBA	73dBA	+19	+3	Severe impact; FHWA standard exceeded
18	Residential	64dBA	72dBA	+8	+2	Minor impact; FHWA standard exceeded
19	Residential	59dBA	76dBA	+17	+6	Severe impact; FHWA standard exceeded
20	Residential	56dBA	69dBA	+13	-1	Significant impact
21	Residential	68dBA	67dBA	-1	-3	Positive impact
22	Residential	67dBA	67dBA	0	-3	Negligible impact

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Of the twenty residential noise sensitive areas shown in Table 8, the impacts are summarized as follows:

- 2 - Positive (reduction in ambient)
- 2 - Negligible (0 - 5 dBA increase in ambient)
- 4 - Minor (6 - 10 dBA increase in ambient)
- 4 - Significant (11 - 15 dBA increase in ambient)
- 8 - Severe (increase in ambient greater than 15 dBA)

Eleven of the noise sensitive areas consist of individual structures which are relatively isolated from other development. Three consist of two residential dwellings and one is comprised of three single family residences. Four areas are portions of residential developments. Federal Highway Administration design noise levels would be exceeded at six of the areas. The significance of this occurs when feasibility of noise control is discussed later in this report.

There are two existing churches within the limits of this project that would be subjected to noise from the new highway. Impacts at these areas would not be adverse, as can be seen from the increase in ambient levels. The Locust United Methodist Church would experience design year L_{10} noise levels below those measured in 1975. Contributions from U. S. 29 would undoubtedly increase as traffic volumes on U. S. 29 increase. The impact from Relocated Maryland Route 32 would not be adverse.

The Guilford United Methodist Church would experience design year L_{10} noise levels 3 dBA greater than ambient 1975 levels. The prime generator of noise at this area is existing Guilford Road. Completion of the new facility would reduce traffic volumes on

the existing highway; thereby reducing the noise level contribution of the existing highway. The overall impact would be negligible.

There would be no impact on any existing schools, colleges, etc. from this project.

This project would have no adverse noise impact upon any existing parkland.

It has been projected that areas presently undeveloped would be subjected to the following L₁₀ noise levels at given distances from the highway.

<u>L₁₀ Level</u>	<u>Distance from Source</u>
78 dBA	100 feet
73 - 74 dBA	200 feet
69 - 70 dBA	400 feet

These projections were made assuming flat , open topography, and as such represent the anticipated maximum levels which would occur.

Plans to incorporate noise control measures along undeveloped land include one area presently zoned residential, and for which development plans have been completed. Coordination, concerning these measures has been accomplished with the Howard County Planning and Zoning Commission. This area abuts the northwest quadrant of the proposed interchange of Relocated Maryland Route 32 and U. S. Route 29. The area is a portion of the Village of King's Contrivance within the New Town of Columbia, Maryland. Projections indicate that ambient levels would be in-

creased by 14 dBA in the design year, a significant impact. A noise barrier is feasible at this location, and would probably consist of a combined earth berm/acoustic wall. Preliminary studies indicate that a reduction of approximately 10 dBA can be achieved. Barrier parameters have not been precisely determined. This would be accomplished in addition to a detailed discussion of alternate noise control measures during further design studies.

The Federal Highway Administration has established noise level standards which have been previously presented. These represent a balancing of that which may be desirable and that which may be achievable. Where highway agencies can achieve lower levels at reasonable cost, they are urged to do so. The Maryland State Highway Administration attempts to do this by limiting increases in ambient levels through noise control measures to 8 - 10 dBA where feasible. The feasibility of this approach is governed by several factors. For example, when a noise sensitive area consists of a single structure or several structures, costs to implement noise control measures for only a few structures may be substantial, and are generally not justifiable in terms of expense, although a limited amount of control may be achieved more economically. This situation exists in fifteen of the listed areas, all of which are residential in nature. The prohibitively high cost for noise control in these cases is not considered to be in the best overall public interest; therefore, noise control will not be considered for these areas. Five of the six violations of design noise level standards occur at these areas, necessitating the granting of exceptions to design noise levels at these locations.

Of the remaining five residential noise sensitive areas which involve more than a few dwellings, two would experience negligible impact; one minor impact, one significant impact, and the fifth location is the King's Contrivance area, previously discussed. Only one of these five areas would experience noise levels above design noise level standards--Area 9. Noise control measures appear feasible at this site, and will be fully investigated during the design phase of this project.

Areas 15, 17, 18 and 19 will experience design year noise levels in excess of the design noise levels. It is necessary to pursue an exception at each of these areas. Further analysis and supportive data to substantiate this would be prepared during the design phase of the project. This would be based on the consideration that, at the least, noise control measures are not feasible due to prohibitively high cost in relation to the amount of amelioration accomplished.

Copies of this report has been and any future refinements or supplemental reports will be forwarded to the appropriate local agencies.

Estimated Displacement of Residences and Businesses

An estimated ten families, totaling twenty-six persons, both owner occupants and tenants, would be affected by this project. Of this total, four are tenant families, one of which is on welfare, and the remaining six are owner occupants. Other than the one welfare family, the households range from lower middle to middle income. The largest of these families contain six persons.

Two businesses will have to be relocated. One business, an American Oil service station, is in the process of searching for a replacement site. The parent oil company will assist the local operator with this search. The other business, a local liquor store and delicatessen will also seek a new location, and definitely intends to continue operating. No active farm operations would be adversely affected. There will be no non-profit organization affected by this project.

The State Highway Administration worksheet for the relocation of residences and businesses is included in Appendix "C".

Minority Displacement: The racial character of the effected area is mainly Caucasian. There were two minority families affected by this project, but they have been satisfactorily relocated in new housing. There are no other minorities who will be relocated by this project. The social and economic status of this minority neighborhood is basically middle class with low to moderate incomes. The highway location, which by-passes this neighborhood, will enhance the area by increasing property values. Additionally, the easy access to the highway will bring about improved community services.

Relocation Plan: The housing market in Howard County has skyrocketed over the past several years, making housing extremely expensive. Although there is ample housing of good quality, possibly two owner occupants and three tenant occupants may require "housing as a last resort". "Housing as a last resort" refers to the case where suitable replacement housing within the financial means of the tenant is not available, and the SHA is forced to use extraordinary means to acquire adequate housing, even if the cost exceeds the general guidelines applicable to relocation. In July 1975, rental properties in the area were checked through the Howard County and Anne Arundel County Multiple Lists by perusing the Baltimore Sun and Washington Post real estate sections and by actual contact with local realtors.

The two owner occupant families possibly can be relocated into satisfactory replacement housing that they can afford to purchase and maintain. This, of course, depends upon the availability of housing at the time of acquisition. In July of 1975, only one detached dwelling (not including mobile homes) was available in the \$10,000 - \$20,000 price range.

Of the three tenant families requiring "housing as a last resort", only one will require a three bedroom replacement dwelling. This family is currently on welfare and will require utmost assistance. This relocation problem is actively being pursued and this family will probably be programmed as "housing as a last resort" in the near future. This action will be taken only after every available source of replacement housing in the area is exhausted.

The other two families will require one or two bedroom dwellings. These families are not in an active acquisition stage, but when

active displacement occurs, available detached replacement dwellings appear to be outside their means. Very possibly, both families will move into affordable apartment house or townhouse type rental units. Only after all avenues of replacement housing in the area have been exhausted will "housing as a last resort" be programmed.

Due to the small number of families and businesses that would be affected by Relocated Maryland Route 32, there would be no appreciable impact upon neighborhoods into which the displaced persons are likely to move.

Of the two businesses that must relocate, both are tenant operated. By checking the Howard County Multiple List, three lease-type operations are available and three properly zoned sites are for sale. The suitability of these sites will be determined by the operators themselves.

No known federal or municipal projects are planned for Howard County that would appreciably affect the housing supply and demand. The upgrading of Maryland Route 108 is a state project that could affect the housing market in Howard County. However, this project will occur after Relocated Maryland Route 32. The Relocated Maryland Route 32 project alone would have little impact upon the local real estate market.

The lead time for this project, which affects ten families and two businesses, should be twelve to eighteen months. Consequently, there would be ample time to satisfactorily relocate all those persons involved.

Even with the possibility of several "housing as last resort" cases on this project, all dislocatees could be satisfactorily relocated. The quantity and quality of replacement housing in this area poses no real problem. All relocation would be accomplished in accordance with the requirements of the "Uniform Relocation Assistance and Land Acquisition Policies Act of 1970" (Public Law 91-646). Benefits and payments would be administered by the Office of Real Estate District 7 Office, Frederick, Maryland. All those to be relocated would be treated in a timely, orderly and humane manner.

A summary of the State Highway Administration's Relocation Assistance Program is provided in the section entitled "Probable Adverse Impacts Which Cannot be Avoided".

Social Impacts

The proposed Relocated Maryland Route 32 would parallel Guilford and Annapolis Junction Roads from the Baltimore-Washington Parkway near Fort Meade to Maryland Route 108 in Clarksville. With interchanges spaced one and a half to two and a half miles apart and a series of strategically located access roads, quick and easy access to the highway would be available from all points within the corridor. Motorists would have the option of using either the existing road or the new highway in traveling to and from points in the study area. The volume of traffic using Guilford and Annapolis Junction Roads, however, would be greatly reduced, making that road a far safer and quicker route.

Presently, all modes of public transportation in the study area flow in a north-south direction, from Washington to Baltimore. There are none that cross the area from east to west in the Guilford Road/Annapolis Junction Road corridor. The Baltimore Region Phase II Transit Study is now underway and intends to develop a number of long range alternatives featuring bus, commuter rail and rapid rail transportation for the Region. This study is based on the assumption that the 1995 Primary and Secondary State Highway System, of which Relocated Maryland Route 32 is an integral part, will be fully implemented. At this time, no public transit system is envisioned for the proposed Relocated Maryland Route 32 corridor. It is conceivable, however, that after 1995 it could be used as a bus route.

Howard County is currently undertaking a public transit study, which is to be funded by the Maryland Department of Transportation and the Urban Mass Transportation Administration. They have no plans, however, for public transit along this route.

This study will be directed by the Public Transportation Board, whose members will be appointed by the County Executive.

While Guilford and Annapolis Junction Roads are not a designated "bike route", they are used to some extent by recreational cyclists. With the present volume of traffic, the narrow roadway width and the absence of shoulders, this is a rather hazardous route for cycling. The great reduction of traffic on the existing road that would result from the construction of the freeway would make it far safer--not only for recreational cyclists--but also for those students who would cycle to and from school.

Many children are picked up and discharged at school bus stops along Guilford and Annapolis Junction Roads. This occurs during the morning rush hour, but is slightly before the evening traffic peak. The heavy traffic along this route makes it quite dangerous, not only for the children who must wait at the edge of the road, but also for the motorists who must be prepared to make sudden stops. Additionally, the frequent stops and comparatively slow speed of school buses tend to impede the smooth flow of traffic. The reduced number of vehicles using Guilford and Annapolis Junction Roads would not only make these bus stops less dangerous, but would also improve the safety of those students who walk and bicycle along and across Guilford and Annapolis Junction Roads on their way to and from school. The new Hammond High School, located on Guilford Road approximately one-half mile west of Berger Road, is scheduled for completion in mid 1976. With an estimated enrollment of 1,200 students, it will generate approximately 125 to 150 school bus trips daily, all of which must use at least a portion of Guilford Road.

Since motorists would have the option of using either the old road or the new freeway, or a combination of both, access to churches, hospitals and libraries would in no instance be impaired. Access could only be improved. For the same reasons, fire, police, ambulance and garbage collection services would be improved, making them not only quicker and more efficient, but less costly to the taxpayers.

The diamond interchange which was once planned at Maryland Route 108, and which could have restricted turning movement at the Clarksville Fire Department and hindered egress in a southerly direction, is being reconsidered. A consultant is presently studying the feasibility of upgrading Route 108, with the possibility of a Clarksville by-pass. The ultimate location of the Relocated Maryland Route 32/Maryland Route 108 interchange will be dependent upon the recommendations of this study.

With Columbia, the U. S. Route 1 Corridor, W. R. Grace Company, Johns Hopkins Applied Physics Laboratory, and the Fort Meade/National Security Agency complex as the major employment centers in the area, Relocated Maryland Route 32 would be heavily used by persons traveling to and from their jobs. These trips would be quicker, safer, far less aggravating, and more economical due to the greater fuel efficiency of sustained optimum speeds.

Since most of the major shopping areas are outside the immediate highway corridor, the proposed freeway would expand shopping opportunities for many people. Area merchants and other businesses would benefit by this improved mobility of customers, and service and repair businesses could broaden their area.

Those desiring to shop and do business in either Baltimore or Washington would have better access to the major highways connecting these two cities.

Both Savage and Gorman Parks would become more accessible to persons both inside and outside the study area, making these recreational facilities available to greater numbers of people. Construction of Marriott's "Great America", a proposed Disneyland-type park covering approximately 850 acres just west of the Interstate 95 interchange, was rejected due to the refusal of Howard County to grant rezoning; consequently, it is of no consideration. The new Atholton School Recreation Center, a Department of Interior Land and Water Conservation Fund project, is a neighborhood-type park located approximately one-half mile from the proposed freeway, and would not be affected either way by the project. The Middle Patuxent Environmental Area, for which some properties have already been acquired, will be situated between Guilford Road, Route 108, and Cedar Lane. It would bound on the right-of-way line of Relocated Maryland Route 32 at several points. While access to the park would be improved for those coming from outside the immediate area, it could also be impaired for residents of the Clarksville Ridge and Dogwood communities who might otherwise have direct access via paths or trails. This would be a minor inconvenience, because they can still gain access to the park system by using the local road system.

The proposed Relocated Maryland Route 32 would be relocated and constructed on an entirely new alignment. Therefore, disruption of utility services would be minimal and would only occur where main lines cross the road. There would be occasional traffic delays along Guilford and Annapolis Junction Roads during construc-

tion, and in some instances, traffic would be detoured. This would occur in the vicinity of the proposed interchanges and would only be a temporary inconvenience.

No significant impact is expected on any racial, ethnic, or religious groups; or to the elderly or handicapped.

Impact on Properties and Sites of Historic and Cultural Significance

The State Historic Preservation Officer at the Maryland Historical Trust was contacted to make a review of the Relocated Maryland Route 32 project to determine the impact on historical properties, if any. On May 6, 1975, a letter from the Maryland Historical Trust was received by the State Highway Administration delineating the historical sites in the area and the expected impact. The text of the letter has been included in Appendix "E" and identifies the following sites in the area:

- 37 - Athol; eighteenth century, one and one-half story stone house of four bays
- 39 - Iris House or Worthington's Quarters; 1710, two story house
- 40 - Moudland; c. 1848, built of local stone
- 41 - Joshua Barney House; c. 1750
- 90 - King's Contrivance; two and one-half story brick eighteenth century
- 157 - Alabama Farm; two story house
- 158 - River Hill; two story stone
- 161 - Due House; two story stone
- 163 - Tierney Gambrel Roof House (Site); burned
- 164 - White Wine and Claret (Welling's Stone House); two and one-half stories
- 165 - Vogel House; two story stone farmhouse much enlarged in early part of twentieth century by concrete block simulating stone
- 267 - Wildwood; clapboard house with log part underneath in one section, well preserved log smokehouse south of the house

The numbers above are identifier numbers for the Maryland Historical inventory in Howard and Anne Arundel Counties. (See Plate 16).

The conclusion of the Historical Trust at that time was that only one of these sites would be affected - the Vogel House (#165). This house would have to be demolished or moved because it was within the right-of-way of the freeway. After reviewing the matter with the Howard County historical representatives, the Historical Trust decided that there was no objection on historical grounds for taking the house for highway purposes. The reason for this decision was an extensive addition to the original portion of the house which considerably diminished the overall historic value of the house.

A field review of the project in relation to historical sites was made on September 15, 1975 with representatives from the Maryland Historical Trust, Howard County Historical Trust, and the Federal Highway Administration. After visiting the Vogel House site, it was the consensus of the State and local historical representatives that the loss of this house would not be a significant impact to the historical inventory.

Again on November 24, 1975, the Maryland Historical Trust wrote to the State Highway Administration to reaffirm their previous statements in regard to the Vogel House. The text of this letter is also included in the Appendix. They conducted another survey of the property and determined that the house was not eligible for the National Register of Historic Places. In their opinion the demolition of the house for highway purposes would not entail a "significant" historical loss to national, State, or local historical resources. The Historical Trust did, however, specify

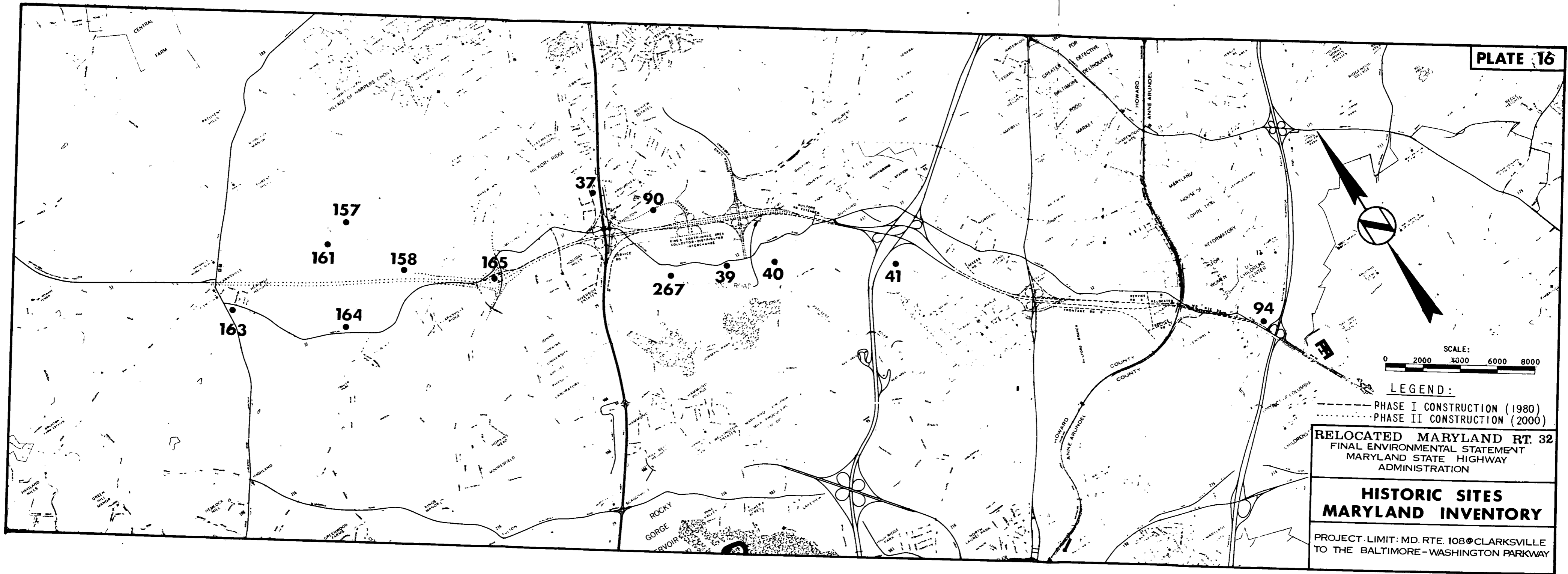


PLATE 16

SCALE:
 0 2000 4000 6000 8000

LEGEND:
 - - - PHASE I CONSTRUCTION (1980)
 . . . PHASE II CONSTRUCTION (2000)

RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

**HISTORIC SITES
 MARYLAND INVENTORY**

PROJECT LIMIT: MD. RTE. 108 @ CLARKSVILLE
 TO THE BALTIMORE - WASHINGTON PARKWAY

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that some of the materials in the building may be beneficially re-used in the restoration of other sites, and they would like to be able to salvage these items. In addition, the Historical Trust would like to take photographs and sketch a floor plan of the house before any construction actions are taken. The State Highway Administration has agreed to these requests, and the details will be worked out before the construction in this area begins.

The State Highway Administration forwarded the material concerning the historical sites to the Federal Highway Administration for their review. The FHWA concurred with the conclusions of the Historical Preservation Officer in declaring the non-significance of this action and ruled that a 4(f) Statement is not required.

Subsequent investigations uncovered another site within Anne Arundel County that has historical significance. This site is:

94 - Grasslands Farm; John Bowie House and Outbuildings

The State Historical Preservation Office reviewed the historical significance of this site and determined that it was of local significance, but not eligible for the National Historical Register. However, since the highway would take property from the site, a 4(f) Statement would be necessary. The letter from the State Historical Preservation Officer of March 1, 1976 concerning Grasslands Farm, is included in Appendix "E". A 4(f) Statement has been developed for the Grasslands property; this discussion begins on page 139.

An archeological survey of the study area has been completed. The results of the survey indicate that no discernible archeological remains or features are present within the proposed

right-of-way. However, certain areas do present some possibility of archeological interest.

The State Archeologist has requested that no map of specific archeological sites be presented in publicly circulating State Highway Administration documents, in order to protect these potential archeological resources from unauthorized investigations or surveys. The complete archeology report is available for office review at the State Highway Administration offices, 300 West Preston Street, Baltimore, Maryland during normal office hours.

The results of the survey indicate that no significant archeological findings are present. However, during the implementation of construction of Phase I, all care and consideration will be taken in the event archeological resources are present. The State Highway Administration shall be responsible for full compliance with state and federal rules and regulations regarding archeological salvage.

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Construction Impacts

The construction activities that will be required to build Relocated Maryland Route 32 will have an impact on the environment. The impact resulting from these activities would be temporary, and would no longer be a problem once construction has been completed. The freeway would be built in two phases--Phase I (1980), and Phase II, (2000). This would entail two separate periods of construction activity. The Phase I construction would involve the most dramatic environmental change. The majority of the clearing and grading would be accomplished during this phase. All of the unpaved disturbed areas would be promptly revegetated. The Phase II construction would be limited primarily to grading, paving, and structure work.

The proposed freeway has been designed to avoid encroachment upon nearby industrial, commercial, and residential structures. Attempts have been made to route the roadway through vacant land. Therefore, the impact on surrounding homes and other structures would be minimal. Vibrations from earthmoving operations and heavy vehicles may cause annoyance to homeowners. The distance of construction activity on the new roadway from existing structures makes the probability remote.

The potential for impacting the ambient air quality during the construction phase does exist. Fugitive dust from grading operations, materials handling, and the possible burning of land clearing debris are potential sources of this problem. In order to eliminate or at least minimize these problems, the Maryland State Highway Administration has instituted "Specifications for Materials, Highways, Bridges, and Incidental Structures". These specifications to control contractors involved in state construc-

tion work were developed in conjunction with the Maryland Bureau of Air Quality and Noise Control as consistent with existing state regulations. Therefore, all appropriate measures will be taken to minimize air pollution impacts during this time.

Impact on ambient noise levels of the study area is also expected during the construction phase. However, reliable data concerning the noise generation from construction equipment is not available to predict the magnitude of this impact. Table 9 presents the range of noise levels expected at an observer's distance of 50 feet. This does not show the effect of the operation of multiple pieces of equipment, nor the decrease in noise levels as the observer's distance increases or obstructions occur. The expected impact will be mitigated by the fact that freeway construction will be generally removed from existing residences, and construction will normally take place between 7:00 a.m. and 4:00 p.m. There will be periods of unavoidable annoyance during construction of the project. If complaints are made, consideration will be given to limiting the hours of use of construction equipment adjacent to noise sensitive areas.

The clearing and grading of the right-of-way of the freeway may increase sediment loading on area streams if ameliorative measures are not taken. Fort Meade uses the Patuxent River as their source of water supply for post facilities. They have commented on the possibility of increased turbidity as a result of freeway construction. Specific soil erosion and sediment control measures, standards, and procedures established in response to the Federal Aid Highway Program Manual, Volume 6, Chapter 7, Section 3, Subsection 1 "Erosion and Sediment Control on Highway Construction Projects" will be contained in the contract documents.

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CONSTRUCTION EQUIPMENT NOISE RANGES

		NOISE LEVEL (dBA) @ 50'					
		60	70	80	90	100	110
EARTH MOVING	COMPACTORS (ROLLERS)		-				
	FRONT END LOADERS		—				
	BACKHOES		—				
	TRACTORS		—				
	SCRAPERS, GRADERS			—			
	PAVERS				—		
	TRUCKS				—		
MATERIALS HANDLING	CONCRETE MIXERS		—				
	CONCRETE PUMPS			—			
	CRANES (MOVABLE)		—				
	CRANES (DERRICK)			—			
STATIONARY	PUMPS		—				
	GENERATORS		—				
	COMPRESSORS		—				
IMPACT EQUIPMENT	PNEUMATIC WRENCHES			—			
	JACK HAMMERS AND ROCK DRILLS			—			
	PILE DRIVERS (PEAKS)				—		
OTHER	VIBRATOR		—				
	SAWS		—				

NOTE: Based on limited available data samples

These documents and construction procedures are subject to the scrutiny of the Water Resources Administration and the Federal Highway Administration. These agencies will not authorize the project until all erosion and pollution control requirements have been satisfied. The State Highway Administration is required by State law to submit a sediment control plan and to make application for Waterway Construction Permits from the Water Resources Administration for all stream crossings involved in the project. No work can begin on any individual contract until said permits have been obtained and detailed schedules and methods of operation known as an "Erosion and Sediment Control Plan" have been developed by the contractor and approved by the State Highway Administration. Also, contractors are required by Chapter 245 of the Acts of 1970 to obtain permits from the appropriate County agency in cooperation with the local soil conservation district for any off-site work, including borrow pits, waste areas, etc.

Undoubtedly, some temporary increase in sedimentation will occur, but implementation of an intelligent sediment control program would minimize the impact. Permanent vegetation will be established to control sedimentation after the construction period has ended.

Some disruption of local traffic patterns is anticipated during construction. All reasonable attempts will be made to keep traffic flowing in a normal pattern as construction proceeds. An increase in the number of large trucks associated with grading and earthmoving activities will be experienced on local roadways. This will be a temporary situation, and is not expected to cause more than minor inconvenience.

Some borrow pits and waste areas may be required to handle land clearing wastes and balance earthwork requirements. The number and location of these cannot be determined until final design.

Secondary Impacts

In addition to the direct impacts to the environment that are associated with the proposed construction and operation of this facility, certain indirect or secondary effects may also be realized. One effect of this transportation project, Relocated Maryland Route 32, would be to increase the ability of the local highway network to transport both goods and services by relieving it of through traffic. This improved efficiency will enable the land uses in the study area to be more intensively utilized.

There are many variables that can promote or limit the intensity of land use in any particular area. These variables include availability of water, sewerage, energy or power sources, transportation access, physical properties of the land, access to markets, and the state of the local economy. Transportation access is a key factor in this process of land development and can either act as a catalyst or inhibitor.

In the particular case of Relocated Maryland Route 32, the adjoining land uses have developed at a rapid pace and are currently overloading the Guilford and Annapolis Junction Roads during peak hours. The north-south highway arterials through the study area provide excellent access to the areas of Baltimore and Washington; however, the east-west connecting links are of considerably less capacity. Relocated Maryland Route 32 was planned to give a better balance to the overall transportation network.

As is the case with all large public works projects, Relocated Maryland Route 32 could not be built just to satisfy the existing needs, but because of the large costs and construction time re-

quired, a reasonable growth factor had to be anticipated. For the purposes of State highway construction, a 20 year design period is used. Consequently, 1980 was designated as the time of completion and the year 2000 (ETC + 20) as the design year.

Realizing that the completion of the full project by 1980 would overcompensate for the existing transportation deficiency, the State Highway Administration opted for a two-phase schedule. The concept of staged construction avoids providing excess capacity in the earlier years, and is more in keeping with the growth of the local area.

Undoubtedly, the completion of the first phase of the freeway will spur some development of adjacent land uses due to the immediate improvement to the traffic flow. The more intensified use of these industrial, commercial, and residential lands will put more pressure on the existing utilities and public services of Anne Arundel and Howard Counties. However, this land development will be guided by the general development and land use plans of the respective counties which have anticipated this growth.

It is inevitable that the study area will undergo land use changes in the next 20 to 30 years as an outgrowth of development occurring in the metropolitan areas of Baltimore and Washington. The planning officials of both Howard and Anne Arundel Counties have implemented development plans to insure an orderly growth pattern, which will provide a minimum impact to the environment. Relocated Maryland Route 32 is one of the implements designed to provide this orderly growth pattern, and the State Highway Administration has worked with both Counties in the carrying out of their plans.

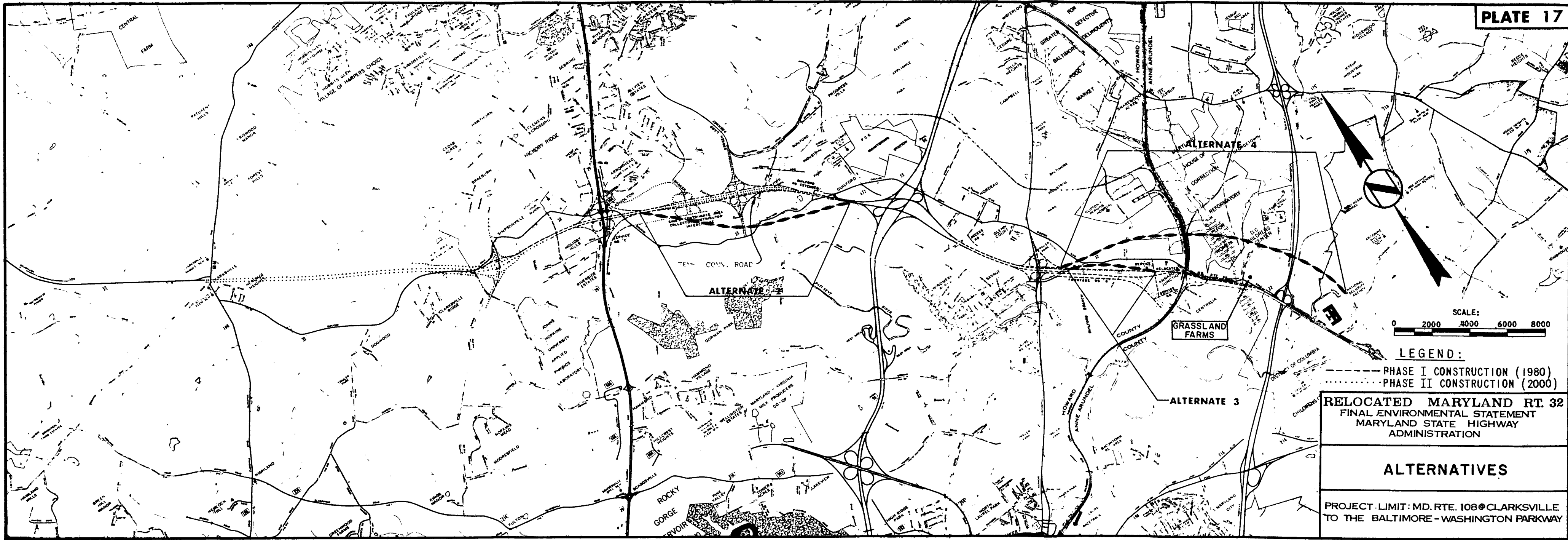
Impacts to the environment will result as land is converted from vacant land to residential, commercial, and industrial. These impacts will include increased air pollution, higher ambient noise levels, larger storm water flows and sedimentation loading, and more population density and congestion. These impacts will not happen suddenly, but over the long term they will be easily observable. The overall effect will be to change the study area to a more suburban environment, in accordance with the land use plans of the region and Counties.

ALTERNATIVES

There are many alternative methods of providing improved transportation access to the study area. The process of selecting the best alternative for this project has encompassed many years of planning on state and local levels. The project has been refined and adjusted in response to the comments of many private individuals and governmental agencies.

Basically, five main alternatives have been evaluated in arriving at the present project. These alternatives will be described below with a brief discussion of the advantages and disadvantages of each. These five alternatives fall into two categories: Build or No Build. All of the alternatives are shown on Plate 17. The "Build" alternatives utilize the existing elements of the freeway which have been constructed under other contracts. These existing portions include the improved relocation of Maryland Route 32 west of Clarksville; the I-95 Interchange, and the Vollmerhausen Road Bridge over the proposed freeway.

After circulation of the draft environmental impact statement, and giving due consideration to the potential impacts on the environment and comments from the public, the Maryland State Highway Administration has decided that Alternative 1 should be implemented. This alternative will achieve the transportation objectives of the project, while affording minimal adverse impact on the environment.



RELOCATED MARYLAND RT. 32
 FINAL ENVIRONMENTAL STATEMENT
 MARYLAND STATE HIGHWAY
 ADMINISTRATION

ALTERNATIVES

PROJECT LIMIT: MD. RTE. 108@CLARKSVILLE
 TO THE BALTIMORE - WASHINGTON PARKWAY

Alternative 1

This is the alternative chosen for implementation as described throughout the foregoing report. (See Major Design Features). It would consist of a dual four-lane/eight-lane freeway with access control, interchanges, frontage roads, and grade separation structures. The construction would take place in two stages: Phase I (1980), and Phase II (2000). This alternative would provide the needed traffic capacity in the study area, and has been approved by Anne Arundel and Howard Counties as meeting the intent of their general development plans.

The disadvantages of this alternative would be an increase in ambient air and noise levels, and the probability of increased stormwater runoff in the study area over the long-term. Temporary construction impacts due to dust, noise, and traffic interruption would be likely to occur; however, these impacts would be short-term. Potential exists for increased sediment loadings in local streams during the construction phase, but implementation of a sediment control program would minimize this impact.

Alternative 2

This is also a "Build" alternative. It is essentially the same as Alternative 1. This alternative would take a more southerly route from U. S. Route 29 to I-95 than Alternative 1. The maximum diversion from the Alternative 1 alignment occurs at Broken Land Parkway, where Alternative 2 is approximately 1,500 feet to the south of Alternative 1. This alignment would follow the south side of the Little Patuxent River, predominantly within the floodplain of the river.

This alternative would involve fewer crossings of watercourses by the main roadway, but impact upon water resources would be more severe. Alternative 1 crosses the watercourses more nearly at right angles, causing a minimum of relocation and intrusion of the streambed. Alternative 2 would require stream crossings which are almost parallel to the streambed, and construction of the Shaker Drive (King's Contrivance) and Broken Land Parkway interchanges would involve a considerable amount of stream modification. In addition, a proposed granite quarry operation would be taken in this action, precluding the use of this natural resource and adversely impacting the local economy. All other impacts would be similar to Alternative 1.

Alternative 3

This "Build" alternative follows Alternative 1, except between U. S. Route 1 and the Howard County line, where it takes an alignment slightly to the north. At Hilda Avenue this deflection is about 150 feet north of Alternative 1. This minor alignment change was one of the first alignments considered, but was eliminated because of the impact on local residential properties.

This alternative would require the taking of three additional homes which are located along the south side of existing Annapolis Junction Road, and it would move the roadway from 50 to 120 feet closer to four other homes. This reduction in the distance from the roadway would cause higher noise and air quality levels to be observed at these homes, as well as more adverse impact from construction activities. Other than these differences, the environmental impacts would be the same as those previously described for Alternative 1.

Alternative 4

This "Build" alternative was initiated in response to a public hearing comment from the owner of Grassland Farms. The route follows Alternative 1 with a major alignment modification occurring east of U. S. Route 1. From U. S. Route 1 this alignment would proceed about 2,500 feet northeast of Alternative 1, roughly parallel to existing Maryland Route 32. The roadway would cross the Baltimore-Washington Parkway about 2,500 feet northeast of the present Annapolis Junction Road Interchange, and would dead-end at Rockenbach Road behind the National Security Agency.

This alternative presents several disadvantages that would make implementation difficult. The construction of this alternative would involve approximately 3,400 linear feet more roadway than Alternative 1, requiring an additional structure over the B-W Parkway. At the point of crossing of Dorsey Run, a longer structure would be required due to the expanse of wetland in this area. The additional cost of this extra work would be in excess of \$3.5 million, which is a substantial outlay of money for minimal benefits.

The alignment of this alternative does not have a logical terminus at the National Security Agency, and would not provide a continuous flow of traffic. In addition, this alignment is not in accordance with the land use plans of either Anne Arundel or Howard Counties.

A significant safety problem would be presented by having Relocated Maryland Route 32 Spur diverge from Relocated Maryland Route 32 almost within the bounds of the U. S. Route 1 Inter-

change. Signing needed to inform motorists of traffic patterns would be impossibly crowded, leading to confusion and potentially dangerous situations.

Alternative 5

This is the "No Build" alternative, and it assumes that no improvements will be made to Guilford or Annapolis Junction Roads other than those items necessary to maintain the present conditions of the road surface. This alternative would not be without impact on the surrounding environment. The increased traffic projected for the roadway under the "No Build" conditions would overload this artery beyond its present capacity, resulting in lower operating speeds and increased backups at major intersections and stoplights. These conditions would tend to slightly increase air pollution and noise levels on properties immediately adjacent to the roadway. However, the air and noise impact resulting from this alternative would be the least adverse of all the alternatives considered.

The accident rate on the road is currently among the highest in the State of Maryland, and is likely to increase with the growth of traffic volumes and the already existing poor horizontal and vertical alignments. The completion of Hammond High School in mid-1976 would alone add 125 to 150 bus trips daily over existing Guilford Road without counting the associated car trips per day.

The construction of this alternative would not encourage land development in the area, thus generating less total corridor traffic than under the "Build" alternatives. Traffic would increase to a point where road capacity would be met, thereby limiting further development of surrounding land.

A variation of this alternative also considered the possibility of improving the existing Guilford and Annapolis Junction Roads within its present right-of-way. This was found to be unfeasible for the following reasons:

1. Traffic projections indicated the need for a minimum of four lanes of roadway throughout the study area by 1980.
2. Some access controls and grade separation structures would be required to keep traffic flowing at a reasonable rate.
3. The roadway was "locked in" on both sides by existing land uses, and in most cases, widening of the road would have involved the taking of structures on one or both sides of the road.
4. The existing roadway lies in the floodplain in certain areas near Cedar Lane, Berger Road, and Jolly Acres Road, and is subjected to occasional flooding, which renders the roadway impassable.
5. In order to provide reasonable access controls, an extensive service road system would be required.
6. In order to correct the many horizontal and vertical problems existing in the present roadway, substantial cuts and fills would be required which would severely disrupt adjacent land uses, and would temporarily impede utility services (gas, water, telephone).
7. Maintenance of traffic during the construction phase would be more disruptive than any of the alternates studied.

Probable Adverse Environmental Affects Which Cannot Be Avoided

The construction of Relocated Maryland Route 32 would have a number of environmental effects. Some of these effects can be avoided, some are unavoidable, and most of these effects could be reduced through appropriate ameliorative action. In general, the impact upon ambient air quality would be negative (see Air Quality Impact). While the increased and sustained vehicle speeds which would occur on the freeway would reduce carbon monoxide emission rates (while having the opposite effect upon nitrogen oxides emissions), the increased volume of traffic would raise the volume of pollutants generated within the corridor, degrading air quality. Using the projected traffic volumes through the year 2000, the National Ambient Air Quality Standards are predicted not to be exceeded. Should these standards be exceeded, the Governor is empowered, under the Maryland Air Pollution Episode System, to take whatever steps are deemed necessary. This includes the reduction of traffic and closing of highways to reduce air pollution levels.

Throughout much of its length, predicted noise levels for the year 2001 would exceed Federal Highway Administration standards, causing impacts ranging from negligible to severe. At this stage, no noise abatement plans have been finalized for this project. Various measures which could ameliorate noise levels include the construction of berms and other types of noise barriers. These measures vary in effectiveness and cost from site to site, and would be implemented when the need arises.

As discussed in "Stream Modification and Water Quality Impacts", the impact upon local waterways would be in the form of construction related impacts such as sedimentation and the long-term impacts associated with runoff carrying highway dirt and maintenance chemicals. The former would be substantially reduced by the formulation and implementation of a sediment control plan as required by law. Strict adherence to this plan, along with constant on-site inspection, would control erosion, minimizing its impact upon the receiving waters. The magnitude of the effects on local streams of road wash and de-icing compounds contained in highway runoff has not been ascertained. As the streams become increasingly stressed due to local development, this impact could become a more important factor. With the exception of reducing the use of de-icing compounds, which is unlikely, it is doubtful that the effects of highway runoff can be curbed once ultimate development has been completed.

The water table may possibly be depressed by the proposed cut approximately five (5) feet below the piezometric surface at Station 1010 near Hilda Avenue. Several homes in this area are presently dependent upon wells for water supply. All feasible alternatives to this undercutting have been investigated, and based on economic analysis and engineering considerations, the profile is properly designed. The impact has been minimized by establishing the grade as high as feasible. Should the wells in fact suffer a loss in water supply due solely to the referenced cut into the permeable aquifer, the State Highway Administration would take appropriate measures to restore water supply to the affected dwellings.

The potential impact upon local streams would be reduced by the use of bridges in lieu of box culverts at most of the stream crossings (See "Major Design Features"). Not only would this leave the stream bottom in a natural condition, permitting the free passage of aquatic life, but would also lessen the possibility of flooding (see "Flood Hazard Evaluation").

The project would stimulate growth and development throughout the subject corridor; probably at a rapid pace. This intensified land usage would place a severe strain upon the natural resources of the area, and from some viewpoints is undesirable. However, the freeway is an integral part of the 1971 General Plan for Howard County, in which the development plan for the entire county is delineated. Similarly, the freeway has been incorporated in the General Development Plan of Anne Arundel County.

This project would be designed with an alignment extending through basically undeveloped land, thus it would displace comparatively few families and businesses. While some displacements are inevitable, this impact would be minimized. No neighborhoods would be severed, nor would any undue hardships be placed upon any minority groups.

Although the displacement of some residences and businesses is necessary for the project, the SHA will make every effort to relocate these people in a satisfactory manner, as shown in the following discussion.

Summary of Relocation Assistance: All State Highway Administration projects must comply with the provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act

of 1970" (P.L. 91-646) and/or the Annotated Code of Maryland, Article 21, Section 12-201 thru 12-209. The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance, administers the 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 that are provided for include replacement housing payments and/or moving costs. The maximum limits of the replacement housing payments are \$15,000 for owner-occupants and \$4,000 for tenant-occupants. In addition, but within the above limits, certain payments may be made for increased mortgage interest costs and/or incidental expenses. In order to receive these payments, the displaced person must occupy decent, safe, and sanitary replacement housing. In addition to the replacement housing payments described above, there are also moving cost payments to persons, businesses, farms, and non-profit organizations. Actual moving costs for displaced residences include actual moving costs up to 50 miles or a schedule moving cost payment up to \$500.00.

The moving cost payments to businesses are broken down into several categories, which include actual moving expenses and payments "in lieu of" actual moving expenses. The owner of a displaced business is entitled to receive a payment for actual reasonable moving and related expenses in moving his business, or personal property; actual direct losses of tangible personal property; and actual reasonable expenses for searching for a replacement site.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Generally, payments for the actual reasonable moving expenses are limited to a 50 mile radius. In both cases, the expenses must be supported by receipted bills. An inventory of the items to be moved must be prepared, and two estimates of the cost must be obtained. The owner may be paid an amount equal to the low bid or estimate. In some circumstances, the State may negotiate an amount not to exceed the lower of the two bids. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business's vehicles or equipment, wages paid to persons who physically participate in the move, and the cost of the actual supervision of the move.

When personal property of a displaced business is of a low value and high bulk, and the estimated cost of moving would be disproportionate in relation to the value, the State may negotiate for an amount not to exceed the difference between the cost of replacement and the amount that could be realized from the sale of the personal property.

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 is to be reestablished, and personal property is not moved but is replaced at the new location, the payment would be the lesser of the replacement costs minus the net proceeds of the sale or the estimated cost of

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moving the item. If the business is being discontinued or the item is not to be replaced in the re-established business, the payment will be the lesser of the difference between the depreciated value of the item in place and the net proceeds of the sale or the estimated cost of moving the item.

If no offer is received for the personal property, the owner is entitled to receive the reasonable expenses of the sale and the estimated cost of moving the item. In this case, the business should arrange to have the personal property removed from the premises.

The owner of a displaced business may be reimbursed for the actual reasonable expenses in searching for a replacement business up to \$500.00. All expenses must be supported by receipted bills. Time spent in the actual search may be reimbursed on an hourly basis, but such rate may not exceed \$10.00 per hour.

In lieu of the payments described above, the owner of a displaced business is eligible to receive a payment equal to the average annual net earnings of the business. Such payment shall not be less than \$2,500 nor more than \$10,000. 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 at least one other establishment in the same or similar business that is not being acquired, and the business contributes materially to the income of a displaced owner.

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 considered 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, with approval of the Federal Highway Administration, 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, his spouse, or his dependents during the period. Should a business be in operation less than two years, not for twelve consecutive months during the two taxable years prior to the taxable year in which it is required to relocate, the owner of the business is 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, for the tax years in question.

For displaced farms and non-profit organizations, actual reasonable moving costs generally up to 50 miles, actual direct losses of tangible personal property, and searching costs are paid. The "in lieu of" actual moving cost payments provide that a displaced farm may be paid a minimum of \$2,500 to a maximum of \$10,000 based upon the net income of the farm, provided that the farm cannot be established in the area or cannot operate as an economic unit. A non-profit organization is eligible to receive "in lieu of" actual moving cost payments, in the amount of \$2,500.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms, and non-profit organizations is available in Relocation Brochures that will be distributed at the public hearings for this project and will also be given to displaced persons individually in the future.

In the event adequate replacement housing is not available to re-house persons displaced by public projects or that available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the re-housing. Detailed studies will be completed by the State Highway Administration and approved by the Federal Highway Administration before "housing as a last resort" could be utilized. "Housing as a last resort" could be provided to displaced persons in several different ways although not limited to the following:

1. An improved property can be purchased or leased.
2. Dwelling units can be rehabilitated and purchased or leased.
3. New dwelling units can be constructed.
4. State acquired dwellings can be relocated, rehabilitated, and purchased or leased.

Any of these methods could be utilized by the State Highway Administration and such housing would be made available to displaced persons. In addition to the above procedure, individual replacement housing payments can be increased beyond the statutory limits in order to allow a displaced person to purchase or rent a dwelling that is within his financial means.

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The "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" requires that the State Highway Administration shall not proceed with any phase of any project which will cause the relocation of any person, 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.

The Relationships Between Local Short Term Use of the Environment and the Maintenance and Enhancement of Long Term Productivity

This proposed freeway, like most construction projects of this magnitude necessarily involves a number of compromises or trade-offs. Only by comparing the gains or long term benefits that would be realized with the significant environmental losses can the desirability of this project be evaluated. Since the proposed action involves the construction of a major transportation facility, its principal benefits are transportation related. Improved transportation through the corridor would result, providing rapid and uncongested commuter and inter-regional travel. The movement of goods, services and troops through the area would be facilitated. An improvement in public services, such as fire and police protection, ambulance service and trash collection, would be realized. This modern, controlled access facility would offer a far safer means of travel, greatly reducing the high monetary costs to motorists and the human suffering and misery resulting from automobile accidents.

If the "No Build" alternate were selected, motorists would be subjected to ever-increasing congestion and traffic delays on the existing two-lane facility. The excessively high accident rate on the existing roadway would only worsen as its capacity is exceeded. Much commercial traffic would be rerouted through other areas, lessening the desirability of the corridor as a location for new commerce and industry. This would be contrary to the General Development Plans set forth by both Howard and Anne Arundel Counties.

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The environmental losses suffered as a result of the construction of Relocated Maryland Route 32 could be broken down into short-term or construction impacts and long-term effects. The short-term impacts would occur during both the initial and ultimate phases of construction and would include noise, dust and vibrations from heavy equipment, minor traffic delays, temporary service disruptions and some unavoidable sedimentation.

The long-term impacts would have a more profound effect upon future generations. These would include the commitment of large areas of land for the highway, increased noise levels, impaired air quality, reduced stream quality and the loss of several key natural areas. Growth, be it residential, commercial or industrial, can be a blessing or an ill, depending upon the point of view. This project would certainly facilitate the growth anticipated under the two county General Development Plans. It could also induce additional rapid growth for which these two political subdivisions may be unprepared. Such unwarranted growth would not only strain the capacities of the counties to provide the attendant public utilities and services, but could also irreparably alter the carefully formulated General Development Plans of both Howard and Anne Arundel Counties.

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Irreversible & Irretrievable Commitment of Resources

The construction of highways could be classified as an irreversible or irretrievable commitment of resources. Approximately 770 acres of land, the primary resource, is irretrievably committed to an intensive use, a freeway, which precludes its use for secondary resources such as mining, timber, wildlife, agricultural production, or less intensive cultural uses such as housing, schools and industrial plants. If the proposed transportation facility is no longer needed as part of the transportation network, or if a greater need arises for the land upon which the highway is situated, it could conceivably be converted to another land use at great expense. It would be possible to convert to a less intensive cultural use such as a shopping center, but virtually impossible to revert to a natural area. If such an improbable situation were to occur, recognition would be made of benefits derived and a proportionate amount of the public funds and efforts committed to the project could be classified as the irretrievable portion. In this case, the construction materials could also be considered irretrievably committed, since the salvage value for most would be nil. Relocated Maryland Route 32, through the inducement or stimulation of growth in the project area, would irreversibly commit other land resources in a like manner to more intense uses. This project would not afford access to any previously inaccessible area as the proposed facility is located within the general corridor of the existing route.

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COMMENTS AND COORDINATION

The first group of comments received on this project resulted from the public hearing conducted at Savage Elementary School. This corridor-design public hearing was held on October 19, 1970 and was concerned with only a small segment of the project from I-95 to the Baltimore-Washington Parkway. The following is a summary of the comments received:

Verbal Testimony

<u>Witness</u>	<u>Synopsis of Comment</u>	<u>Disposition of Comment</u>	<u>Page</u>
Robert Smith National Security Agency	1) Desires speedy highway improvement	1) -	-
Marion McCoy Anne Arundel County	1) Supports highway 2) Retain Maryland Route 198 interchange	1) -- 2) B-W Parkway interchanges under study	- 46
Al NeVasio Maryland Civic	1) Retain Maryland Route 198 interchange	2) B-W Parkway interchanges under study	46
John Bowie Property Owner	1) Opposed to widening and access control. 2) Recommends new alignment (Alternate 4)	1) Road presently substandard for volume of traffic 2) Alternate 1 selected	22 113
John Everhardt Property Owner	1) Wants better turning radius.	1) Improved turning radius recommended.	-
Rudy Nothdurft Citizen/Motorist	1) Wants initial construction of dual highway.	1) Dual highway planned for initial phase.	14
Albert Aaron Owner of Holiday Inn on 198	1) Retain Maryland Route 198 interchange	1) B-W Parkway interchanges under study.	46
Frank Brady Laurel Race Track	1) Retain Maryland Route 198 interchange	1) B-W Parkway interchanges under study.	46
Nicholas Andrew Citizen	1) Retain Maryland Route 198 interchange	1) B-W Parkway interchanges under study.	46

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<u>Witness</u>	<u>Synopsis of Comment</u>	<u>Disposition of Comment</u>	<u>Page</u>
Mrs. Lev Columbia Transportation Commission	1) Supports highway proposal.	1) --	-
Marvin Anderson Attorney for Bowie	1) Challenges access controls, highway network, etc.	1) Existing road is sub-standard	22
Mr. Keagan Property Owner	1) Objects to increased property taxes.	1) --	-
John Krandal Citizen	1) Retain 198 interchange	1) B-W Parkway interchanges under study.	46
William Smith Property Owner	1) Objects to proximity of highway	1) Alternate 1 selected	110
Charles Webb Attorney for Gibson	1) Objects to access controls in front of clients property	1) Owner to be compensated.	14
Mrs. Dorothy Williams Property Owner	1) Objects to Right-of-Way taking, etc.	1) Alternate alignments infeasible.	110

Written Testimony

<u>Witness</u>	<u>Synopsis of Comment</u>	<u>Disposition of Comment</u>	
George R. Lewis Dept. of General Services	1) No comment	--	-
James G. Everhardt Property Owner	1) Requests better turning radius at Hilda Avenue and Service Road	1) Would be provided	14
Francis Beverina Property Owner	1) Objects to Right-of-Way taking, etc.	1) Alternate alignments infeasible.	110
Charles Williams Property Owner	1) Objects to Right-of-Way taking, etc.	1) Alternate alignments infeasible.	110
Marvin Anderson Attorney for Bowie	1) Objects to highway network	1) Existing road sub-standard	22

<u>Witness</u>	<u>Synopsis of Comment</u>	<u>Disposition of Comment</u>	<u>Page</u>
William P. Kerns Anne Arundel Schools	1) Recommends extension of frontage road to better serve school bus route.	1) Extension would be provided	14
Edward H. Utz Anne Arundel Fire Department	1) Same as above for fire vehicles.	1) Extension would be provided.	14
Herman S. O'Neill Howard County Dept. of Public Works	1) Turnarounds needed at severed roads.	1) Turnarounds would be provided.	14
Roland B. Handley U.S. Dept. of Interior	1) Cautions to protect Patuxent River.	1) Sediment and erosion control measures to be implemented.	103
Thelma Gibson Property Owner	1) Objects to denial of access along U. S. Route 1	1) Access would be provided to existing Guilford Road	14
H.C. Zepp Baltimore & Ohio Railroad	1) Requests removal of existing Maryland Route 32 bridge over railroad prerequisite for railroad approval.	1) Infeasible since existing Route 32 will continue to serve local traffic.	14
Marvin Anderson Attorney for Bowie	1) Request consideration of farm as historic site.	1) Reviewed by Maryland Historical Trust.	139 100
Marvin Anderson Attorney for Bowie	1) Requests audience to discuss Alternate 4.	1) Alternate 4 abandoned in favor of Alternate 1.	113
David H. Fishman Attorney for Laurel Race Track	1) Retain 198 interchange.	1) B-W Parkway interchanges under study.	46
Marvin Anderson Attorney for Bowie	1) Alternate 4 would not affect churches as determined by field review.	1) Alternate 4 abandoned in favor of Alternate 1.	113

The coordination process was initiated on December 15, 1971, when the State Highway Administration sent a letter to all interested local, state and federal agencies notifying these parties of its plans and soliciting comments related to the project. The comments which were received were listed in the Draft Environment Impact Statement.

In accordance with the Federal Highway Administration's Policy and Procedure Memorandum 90-1 dated August 24, 1971, concerning implementation of Section 102(2) (c) of the National Environment Policy Act of 1969, a Draft Environmental Impact Statement was prepared. On May 12, 1972, this statement was circulated to federal, state and county agencies, and local elected officials (See Distribution List in Appendix E). The following comments on the draft statement were received:

Comments on Draft Environmental Statement

<u>Respondent</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
Robt. S. Norton, Jr. Chief, Surface Water Resources Administration	1) Pre-emption of flood control project.	1) Flood control project has been abandoned.	57
Mrs. Marion J. McCoy Anne Arundel County Planning & Zoning Officer	1) Objects to absence of future Patuxent Free-way-Baltimore-Washington Parkway interchange.	1) Baltimore-Washington Parkway currently under study.	46
	2) Lack of assessment of long range commitments.	2) Covered in Final Environmental Statement.	45
Robert N. Young Executive Director Regional Planning Council (Regional Clearinghouse)	1) Consideration of impacts by proposed Marriott recreation park.	1) Plans for Marriott park have been abandoned.	96
	2) Urges coordination with open space proposals.	2) Coordination has taken place.	51
Robert J. Blanco U.S. Environmental Protection Agency	1) Request assessment of impact upon Little Patuxent River Conservation Area.	1) Principal impacts would be noise and loss of wildlife habitat.	51
	2) Assessment of long range commitments within Anne Arundel County.	2) Alignment of Patuxent Freeway in Anne Arundel County not yet determined.	45
	3) Assessment of air quality due to stimulated development.	3) Impact upon air quality would be negative.	107
	4) Consideration of initial single roadway as ultimate highway improvement.	4) Insufficient for projected traffic volume.	115

<u>Respondent</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
	5) Consideration of mass transit.	5) Two studies now underway.	93
John A. Busterud Deputy Assist. Secretary, U.S. Dept. of Defense	1) Cautions to protect water quality.	1) Implementation of approved Sediment Control Plan.	103
J. Herbert Clawson, Jr., Chief, Div. of Land Development and Transportation Planning, Howard County	1) Alternate 2 undesirable.	1) Alternate 1 selected.	111
John H. Gibson Acting State Conservationist, U.S. Dept. of Agriculture, Soil Conservation Service	1) Encouraged by S.H.A. sediment and erosion control programs.	1) Implementation of approved Sediment Control Plan.	103
Jean J. Schueneman Director, Bureau of Air Quality Control, Dept. of Health and Mental Hygiene	1) Various aspects of air quality. 2) Suggests study of regional impact of expressways in Balto.-Wash. Corridor.	1) Supplemental air quality statement. 2) Regional Planning Council study being updated.	64 -
Mark Abelson Regional Coordinator, U.S. Dept. of Interior	1) Concern over threats to water quality by erosion and sedimentation. 2) Concern over two wooded areas.	1) Implementation of approved Sediment Control Plan. 2) The two wooded areas mentioned are not in public ownership. The woodland north of Heritage Hills would be impacted during Phase II, by removing 615 acres of the of the 22 acre tract. The Trotter Rd. relocation has been eliminated. Therefore, there will be no impact on the second woodland.	103 50
	3) Possible conflict with Atholton School Land and Water Conservation Fund project.	3) Project completed - no conflict.	96
	4) Consultation with Md. Historical Trust.	4) Completed	98 139

<u>Respondent</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
John E. McKenna Regional Environmental Coordinator U.S. Dept. of Health Education & Welfare	1) Concurs with general content.	1) --	-
Vladimir Wahbe Secretary Dept. of State Planning (State Clearinghouse)	1) Relays concerns of Bureau of Air Quality Control.	1) Supplemental air quality statement.	64
	2) Relays concerns of Dept. of Natural Resources.	2) --	-
	a) Impact upon waterways,	a) Sediment control Plan implementation.	103
	b) Impact upon wildlife habitat.	b) Negative impact would be experienced.	52
	c) Impact upon fee hunting area.	c) Negative impact would be experienced.	16
d) Possible effects upon two conservation areas by future extensions.	d) Neither area would be affected.	-	
	3) Justification for growth stimulation.	3) In concurrence with General Development Plans of both counties.	45
Stanley D. Doremus Deputy Assistant Secretary of the Interior	1) The FHWA should apply criteria of eligibility of Grassland Farms for the National Register of Historical Places	FHWA and MSHA concur in determination made by the State Historic Preservation Officer. See the letter from the State Historic Preservation Officer in the Correspondence Section dated March 16, 1977.	100
	2) The project site should be surveyed for evidence of archeological remains.	Results of archeological survey indicate no remains.	100 101
	3) Suitable mitigation measures affecting the barn should be agreed upon.	During final design stage appropriate measures will be agreed upon.	142
	4) Comments made by DOI on July 7, 1972 on the project should be addressed.	Comments addressed in the FEIS.	

On August 15, 1973, a corridor-design public hearing was held for that portion of the roadway from west of U. S. Route 29 to I-95, and simultaneously, a corridor public hearing for Maryland Route 108 to west of U. S. 29. This combined public hearing was held at Atholton High School, and resulted in the comments which follow:

Verbal Testimony

<u>Witness</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
Edward Cochran Howard County Council	Impact of Trotter Road Interchange on planned Middle Patuxent Environmental Area by Howard County.	Plans for Relocated Trotter Road and Trotter Road Interchange have been abandoned.	50
Thomas Mohler Reading letter of Clarksville Ridge Citizens Assoc.	Objects to proximity of highway and highway generated noise.	Alignment has been shifted away from Clarksville Ridge. Federal noise standards would not be exceeded.	31
Dr. Michael Lauriante Clarksville Ridge Citizens Assoc.	Objects to shifting original alignment off W. R. Grace toward Clarksville Ridge.	Alignment has been shifted away from Clarksville Ridge.	31
Richard T. Ellis Property Owner	Objects to Trotter Road Relocation and Interchange.	Plans for Relocated Trotter Road and Trotter Road Interchange have been abandoned.	50
Mr. Carl Huber Middle Patuxent Valley Assoc.	Objects to Trotter Road Interchange.	Plans for Trotter Road Interchange have been abandoned.	50
Malcom C. Thomas Christ Memorial Presbyterian Church	Objects to service road configuration.	Service road not part of this project.	-
Bruce Rushlow Christ Memorial Presbyterian Church	Objects to service road configuration.	Service road not part of this project.	-
Clifford M. Stretmater Clarksville Ridge Citizens Assoc.	Objects to proximity of highway.	Alignment has been shifted away from Clarksville Ridge.	31

<u>Witness</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
Fred Oyhus Clarksville Ridge Citizens Assoc.	Objects to proximity of highway.	Alignment has been shifted away from Clarksville Ridge.	31
T. H. Dike Property Owner	Questions construction responsibility of service road.	Service road has been constructed by others.	-
Robert E. Phillips Property Owner	Objects to proximity of highway.	Alignment has been shifted away from Clarksville Ridge.	31
Irvin Gaither Property Owner	Is their property in- cluded within Maryland Route 108 interchange?	Interchange location will be resolved upon completion of Maryland Route 108 study.	14
Robert E. Woodall Property Owner	Inquired planned water and sewer improvements within this area.	Water and sewer are the responsibilities of Howard County.	-
Sally Ann Cooper Property Owner Holiday Hills	Wants S.H.A. to con- sider recommendation of Holiday Hills Civic Association and con- struct alternate "B".	Newberry Drive selected as access road to Holiday Hills.	15

Written Testimony

<u>Witness</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
J. H. Clawson Howard County Land Development & Transportation Planning	Conforms with Howard County General Plan for Highways 1971.	Project is part of General Plan for Highways.	-
Paul F.L. LePore Howard County Fire Adminis- trator	Impact upon Clarks- ville Volunteer Fire Station.	Location of Maryland Route 108 interchange has not been determined.	14
W. O. Filbert Howard County D. P. W.	County's plans for Trotter Road Relocation, Cedar Lane, access to Holiday Hills and new maintenance facilities at Routes 108 and 32.	Location of Maryland Route 108 interchange has not been determined. Plans for Relocated Trotter Road have been abandoned.	14 50
F. Leonard Dunn Howard County Recreation and Parks	Objects to Relocated Trotter Road and Pin- dell School Road access ramp.	Plans for Relocated Trotter Road have been abandoned.	50
Gerald W. von Mayer Howard County Planning & Zoning	Objects to Trotter Road interchange. Impact upon Little & Middle Patuxents and Crickett Creek should be mini- mized. Holiday Hills access should be from relocated Pindell School Road.	Plans for Relocated Trotter Road have been abandoned. Implementa- tion of sediment control plan would minimize im- pact upon streams. New- berry Drive would provide access to Holiday Hills.	50 103 15
G. R. Walters Howard County Police Department	Supports highway proposal.	--	-
Clifford M. Stretmater Property Owner	Objects to proximity of highway.	Alignment has been shifted away from Clarksville Ridge.	31
Richard T. Ellis Trotter Road Association	Objects to Trotter Road Relocation and Interchange with list of names agreeing with his position.	Plans for Trotter Road Relocation and Inter- change have been abandoned.	50

<u>Witness</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
Dudley P. Jackson, M.D. Property Owner	Objects to Trotter Road Relocation and Interchange.	Plans for Trotter Road Relocation and Interchange have been abandoned.	50
James Salango Minister-Christ Memorial Presbyterian Church	Objects to service road configuration in area of church property.	Service road not a part of this study.	
Charles E. Hogg Attorney for W.R. Grace Company	Support of highway and amenable to a shifting of the road resulting in a minimal encroachment on its property.	Alignment has been shifted onto W. R. Grace property.	31
Malcolm C. Thomas Property Owner	Objects to configuration of service road near Allview Estates.	Service road has been eliminated in this area.	14
Mr. & Mrs. Wm. E. Tolson Property Owners	Object to proximity of the highway.	Alignment has been shifted away from Clarksville Ridge.	31
Cay G. Weinel, Jr. Howard Research & Development	Supports project but questions construction responsibility of service roads shown on their property.	Interchange at King's Contrivance is planned with some service road construction by developer.	16
Mr. & Mrs. Michael J. Baluck Property Owners	Object to Trotter Road Relocation and Interchange.	Plans for Trotter Road Relocation and Interchange have been eliminated.	50

In August of 1975, an Air Quality Technical Report was circulated to the Environmental Protection Agency, the Maryland Bureau of Air Quality and Noise Control, and the Federal Highway Administration. A summary of their comments to this supplemental report is shown below:

<u>Respondent</u>	<u>Synopsis of Comments</u>	<u>Disposition of Comments</u>	<u>Page</u>
Environmental Protection Agency	1) Wanted "worst case" carbon monoxide modelling.	1) "Worst case" conditions have been used.	66
	2) Desired I-95 and B-W Parkway interchanges to be modelled.	2) Interchanges have been modelled.	68
	3) Analysis of regional air quality.	3) See Air Quality Report.	73
Maryland Bureau of Air Quality and Noise Control	1) Concerned by size of facility-traffic generator.	1) The number of lanes to be built have been reduced.	6
	2) Desired analysis of monitoring data.	2) Data included in report.	71

All of these comments, beginning in 1970, are part of the coordination process that the Maryland State Highway Administration has maintained with local, state and federal agencies during the course of this project. Response to these comments has been made in this Final Environmental Impact Statement and modifications to the project as a result of the comments have been incorporated where applicable.

4 (f) STATEMENT

on

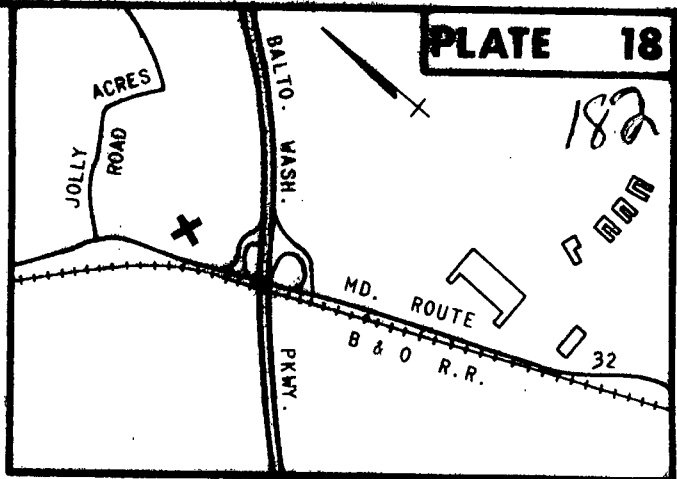
Grasslands Farm

Location of the Site: Grasslands Farm has been listed on the Maryland Historical Inventory for Anne Arundel County as Site #94. The entire property has been denoted as an historical place. Grasslands Farm, consisting of the John Bowie House and several outbuildings, is located on the northwest quadrant of the intersection of existing Maryland Route 32 (Annapolis Junction Road) and the Baltimore-Washington Parkway.

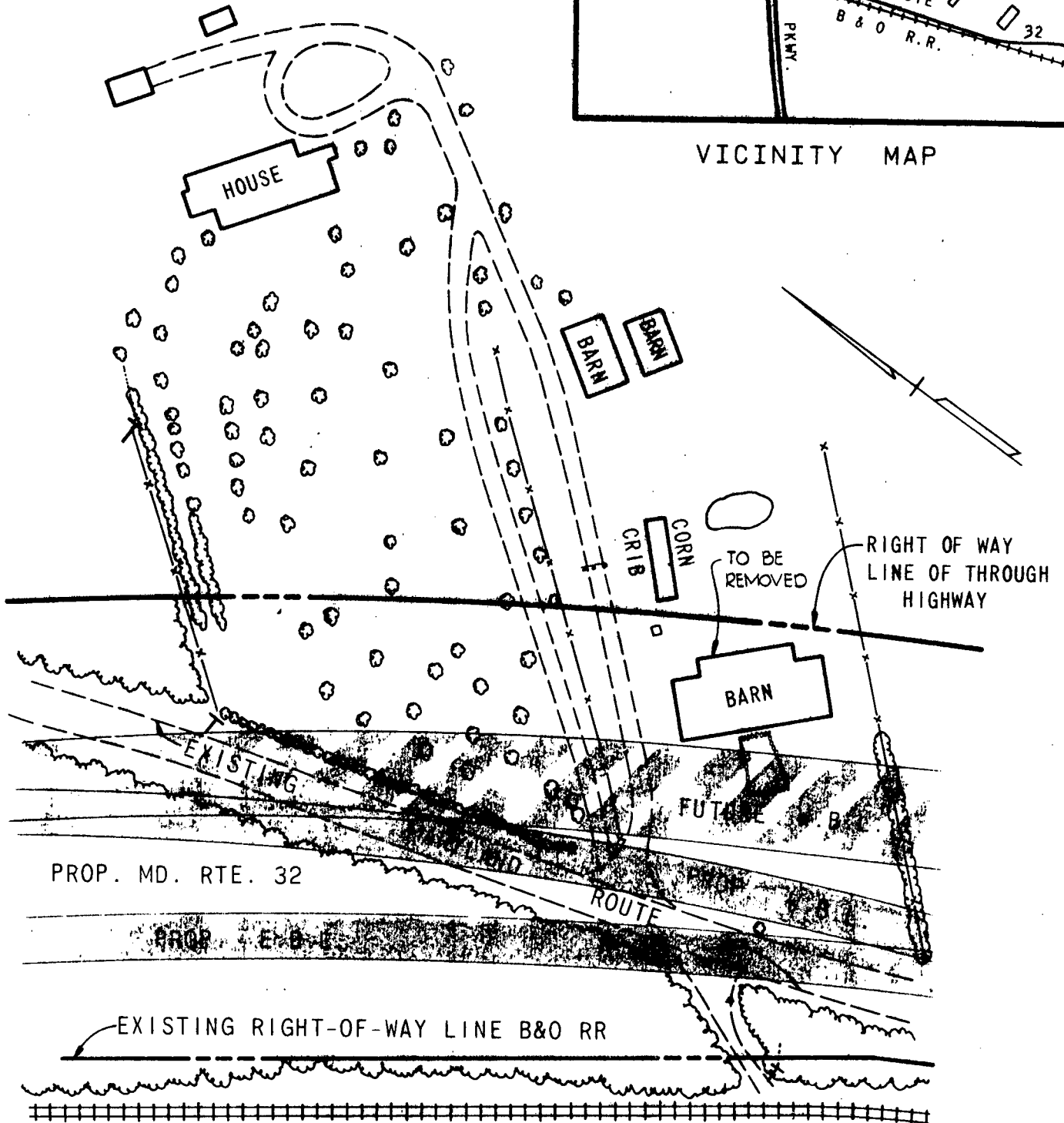
Description of the Site and the Proposed Action: The total Grasslands property is 180.109 acres in size. The site is currently in private ownership and is being utilized for agricultural purposes by the tenant. There is one house, three barns, one corn crib, one former slave quarters building, and several smaller outbuildings on this property. The improvements to the property date from the early 1800's.

The proposed action, being the construction of Maryland Route 32 Spur, will take approximately 8.35 acres or 4.6% of the Grasslands property. Approximately 5.35 acres of the proposed acquisition would be north of the existing Maryland Route 32 right-of-way and 3.00 acres south of the right-of-way. This right-of-way acquisition will also involve the taking of a 1-1/2 story barn on the Grasslands property. This wooden barn rests on a stone foundation and would be demolished as part of the roadway development plan. The barn structure itself, is in poor condition with part of the roof and one wall caved in. Plate 18 shows the layout of the property and the barn which would be affected by the proposed action.

At the present time, existing Maryland Route 32 is a two lane roadway, with no access controls, poor vertical and horizontal alignments, and is subject to flooding from Dorsey Run. The



VICINITY MAP



RELOCATED MARYLAND ROUTE 32
HISTORIC SITE
GRASSLANDS
 NO SCALE

traffic increases projected over the next thirty years, resulting from Fort George G. Meade and the National Security Agency, would exceed the capacity of the existing roadway, presenting a significant safety problem.

The proposed Maryland Route 32 Spur would be a four lane controlled access arterial highway with at-grade intersections and a frontage road. Twin bridges will be utilized to span Dorsey Run to alleviate flooding on the new roadway.

The right-of-way for the proposed project would closely follow the existing Maryland Route 32 right-of-way. The new roadway would require a minimum 250 foot wide right-of-way, whereas the existing right-of-way is only 30 feet wide.

Impact of the Action: The appropriation of 8.35 acres of land and the loss of the 1-1/2 story barn are the major impacts to the historic property. The Maryland Historic Preservation Officer has been consulted, and his review of the case has concluded that the barn is an integral part of the historic property. He has also ruled that, although the farm has some local historical significance, it is not eligible for listing on the National Register of Historic Places. Due to the deteriorated condition of the barn and its relationship to the overall site, the Preservation Officer has determined that the loss of the barn would not significantly diminish the historic qualities of the site. The letters concerning this subject from the Maryland Historic Preservation Officer, dated March 1, 1976, and March 16, 1977, have been reproduced in Appendix "E".

Feasible Alternatives: One alternative was studied which would have routed the road north of the historic property, terminating in the parking lot of the National Security Agency just east of the Baltimore/Washington Parkway. This alternative was rejected for the following reasons:

1. This alignment does not fulfill the objectives of the land use plans of either Howard or Anne Arundel Counties, because it would not provide a through route between Annapolis and I-70.
2. Approximately 3,400 more linear feet of roadway would be required than the chosen alignment.
3. An additional overpass would be needed to cross the Baltimore/Washington Parkway.
4. The crossing of Dorsey Run and its floodplain would necessitate a longer bridge.
5. Total additional costs would be in excess of \$3.5 million.
6. Continuous flow of traffic could not be provided through the National Security Agency parking lot to the local highway network.

An attempt to shift the roadway further to the south of existing Maryland Route 32 would meet most of the same problems encountered above. In addition, an alignment to the south would more severely impact the Anne Arundel County Wetlands Unit #1, and

necessitate the relocation of the Fort Meade Branch of the Ches- sie System railroad line, which in turn would displace an old slaves quarters building on the Grasslands property. The top- ography south of existing Maryland Route 32 would also present a problem, requiring more extensive grading and filling.

The chosen alignment for Relocated Maryland Route 32 Spur falls within an established transportation corridor (Annapolis Junction Road and the Chessie System Railroad Line). Expansion of the roadway within this transportation corridor provides the least costly alternative with the minimum environmental impact, al- though a portion of the historical Grasslands property would be converted to highway useage.

Mitigating Measures: The deteriorated condition of the barn would make it impossible to move it to another location on the property. However, the State Highway Administration would give favorable consideration to salvaging all materials during the demolition of the barn and stockpiling the materials, if the own- er would like to rebuild the barn at a later date.

In lieu of relocating the barn, the State Highway Administration would compensate the owner for the economic loss to his property. This particular barn is not currently being used by the owner be- cause of its poor structural condition, and there are two other smaller barns on the property.

A modest shift of the proposed roadway eastward of existing Mary- land Route 32, would entail a greater impact on the Grasslands property, by requiring more land and perhaps more structures. Additionally, the further the proposed roadway is from the main Bowie house, the less the visual, acoustical, and aesthetic im- pact on the home.

During final design of the project, the State Highway Administration will enter into a formal agreement with the owner, which is satisfactory to the owner, for final mitigation measures relating to the barn.

APPENDIX "A"

Definition of Terms

DEFINITION OF TERMS

- access roads A roadway facility by means of which vehicles can enter or leave an arterial highway.
- arterial highway A major thoroughfare which carries a significant portion of local or regional traffic volume, together with all rights-of-way for construction and operation thereof.
- biota All species of plants and animals within a certain ecosystem.
- collector-distributor roads Roads apart from the main roadway designed to keep accelerating and decelerating traffic separated from the through traffic flow. Used especially on high speed roads where several interchanges are built within a short distance of each other.
- controlled access arterial highway A major thoroughfare of two or more traffic lanes in each direction, having the same characteristics as an expressway, except that the conflict of cross-streams of traffic need not be eliminated at every intersection by means of grade separation structures.
- decibel A unit of sound pressure level.
- dB(A) Sound pressure levels in decibels measured with a frequency weighting corresponding to the "A-Scale" on a sound level meter. The A-scale tends to suppress lower frequencies (e.g., below 1,000 Hz.) and approximates the auditory response of the human ear.
- Emission factor The average amount of pollutant emitted by a pollution source per unit time or unit of activity. Automobile emissions are defined on a per mile basis.

Expressway

A major thoroughfare of two or more lanes in each direction designed to eliminate principal traffic hazards. An expressway has the following characteristics: a) a median divider separating opposing traffic lanes to eliminate head-on collisions and sideswiping; b) grade separating structures to eliminate the conflict of cross-streams of traffic at all intersections; c) points of access and egress limited to predetermined locations; d) vertical curves of lengths sufficient to provide long sight distances; and e) shoulder of adequate width to permit vehicles to stop or park out of traffic lanes.

floodplain

That land adjacent to a body of water (stream, river, etc.) which is periodically inundated as a result of stormwater flows or runoff.

freeway

A fully controlled-access, divided, high speed, high capacity, arterial highway. All crossings are separated by bridges; pedestrians, animals, and cyclists are excluded; and abutting property owners are denied direct access to the roadway.

frontage road

A road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas and for control of access.

grade separation structure

A highway overpass or bridge carrying one roadway over another without providing access.

groundwater

The supply of fresh-water encountered at the water table below the ground surface. Water bearing geologic strata below ground are referred to as aquifers.

"housing as a last resort"

Refers to special efforts made by the SHA to find suitable housing for people displaced by a highway project. If suitable housing cannot be found within the financial means of the displaced residents, then extraordinary methods may be utilized to get these people relocated satisfactorily.

L₁₀

The sound level exceeded 10 percent of the time (the tenth percentile) for the time period under discussion. This value is an indicator of both the magnitude and frequency of occurrence of the loudest noise occurrence.

Level of Traffic Service

Six levels of traffic service identify the conditions existing under various speed and volume conditions on any street or highway. These levels of service, designated A through F, describe the best to worst conditions respectively. A detailed description of each level of service is given below:

Level of Service A: Condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.

Level of Service B: The zone of stable flow, with operatspeeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed. Reductions in speed are unreasonable, with a low probability of traffic flow being restricted.

Level of Service C: In the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed. A relatively satisfactory operating speed is still obtained, with service volumes suitable for urban and rural design.

Level of Service D: Approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating

speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

Level of Service E (Capacity): Cannot be described by speed alone, but represents operations at even lower operating speeds than in level D, with volumes at or near the capacity of the highway. At capacity, speeds are typically, but not always, in the neighborhood of 30 mph. Flow is unstable, and there may be stoppages of momentary duration.

Level of Service F: Forced flow operations at low speeds, where volumes are above capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of the downstream congestion.

- noise Any undesirable audio signal or sound.
- ppm Parts per million; used to express the concentration of pollutants in air or water.
- peak hour The hour of the day when the highest traffic volume occurs, usually between the hours of 4:00 p.m. to 6:00 p.m. The peak hour traffic volume is taken to be approximately ten (10%) percent of the average daily traffic for the purposes of this report.
- rapid transit A form of public transportation by which large volumes of people are moved over fixed routes (e.g., subways).
- Right-of-way The area acquired and reserved by the SHA for construction of the roadway and appurtenances thereto.
- service road A roadway providing continuity of access on the adjacent secondary roads, where the construction of the freeway may have severed or disjointed the secondary roads system.

traffic capacity

The maximum number of vehicles which have a reasonable expectation of passing over a given section of a lane or roadway in one direction (or in both directions for a two-lane or a three-lane highway) during a given time period under prevailing roadway and traffic conditions. Capacity is designated as Level of Service E.

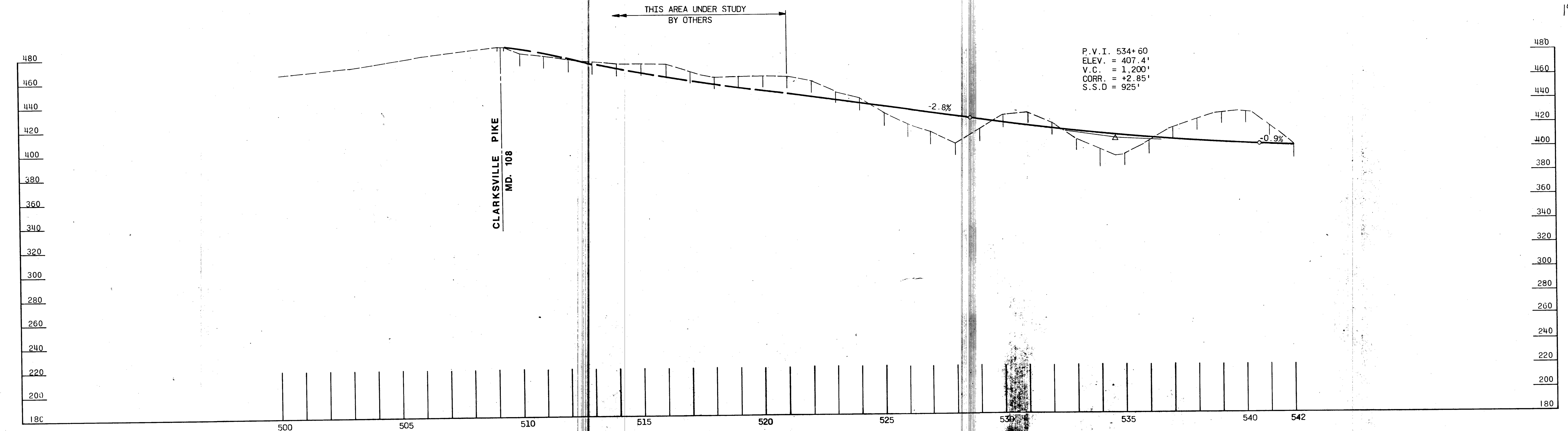
wetlands

Land or area such as swamps, tidal flats, or floodplains, which contain much soil moisture. Wetlands have a great capacity to absorb flood flows and also to support an abundance of varied and unusual species of plants, animals, and aquatic life.

APPENDIX "B"

Roadway Profiles and Typical Sections

199



RELOCATED MARYLAND ROUTE 32

SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 STA. 500+ TO STA. 542+

195

480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180

480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180

P.V.I. = 556+70
ELEV. = 387.5'
V.C. = 800'
CORR. = +3.90
H.S.D. = 800'

P.V.I. = 578+44
ELEV. = 452.7'
V.C. = 2,100'
CORR. = -15.75'
S.S.D. = 700'

542

545

550

555

560

565

570

575

580

585

590

594

0.9%

+3.0%

-3.0%

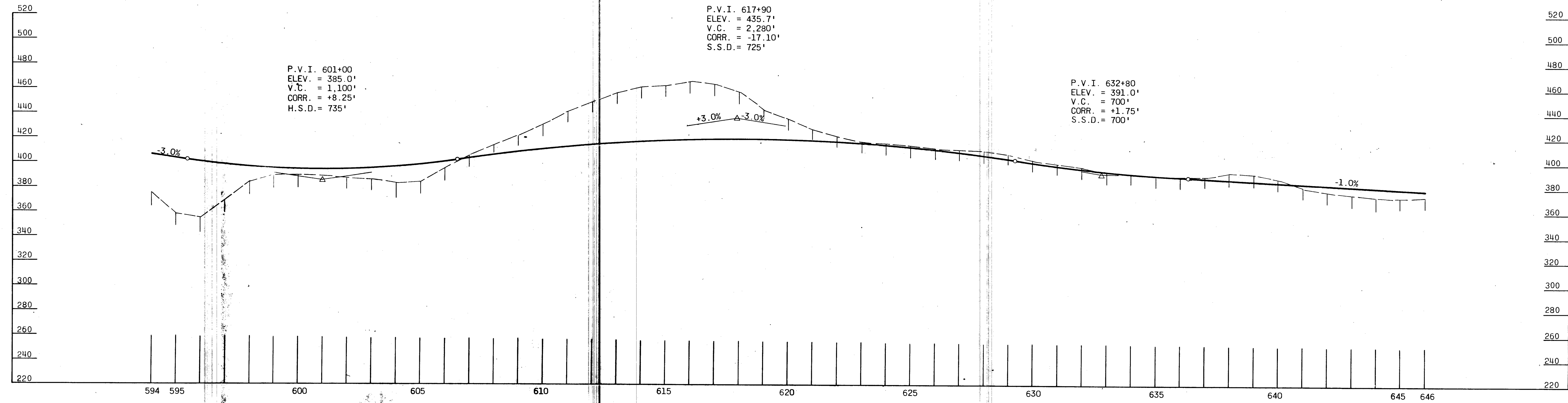
CRICKET CREEK

TROTTER ROAD

RELOCATED MARYLAND ROUTE 32

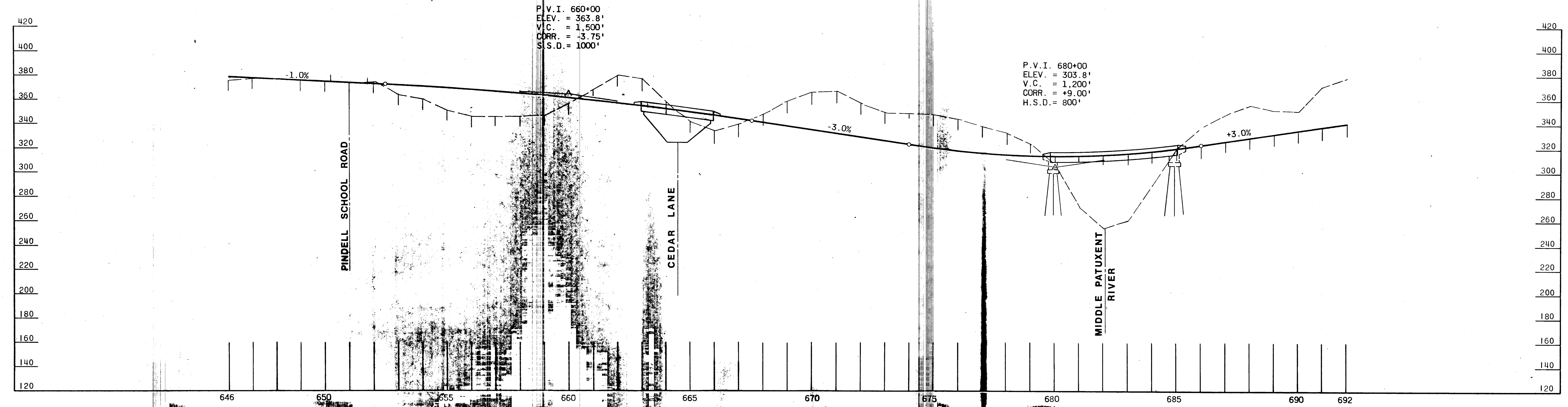
SCALE:
1" = 200' HORZ.
1" = 40' VERT.
STA. 542+ TO STA. 594+

180



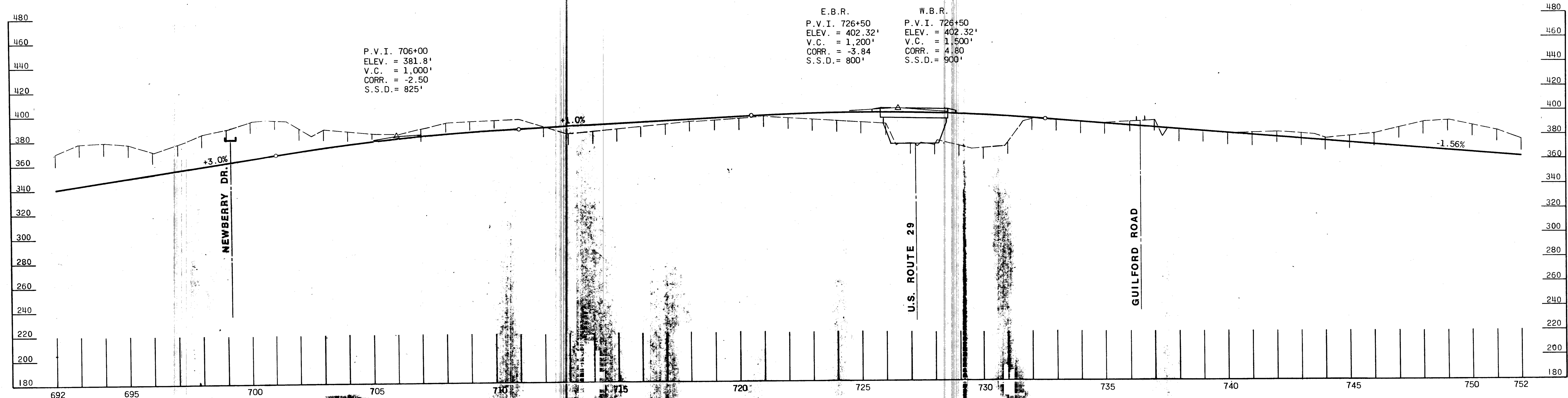
RELOCATED MARYLAND ROUTE 32

SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 STA. 594+ TO STA. 646+



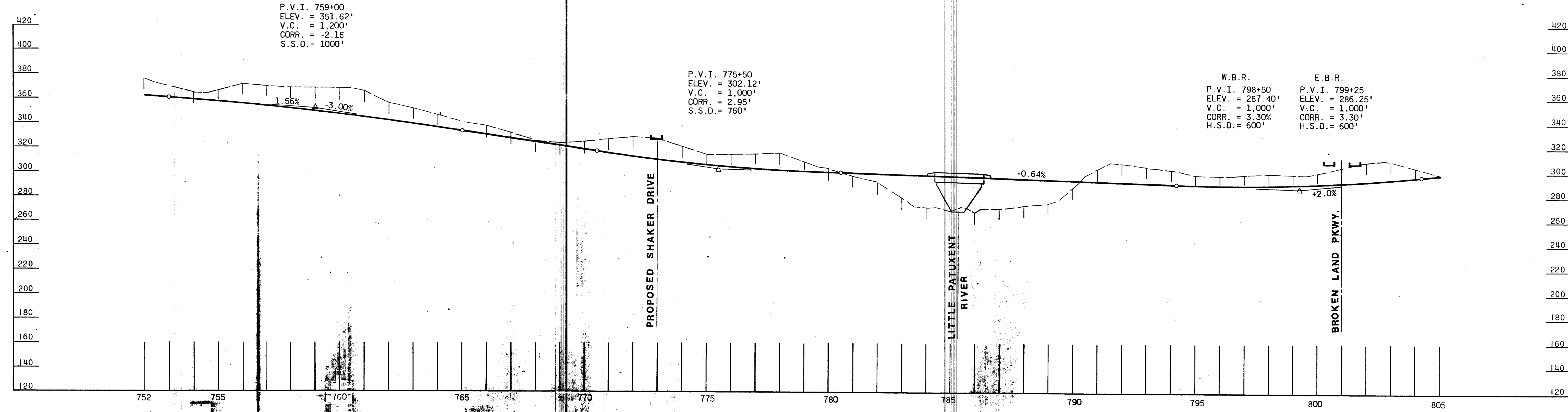
RELOCATED MARYLAND ROUTE 32

SCALE:
1" = 200' HORZ.
1" = 40' VERT.
STA. 646+ TO STA. 692+



RELOCATED MARYLAND ROUTE 32

SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 STA. 692+ TO STA. 752+



P.V.I. 759+00
ELEV. = 351.62'
V.C. = 1,200'
CORR. = -2.16
S.S.D. = 1000'

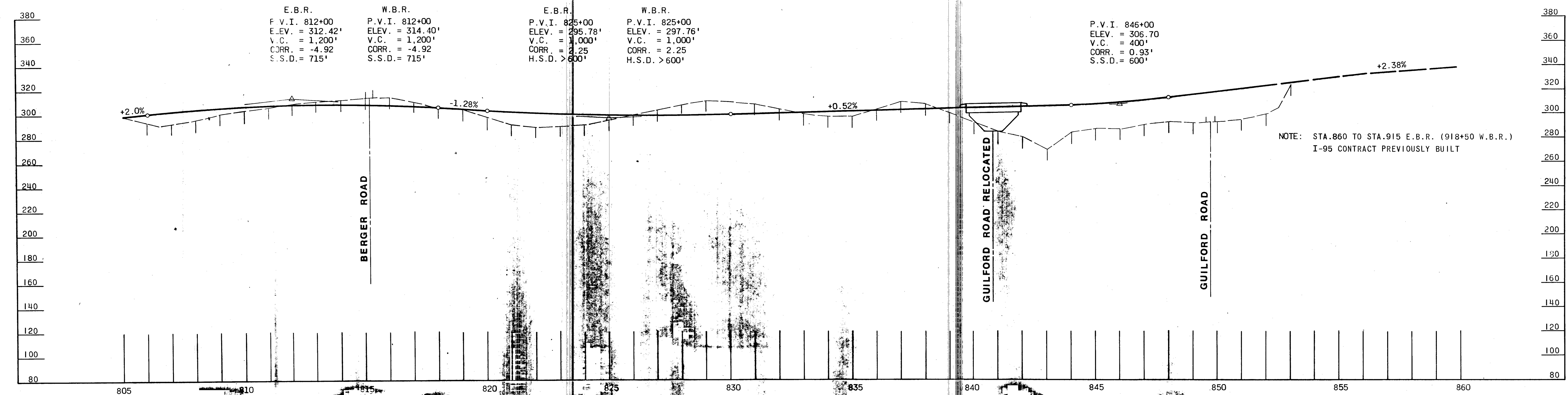
P.V.I. 775+50
ELEV. = 302.12'
V.C. = 1,000'
CORR. = 2.95'
S.S.D. = 760'

W.B.R.	E.B.R.
P.V.I. 798+50	P.V.I. 799+25
ELEV. = 287.40'	ELEV. = 286.25'
V.C. = 1,000'	V.C. = 1,000'
CORR. = 3.30%	CORR. = 3.30%
H.S.D. = 600'	H.S.D. = 600'

RELOCATED MARYLAND ROUTE 32

SCALE:
1" = 200' HORZ.
1" = 40' VERT.
STA. 752+ TO STA. 805+

20°

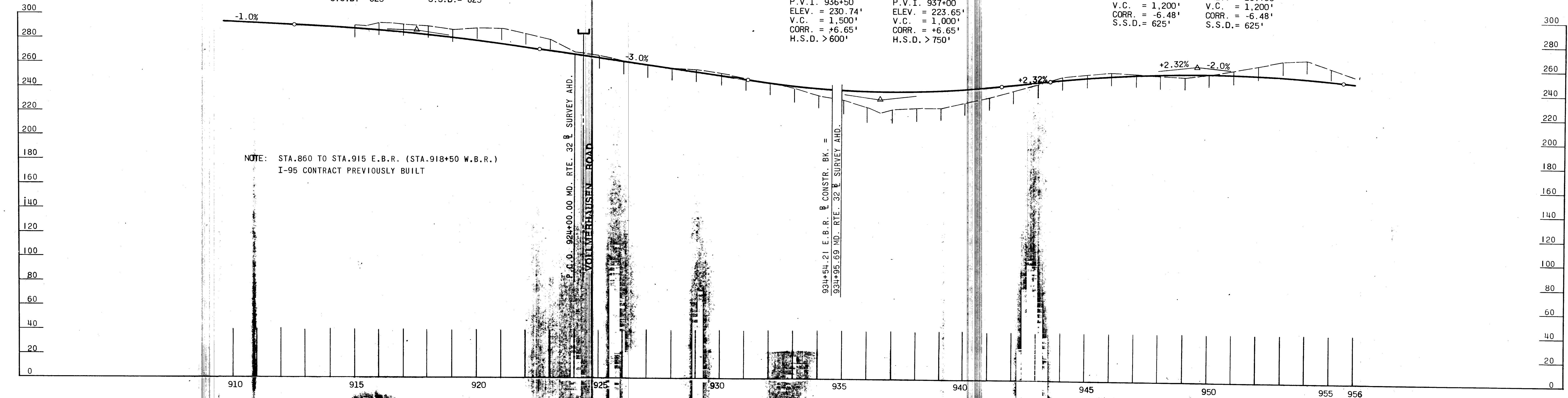


NOTE: STA.860 TO STA.915 E.B.R. (918+50 W.B.R.)
I-95 CONTRACT PREVIOUSLY BUILT

RELOCATED MARYLAND ROUTE 32

SCALE:
1" = 200' HORZ.
1" = 40' VERT.
STA.805+ TO STA.860+

201



E.B.R.	W.B.R.
P.V.I. 917+50	P.V.I. 920+50
ELEV. = 286.50'	ELEV. = 290.22'
V.C. = 1,000'	V.C. = 1,000'
CORR. = -2.50'	CORR. = -2.75'
S.S.D. = 825'	S.S.D. = 825'

E.B.R.	W.B.R.
P.V.I. 936+50	P.V.I. 937+00
ELEV. = 230.74'	ELEV. = 223.65'
V.C. = 1,500'	V.C. = 1,000'
CORR. = +6.65'	CORR. = +6.65'
H.S.D. > 600'	H.S.D. > 750'

E.B.R.	W.B.R.
P.V.I. 949+50	P.V.I. 949+50
ELEV. = 260.90	ELEV. = 257.65'
V.C. = 1,200'	V.C. = 1,200'
CORR. = -6.48'	CORR. = -6.48'
S.S.D. = 625'	S.S.D. = 625'

NOTE: STA. 860 TO STA. 915 E.B.R. (STA. 918+50 W.B.R.)
I-95 CONTRACT PREVIOUSLY BUILT

P.C. 924+00.00 MD. RTE. 32 SURVEY AHD.
VOLLMEYER ROAD

934+54.21 E.B.R. CONSTR. BK. =
934+95.69 MD. RTE. 32 SURVEY AHD.

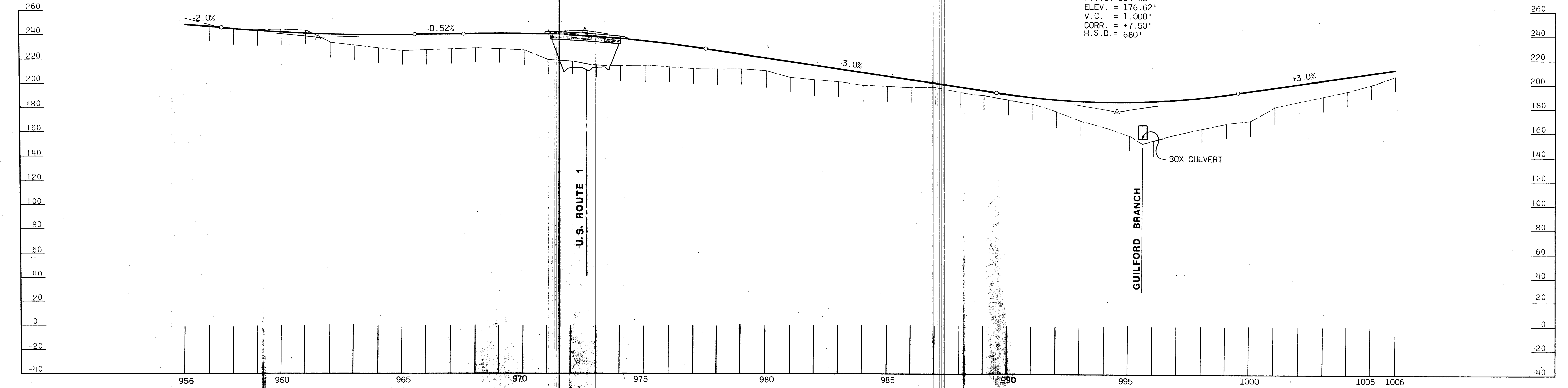
RELOCATED MARYLAND ROUTE 32

SCALE:
1" = 200' HORZ.
1" = 40' VERT.
STA. 910+ TO STA. 956+

202

E.B.R.	W.B.R.	E.B.R.	W.B.R.
P.V.I. 961+50	P.V.I. 961+00	P.V.I. 972+50	P.V.I. 972+50
ELEV. = 236.90'	ELEV. = 234.65'	ELEV. = 242.63'	ELEV. = 242.63'
V.C. = 800'	V.C. = 800'	V.C. = 1,000'	V.C. = 1,000'
CORR. = +2.52'	CORR. = +2.52'	CORR. = -4.40'	CORR. = 4.40'
S.S.D. = 850'	S.S.D. = 850'	S.S.D. = 785'	S.S.D. = 785'

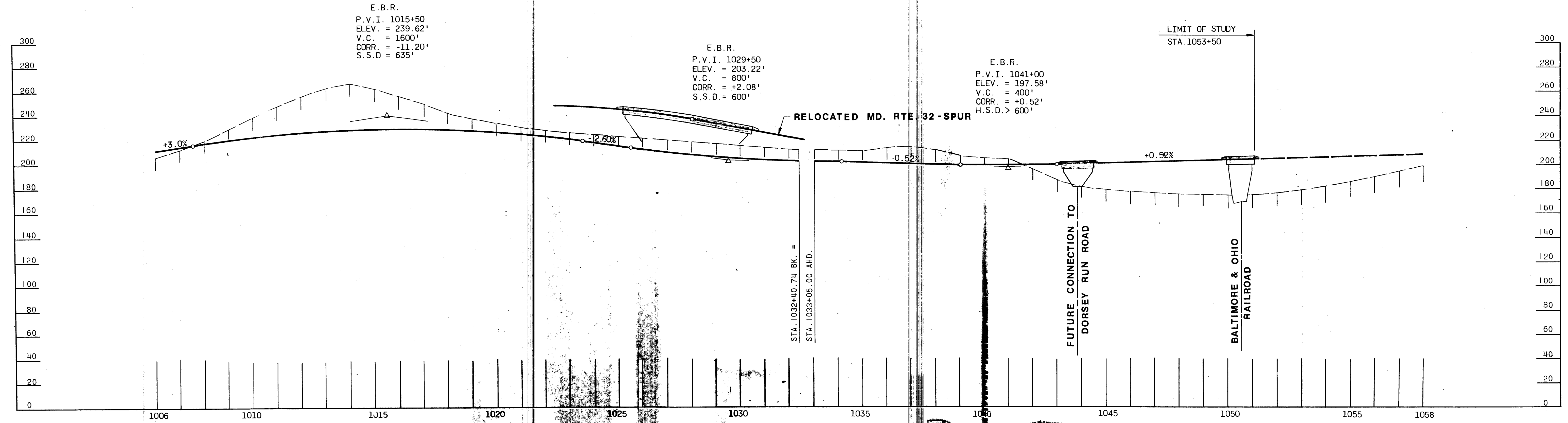
P.V.I. 994+50
 ELEV. = 176.62'
 V.C. = 1,000'
 CORR. = +7.50'
 H.S.D. = 680'



RELOCATED MARYLAND ROUTE 32

SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 STA. 956+ TO STA. 1006+

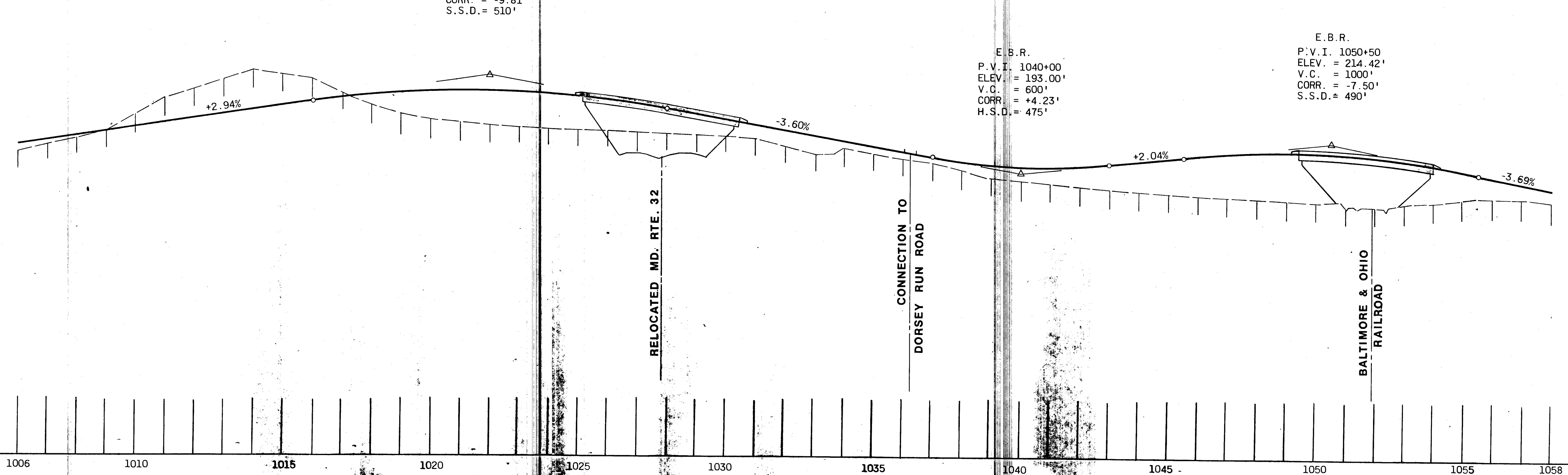
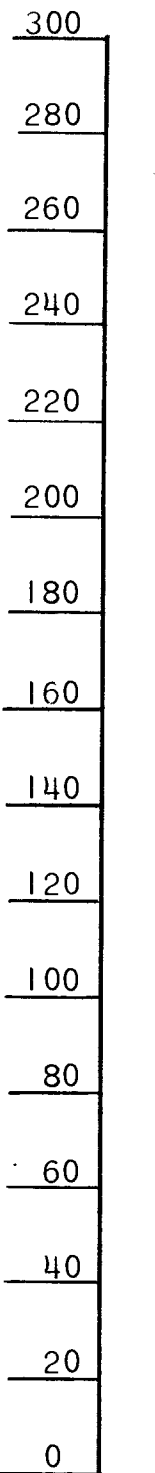
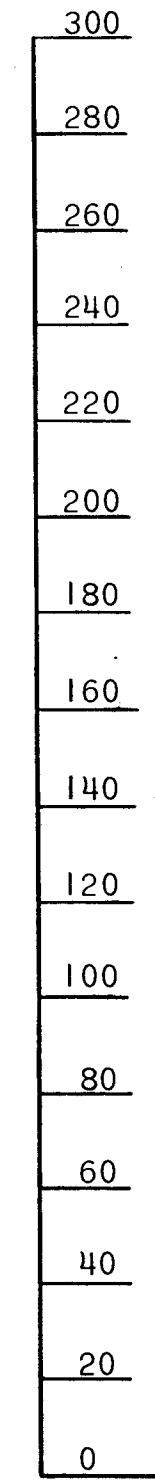
203



RELOCATED MARYLAND ROUTE 32

SCALE:
 1" = 200' HORIZ.
 1" = 40' VERT.
 STA. 1006+ TO STA. 1058+

204



E.B.R.
 P.V.I. 1022+00
 ELEV. = 257.80'
 V.C. = 1200'
 CORR. = -9.81'
 S.S.D. = 510'

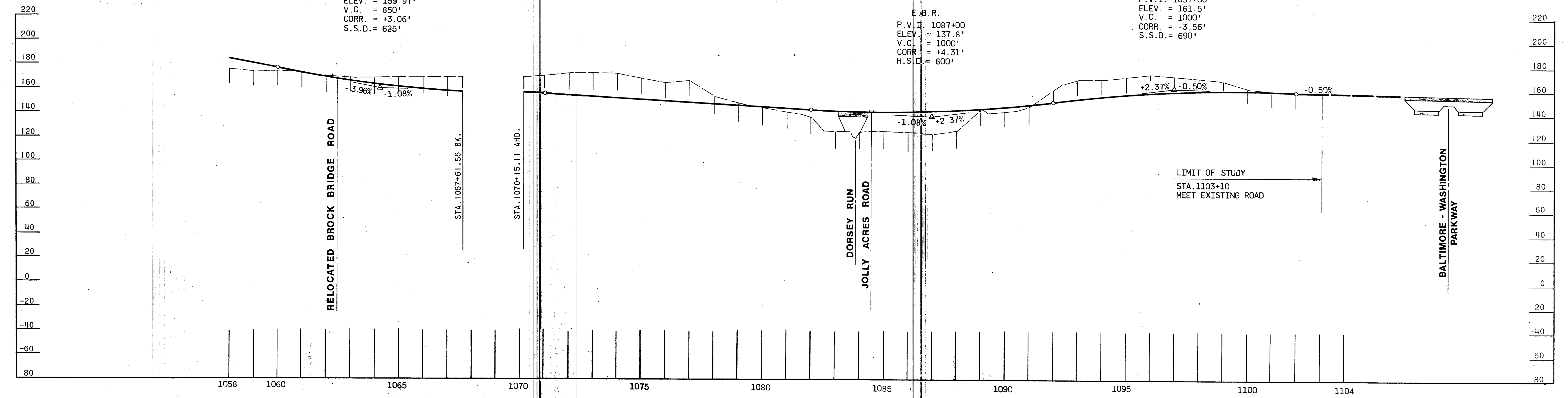
E.B.R.
 P.V.I. 1040+00
 ELEV. = 193.00'
 V.C. = 600'
 CORR. = +4.23'
 H.S.D. = 475'

E.B.R.
 P.V.I. 1050+50
 ELEV. = 214.42'
 V.C. = 1000'
 CORR. = -7.50'
 S.S.D. = 490'

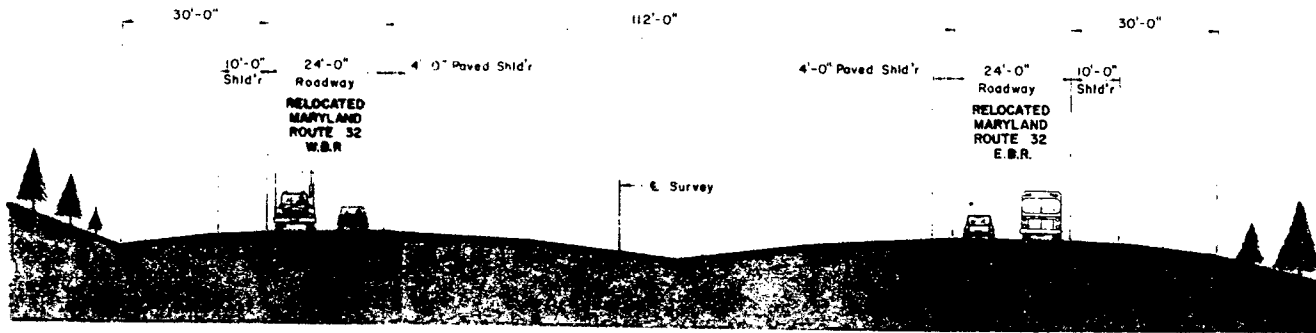
RELOCATED MARYLAND ROUTE 32 - SPUR

SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 STA. 1006+ TO STA. 1058+

205



SCALE:
 1" = 200' HORZ.
 1" = 40' VERT.
 RELOCATED MARYLAND ROUTE 32 - SPUR
 STA. 1058+ TO STA. 1104+



PHASE I CONSTRUCTION
TYPICAL SECTION

200

30'-0" SAFETY GRADE AREA IF
REQUIRED WITH INITIAL 24'-0" ROADWAY

9'-0" 30'-0" SAFETY 15'-0" 54'-0"
GRADE AREA ULTIMATE

10'-0" Paved
Shoulder

24'-0"
Roadway

4'-0" Paved
Shoulder

10'-0"
Paved
Shld'r

48'-0"
Roadway

FUTURE
RELOCATED
MARYLAND ROUTE 32
W.B.R.

10'-0"
Paved
Shld'r

64'-0"

E. Survey

10'-0"
Paved
Shld'r

48'-0"
Roadway

FUTURE
RELOCATED
MARYLAND ROUTE 32
E.B.R.

10'-0"
Paved
Shld'r

54'-0"

4'-0" Paved
Shoulder

24'-0"
Roadway

10'-0" Paved
Shoulder

30'-0" SAFETY GRADE AREA IF
REQUIRED WITH INITIAL 24'-0" ROADWAY

15'-0" 30'-0" SAFETY 9'-0"
ULTIMATE GRADE AREA

24'-0"
Roadway

10'-0" Paved
Shoulder

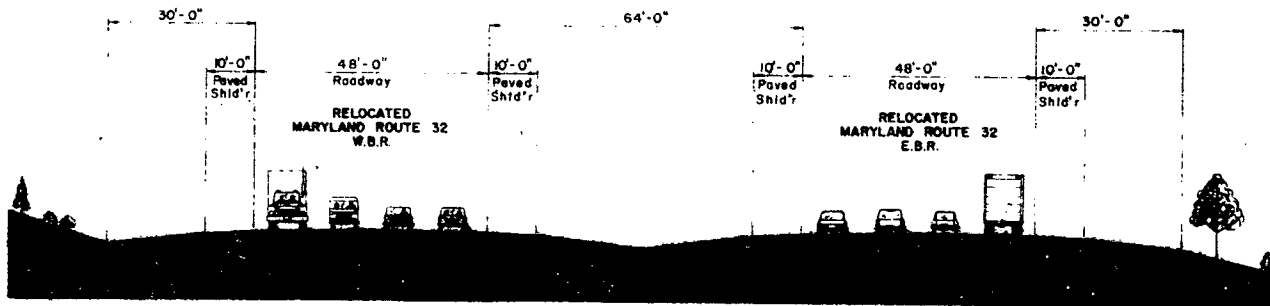
C-D
E.B.R.

PHASE I CONSTRUCTION TYPICAL SECTION

NOTE: IN THE VICINITY OF KING'S CONTRIVANCE
TO BROKEN LAND PARKWAY ONLY

267

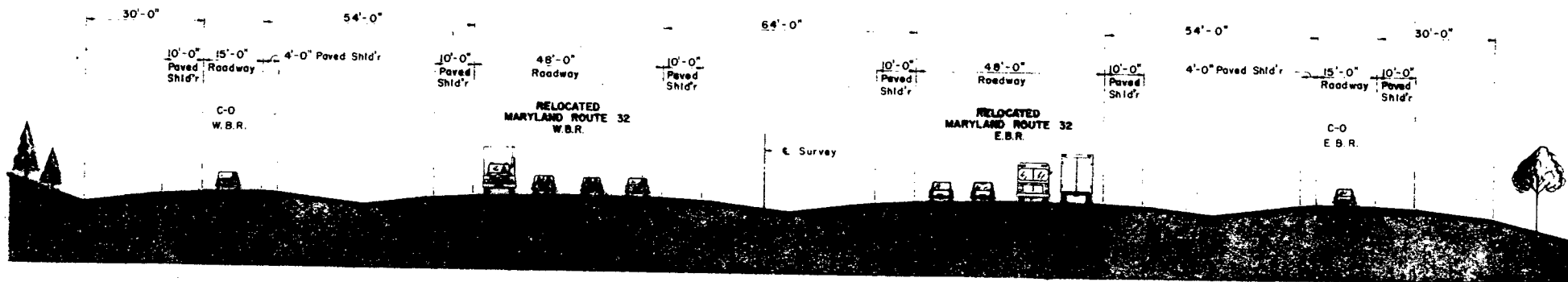
PLATE B-14



TYPICAL ULTIMATE SECTION
RELOCATED MARYLAND ROUTE 32

206

PLATE B-15



TYPICAL ULTIMATE SECTION
RELOCATED MARYLAND ROUTE 32

NOTE: IN THE VICINITY OF KING'S CONTRIVANCE
TO BROKEN LAND PARKWAY ONLY

209

PLATE B-16

APPENDIX "C"

Relocation Assistance Work Sheets

Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21202

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63.0-07-1 (10-15-74) Page 1 Preliminary Relocation Studies
Maryland Project: HO 292-44-771 Federal Aid Project: F 915-1(8)
Termini: W. of U. S. 29 to Md. 108

Alternate Number: _____ General File No. _____

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	DWLOS.	DWLS. UNITS	PAN.	IND.	TYPE OF CONSTRUCTION							AGE				ROOMS				BEDROOMS				ESTIMATED VALUE (000's) OR RENT (DOLLARS)					
					BRICK	FRAME LOG	COND.	DET.	SEM. DET.	ROW	MULTI FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	\$0-\$20	\$20-\$40	\$40 -		
OWNER OCCUPIED	1	1	1			1		1							1												1		
TENANT OCCUPIED																													
TOTALS	1	1	1			1		1							1											1			

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASBTRD PRICE RANGE (000's)	DWLOS.	TYPE OF CONSTRUCTION							AGE				ROOMS				BEDROOMS				MONTHLY RENT				Condo. & APT.	ROOMS	TOTALS							
		BRICK	FRAME	COND.	DET.	SEM. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250				\$250 to \$300	\$300 & UP					
\$0-20	5		5		5			4	1				2	3												5								
\$20-40	25		24	1	25			10	8	7			2	9	7	3	4				7	12				6								
\$40 -	30	2	23	5	30			21	9				2	11	11	6				1	23				6									
TOTALS	60	2	52	6	60			35	18	7			2	13	21	14	10			8	40	12			12									

Sources: Howard Co. M.S., A.A. Co. M.S.

Sources: Howard Co. M.S., Baltimore Sun & Washington Post Newspapers

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANCY STATUS	BUSINESSES					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	COOL	HTER.	CHAIN	EMP.	DAIRY	CATTIE	CRUES	Sw.	REL.	SOC.	INST.	EXP.
OWNER													
TENANT													
TOTALS													

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESS	NON-PROFIT	FARMS
LEASE			
TOTALS			

Sources: _____
Remarks: _____

* Estimated average family size _____ See interview sheets
Estimated total number persons affected _____
Estimated total number of minority group members affected _____, number of owner occupant families _____, number of tenant occupant families _____, and number of individuals _____

Estimated number of minority owned or operated businesses _____
Estimated number of minority employees _____
Estimated number of minority owned or operated farms _____
Estimated number of minority employees _____
Estimated number of minority non-profit organizations _____
Estimated number of minority employees _____

Signature: _____

(RELOCATION OFFICER)

9/28/75

(DATE)

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Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63.0-07-1 (10-35-74) Page 1 Preliminary Relocation Studies
Maryland Project: HO 292-31-771 Federal Aid Project: F 915-1(8)
Terminus: Berger Road to U. S. 29
Alternate Numbers: _____ General File No. _____

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement X Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	TWLOS.	DMO. UNITS	FAM.	IND.	TYPE OF CONSTRUCTION								AGE								ROOFS	BETHRMS	ESTIMATED VALUE (000's) OR RENT (USE 10%)																							
					BRICK	FRAME	COND.	DET.	SEM. DET.	ROW	MULTY FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up			1	2	3	4 up	\$0-\$20	\$20-\$40	\$40 -																	
OWNER OCCUPIED	1	1	1		1			1							1						1																	1								
TENANT OCCUPIED																																														
TOTALS	1	1	1		1			1							1																												1			

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASKING PRICE RANGE (000's)	IMPLS.	TYPE OF CONSTRUCTION								AGE			ROOFS								BETHRMS																						
		BRICK	FRAME	COND.	DET.	SEM. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up																							
\$0-20	5		5						4	1				2	3					5																							
\$20-40	25		24		1	25			10	8	7			2	9	7	3	4		7	12	6																					
\$40 -	30	2	23		5	30			21	9				2	11	11	6		1	23	6																						
TOTALS	60	2	52		6	60			35	18	7			2	13	21	14	10		8	40	12																					

MR.	MONTHLY RENT									Cond. & APT.	NORMS	TOTALS
	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP	1	2	3			
1		1	1	6						7	1	8
2			5	4	14					21	2	23
3			1		3	4				3	5	8
4 up						1				1	1	1

Sources: Howard Co. MIS, A.A. Co. MIS

Sources: Howard Co. MIS, Baltimore Sun & Washington Post Newspapers

BUSINESS, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

AVAILABLE REPLACEMENT SITES

OCCUPANCY STATUS	BUSINESS					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	CONC.	MPR.	CHAIN	EXP.	DAIRY	CATTIE	TRUCK	EXP.	REL.	SOC.	INST.	EXP.
OWNER													
TENANT	2				15								
TOTALS	2				15								

TYPE OF SITE	BUSINESS	NON-PROFIT	FARMS
SALE	3		
LEASE	3		
TOTALS	6		

Sources: Howard County MIS

Remarks: Subject to suitability of each individual business operator.

* Estimated average family size _____ See interview sheets
Estimated total number persons affected _____
Estimated total number of minority group members affected _____, number of owner occupant families _____, number of tenant occupant families _____, and number of individuals _____

Estimated number of minority owned or operated businesses _____
Estimated number of minority employees _____
Estimated number of minority owned or operated farms _____
Estimated number of minority employees _____
Estimated number of minority non-profit organizations _____
Estimated number of minority employees _____

Signature: [Handwritten Signature] (RELOCATION OFFICER) Date: 9/28/75 (DATE)

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Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 602
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63.0-07-1 (10-35-74) Page 1 Preliminary Relocation Studies

Maryland Project: HO 292-29-771 Federal Aid Project: F 915-1(8)
Termini: Md. Rte. 32, I-95 to Berger Road

Alternate Number: _____ General File No. _____

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement X Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	DWLS.	BMLS UNITS	FAM.	IND.	TYPE OF CONSTRUCTION							AGE								ROOMS				BEDROOMS				ESTIMATED VALUE (000's) OR RENT (USE 10's)						
					BRICK	FRAME	CONC.	DET.	SEN. DET.	ROW	MULTI FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	\$0-\$20	\$20-\$40	\$40 -							
OWNER OCCUPIED	1	1	1			1									1				1					1										
TENANT OCCUPIED	1	1		1	1			1								1																		
TOTALS	2	2	1	1	1	1		2							1	1							1											

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASSTG PRICE RANGE (000's)	DWLS.	TYPE OF CONSTRUCTION							AGE			ROOMS				BEDROOMS				
		BRICK	FRAME	CONC.	DET.	SEN. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up
\$0-20	5		5		5			4	1				2	3					5	
\$20-40	25		24	1	25			10	8	7		2	9	7	3	4		7	12	6
\$40 -	30	2	23	5	30			21	9			2	11	11	6		1	23	6	
TOTALS	60	2	52	6	60			35	18	7		2	13	21	14	10	8	40	12	

Sources: Howard Co. MLS, A.A. Co. MLS

FOR RENT

MTH.	MONTHLY RENT						APT.	ROWES	TOTALS
	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP			
1		1	1	6			7	1	8
2			5	4	14		21	2	23
3			1		3	4	3	5	8
4 up						1		1	1

Sources: Howard Co. MLS, Baltimore Sun & Washington Post Newspapers

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANCY STATUS	BUSINESSES					FARMS			NON-PROFIT ORGANIZATIONS			
	RETAIL	COMM.	MANUF.	CHAM.	EXP.	DAIRY	CATTIE	TRUCK	REL.	SOC.	INST.	EXP.
OWNER												
TENANT												
TOTALS												

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESSES		NON-PROFIT		FARMS
	BUSINESSES	NON-PROFIT	BUSINESSES	NON-PROFIT	
SALE					
LEASE					
TOTALS					

Sources: _____
Remarks: _____

* Estimated average family size _____
Estimated total number persons affected _____ See interview sheets
Estimated total number of minority group members affected _____
number of occupant families _____, number of owner occupant families _____, and
number of individuals _____, number of tenant occupant families _____

Estimated number of minority owned or operated businesses _____
Estimated number of minority employees _____
Estimated number of minority owned or operated farms _____
Estimated number of minority employees _____
Estimated number of minority non-profit organizations _____
Estimated number of minority employees _____

Signature: _____

(RELOCATION OFFICER)

9/28/75

(DATE)

213

Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63.0-09-1 (10-15-74) Page 1 Preliminary Relocation Studies

Maryland Project: HO 292-28-771 Federal Aid Project: F 915-1(8)

Terminus: Md. Rte. 32, U. S. 1 to I-95

Alternate Number: _____ General File No. _____

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement X Acquisition Stage Study _____

NONE		DWLOS.	DWLO. UNITS	FAN.	IND.	TYPE OF CONSTRUCTION								AGE								ROOMS								BEHROOMS				ESTIMATED VALUE (000's) OF RENT (USE 10%)		
						BRICK	FRAME	CONC.	DET.	SEM. DET.	ROW	MULTI FAN.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	\$0-\$20	\$20-\$40	\$40 -								
OWNER OCCUPIED																																				
TENANT OCCUPIED																																				
TOTALS																																				

RESIDENTIAL IMPROVEMENTS AVAILABLE FOR SALE		DWLOS.	TYPE OF CONSTRUCTION								AGE								ROOMS								BEHROOMS								MONTHLY RENT					
			BRICK	FRAME	CONC.	DET.	SEM. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP	APT.	HOUSES	TOTALS										
ASKED PRICE RANGE (000's)																																								
\$0-20																																								
\$20-40																																								
\$40 -																																								
TOTALS																																								

Sources: _____

Sources: _____

OCCUPANCY STATUS	BUSINESSES					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	CONV.	NGCH.	CHAIN	EXP.	Dairy	CATTLE	TRUCK	EXP.	REL.	SOC.	INST.	EXP.
OWNER													
TENANT													
TOTALS													

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESSES	NON-PROFIT	FARMS
SALE			
LEASE			
TOTALS			

Sources: _____
Remarks: _____

Estimated average family size: _____
Estimated total number persons affected: _____
Estimated total number of minority group members affected: _____, number of owner occupant families: _____, number of tenant occupant families: _____, and number of individuals: _____

Estimated number of minority owned or operated businesses: _____
Estimated number of minority employees: _____
Estimated number of minority owned or operated farms: _____
Estimated number of minority employees: _____
Estimated number of minority non-profit organizations: _____
Estimated number of minority employees: _____

Signature: John E. Koppert (RELOCATION OFFICER) Date: 9/28/75

Bill

Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63-0-07-1 (10-35-75) Page 1 Preliminary Relocation Studies
Maryland Project: HO 292-23-771 Federal Aid Project: F915-1(8)
Terrains: Md. Rte. 32, A.A. Co. Line to U. S. 1
Alternate Number: _____ General File No. _____

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	DWLS.	DWLS. UNITS	FAM.	IND.	TYPE OF CONSTRUCTION										ROOMS								BEDROOMS				ESTIMATED VALUE (000's) (OR RENT (USE 10K))					
					BRICK	FRAME	CCNS.	DET.	SEN. DET.	ROW	MULTY FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	\$0-\$20	\$20-\$50	\$50 -					
OWNER OCCUPIED	2	2	2			2		2									2												1	1		
TENANT OCCUPIED	2	2	2			2		2									1	1											1	1		
TOTALS	4	4	4			4		4									1	3											2	2		

RESIDENTIAL IMPROVEMENTS AVAILABLE

		FOR SALE											FOR RENT																					
ASSTD PRICE RANGE (000's)	DWLS.	TYPE OF CONSTRUCTION						AGE			ROOMS					BEDROOMS				MONTHLY RENT						APT.	ROOMS	TOTALS						
		BRICK	FRAME	COND.	DET.	SEN. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300				\$300 & UP					
\$0-20	5		5		5				4	1																								
\$20-40	25		24	1	25			10	8	7			2	9	7	3	4			7	12	6												
\$40 -	30	2	23	5	30			21	9				2	11	11	6			1	23	6													
TOTALS	60	2	52	6	60			35	18	7			2	13	21	14	10			8	40	12												

Sources: Howard Co. MLS, A.A. Co. MLS, Baltimore Sun and Washington Post Newspapers

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANCY STATUS	BUSINESSES					FARMS					NON-PROFIT ORGANIZATIONS			
	RETAIL	CONC.	MPGR.	CHRN	EXP.	DAIRY	CATTLE	TRUCK	EXP.	MIL.	SOC.	INST.	EXP.	
OWNER														
TENANT														
TOTALS														

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESSES	NON-PROFIT	FARMS
SALE			
LEASE			
TRANS.			

Sources: _____
Remarks: _____

Estimated average family size: _____
Estimated total number persons affected: _____
Estimated total number of minority group members affected: 0, number of owner occupant families: 0, number of tenant occupant families: 0, and number of individuals: 0.
See interview sheets

Estimated number of minority owned or operated businesses: 0
Estimated number of minority employees: 0
Estimated number of minority owned or operated farms: 0
Estimated number of minority employees: 0
Estimated number of minority non-profit organizations: 0
Estimated number of minority employees: 0

Signature: [Signature] 9/28/75 (DATE)
(RELOCATION OFFICER)

2115

Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63,0-UP-1 (10-15-74) Page 1 Preliminary Relocation Studies
Maryland Project: AA 739-2-573 Federal Aid Project: F 915-1 (5)
Terrain: Md. Rte. 32, A. C. Co. Line to B/W Expressway
Alternate Number: _____ General File No. 61305

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	DWLOS.	DWLD. UNITS	FAM.	IND.	TYPE OF CONSTRUCTION										ROOMS							BEDROOMS				ESTIMATED VALUE (000's) OR RENT (USE ICI)		
					BRICK	FRAME	CONB.	DET.	SEM. DET.	ROW	MULTY FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up.	1	2	3	4 up	10-20	20-40	40 -	
																					1	1	1	1	1	1	1	1
OWNER OCCUPIED	1	1	1				1		1																1			
TENANT OCCUPIED	1	1	1				1		1					1												1	1	
TOTALS	2	2	2				2		2					1											1	1		

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASSED PRICE RANGE (000's)	DWLOS.	TYPE OF CONSTRUCTION										ROOMS							BEDROOMS							FOR RENT										
		BRICK	FRAME	CONB.	DET.	SEM. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	MONTHLY RENT															
																					0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP	AFT.	ROOFS	TOTALS							
\$0-20																																				
\$20-40	38	28	10		11		27	32	4	2			6	30	2																			3	-	3
\$40 -																																				
TOTALS	38	28	10		11		27	32	4	2			6	30	2																					

Sources: Houses listed above are from A.A. Co. Multiple Listing in Fourth Election District dated 7/25/75

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANCY STATUS	BUSINESSES					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	COMM.	OFFER.	CHAM.	EMP.	DAIRY	CATTLE	TRUCK	EMP.	REL.	SOC.	INDT.	EMP.
OWNER													
TENANT													
TOTALS													

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESS	NON-PROFIT	FARMS
SALE			
LEASE			
TO LEASE			

Sources: A. A. Co. Multiple Listing, newspaper,

XXXXXX property managers
Remarks: The tenant may present a problem, as there is a severe shortage of low cost homes and apartments in area.

Estimated average family size _____
Estimated total number persons affected _____
Estimated total number of minority group members affected _____, number of owner occupant families _____, number of tenant occupant families _____, and number of individuals _____

Estimated number of minority owned or operated businesses _____
Estimated number of minority employees _____
Estimated number of minority owned or operated farms _____
Estimated number of minority employees _____
Estimated number of minority non-profit organizations _____
Estimated number of minority employees _____

Signature: Richard H. London

(RELOCATION OFFICER)

8-11-75

(DATE)

216

2:17

APPENDIX "D"

Air Quality Study

LOCATION OF SECTION LINES

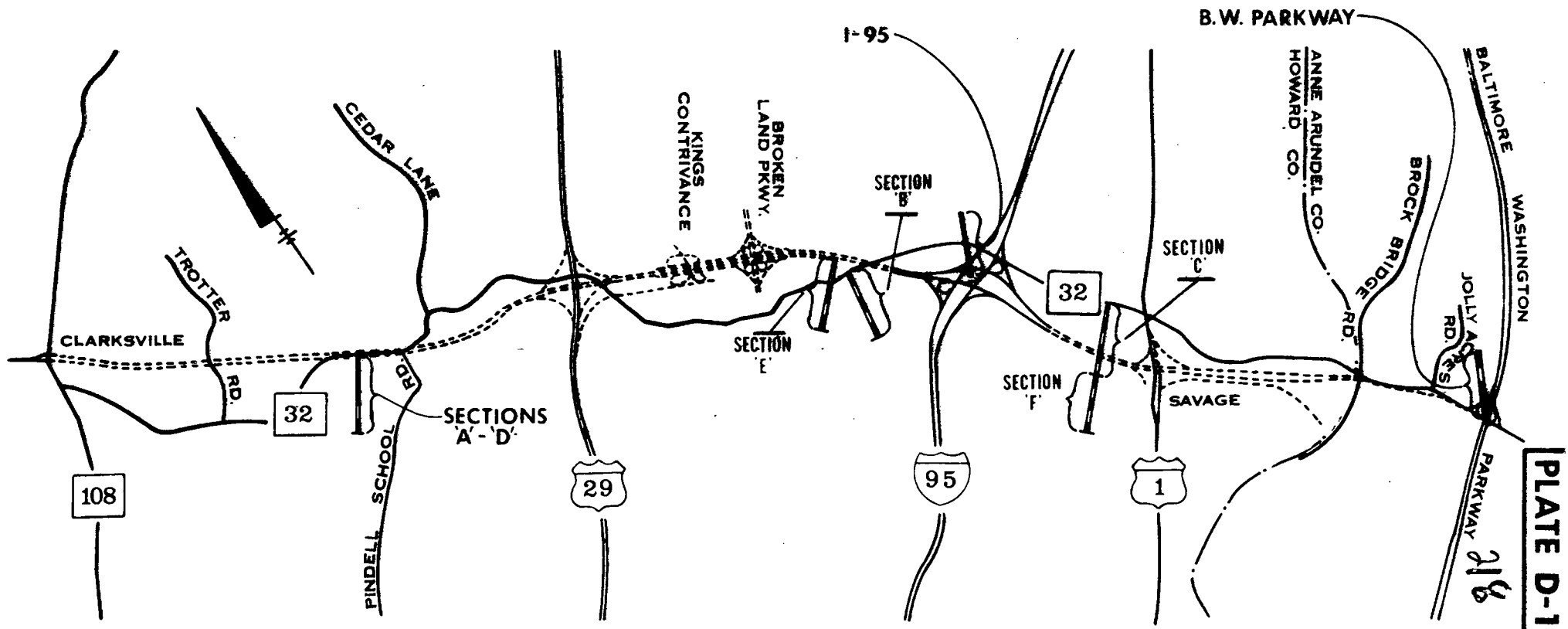
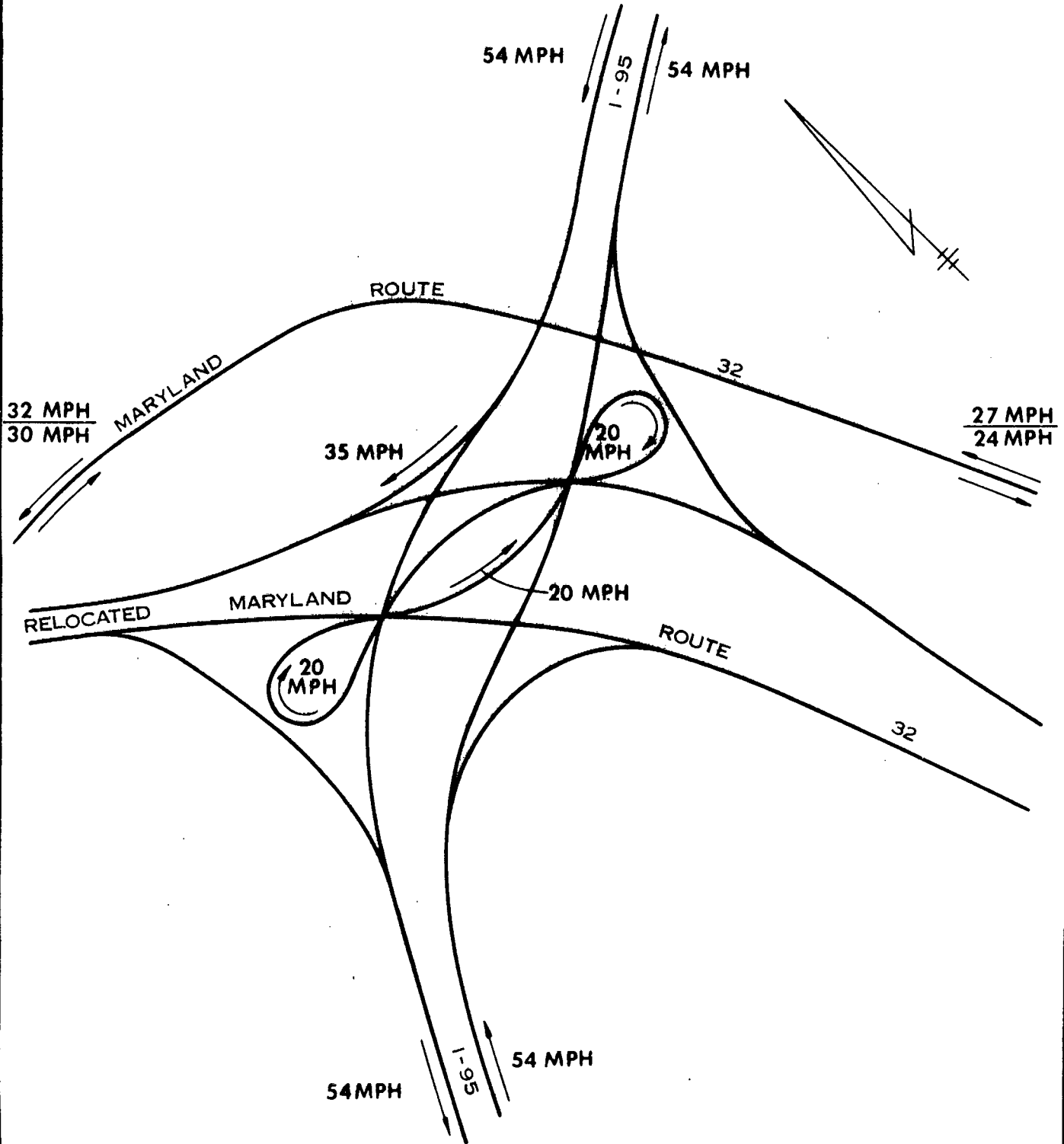


PLATE D-1

**PEAK HOUR
OPERATING SPEEDS
NO BUILD
1980 & 2000**

PLATE D-2

219

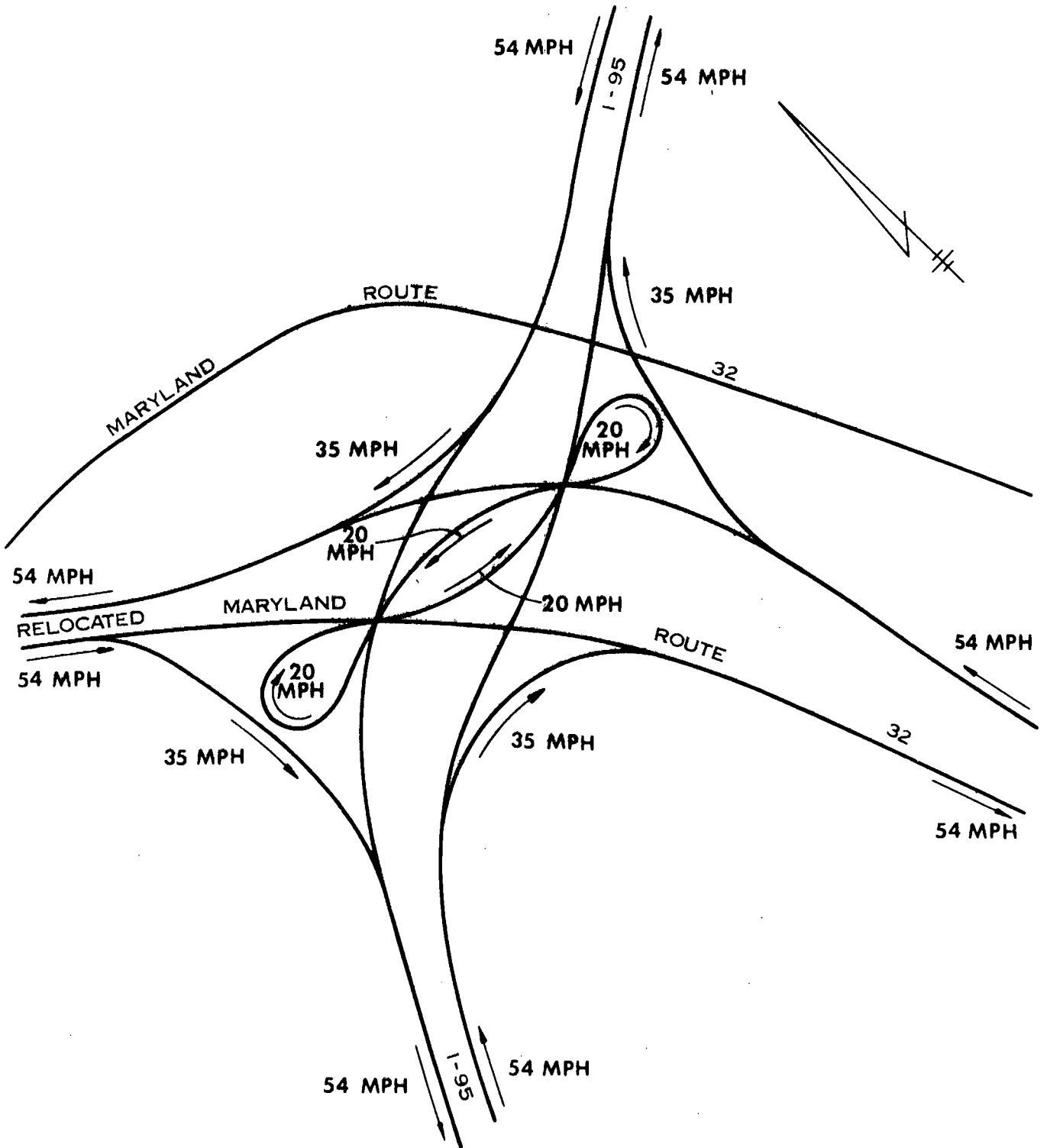


**RELOCATED MARYLAND ROUTE 32
I-95 INTERCHANGE
NO SCALE**

404

**PEAK HOUR
OPERATING SPEEDS
CONSTRUCT
1980 & 2000**

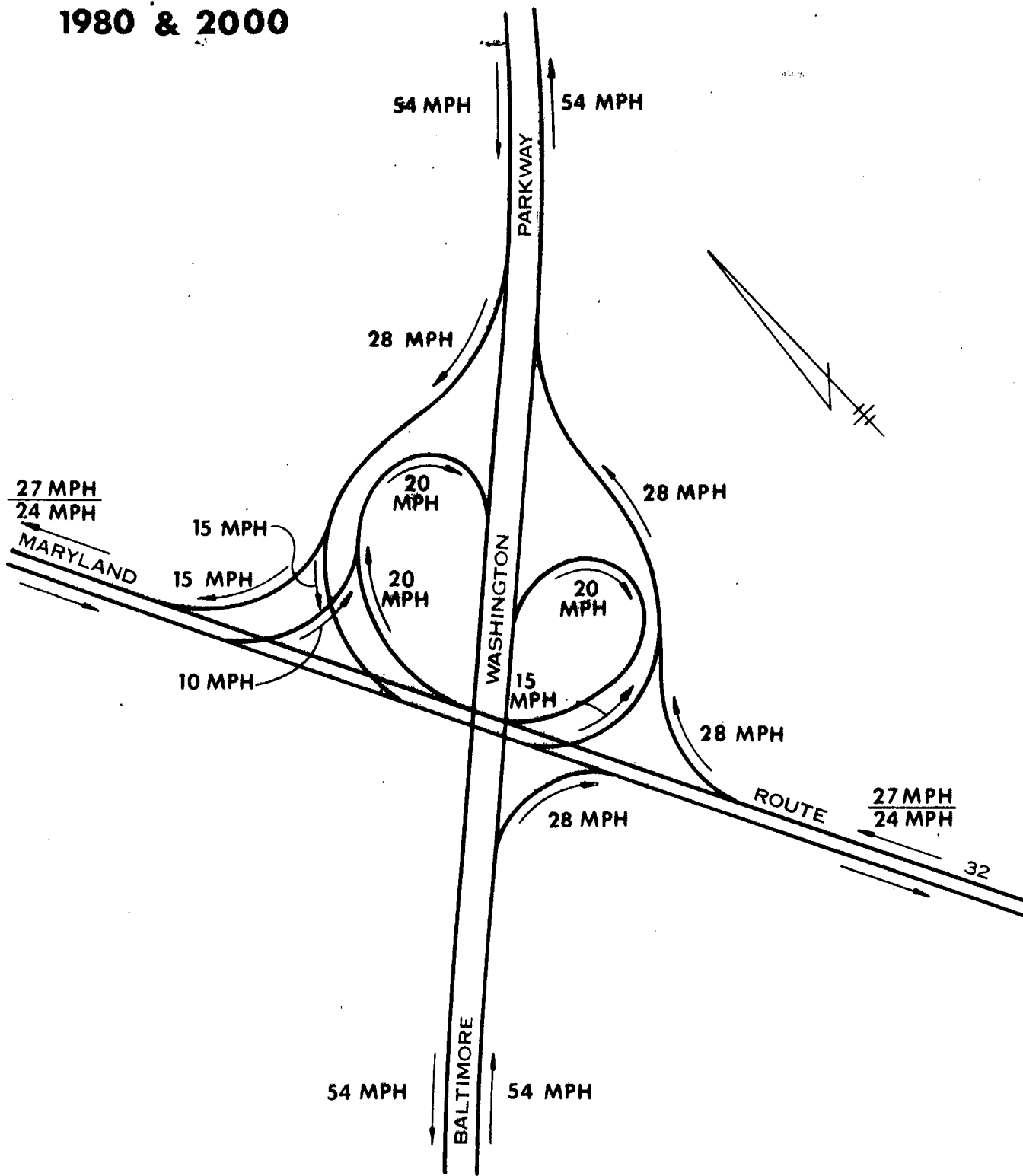
220



**RELOCATED MARYLAND ROUTE 32
I-95 INTERCHANGE
NO SCALE**

**PEAK HOUR
OPERATING SPEEDS
NO BUILD
1980 & 2000**

221

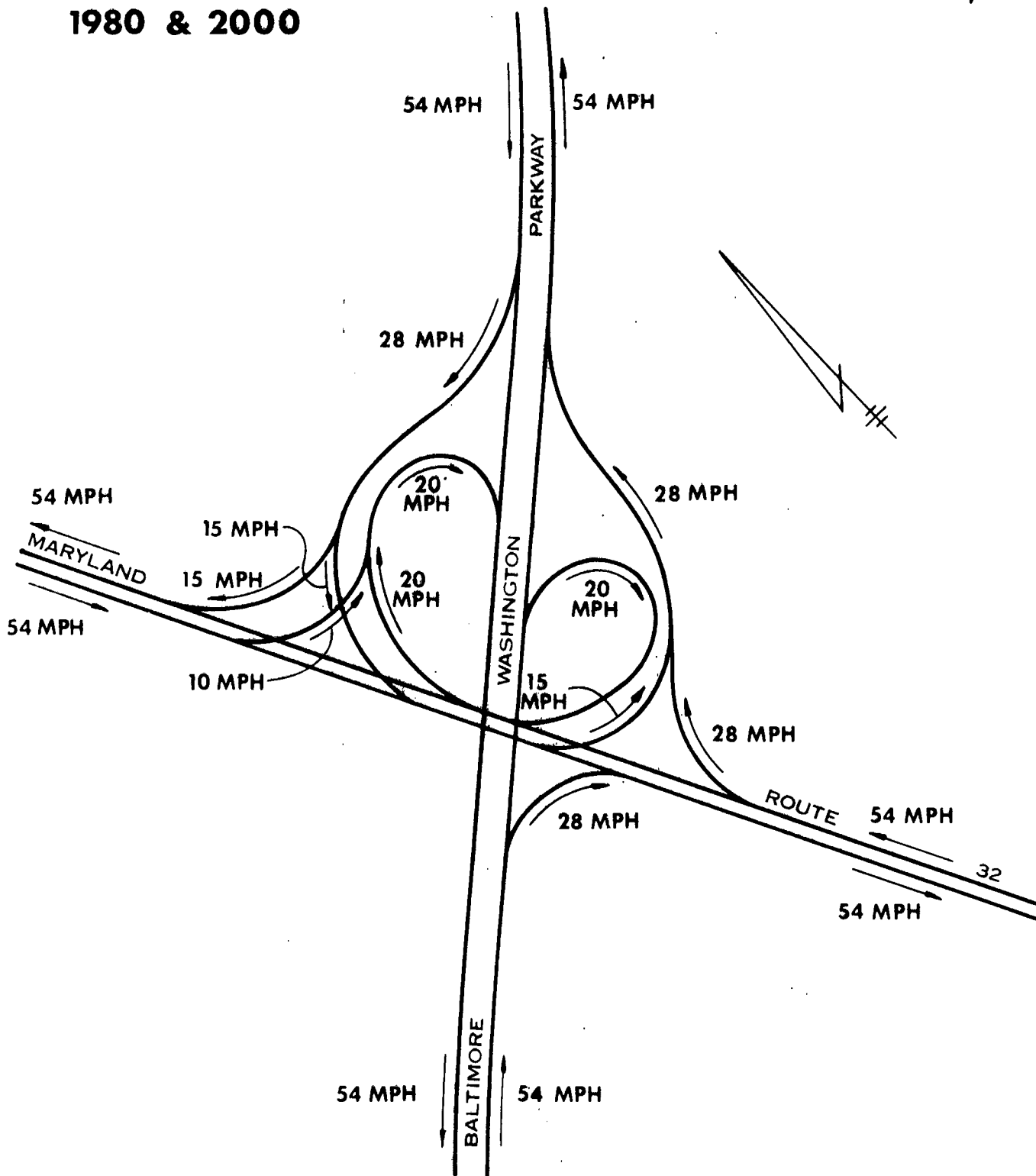


**RELOCATED MARYLAND ROUTE 32
BALTIMORE WASHINGTON
PARKWAY
NO SCALE**

**PEAK HOUR
OPERATING SPEEDS
CONSTRUCT
1980 & 2000**

PLATE D-5

222



**RELOCATED MARYLAND ROUTE 32
BALTIMORE WASHINGTON
PARKWAY
NO SCALE**

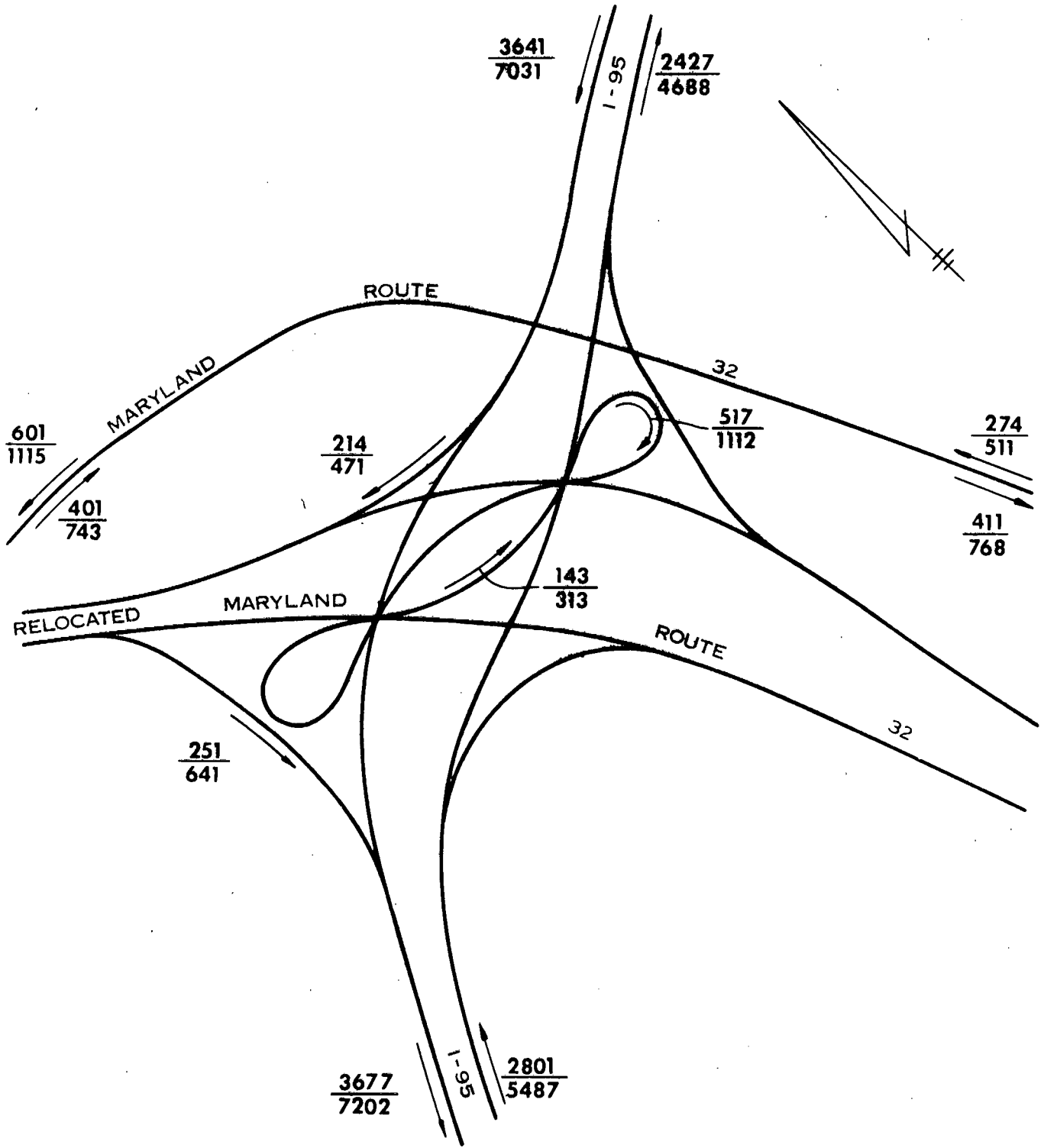
PEAK HOUR TRAFFIC

PLATE D-6

NO BUILD

1980
2000

223

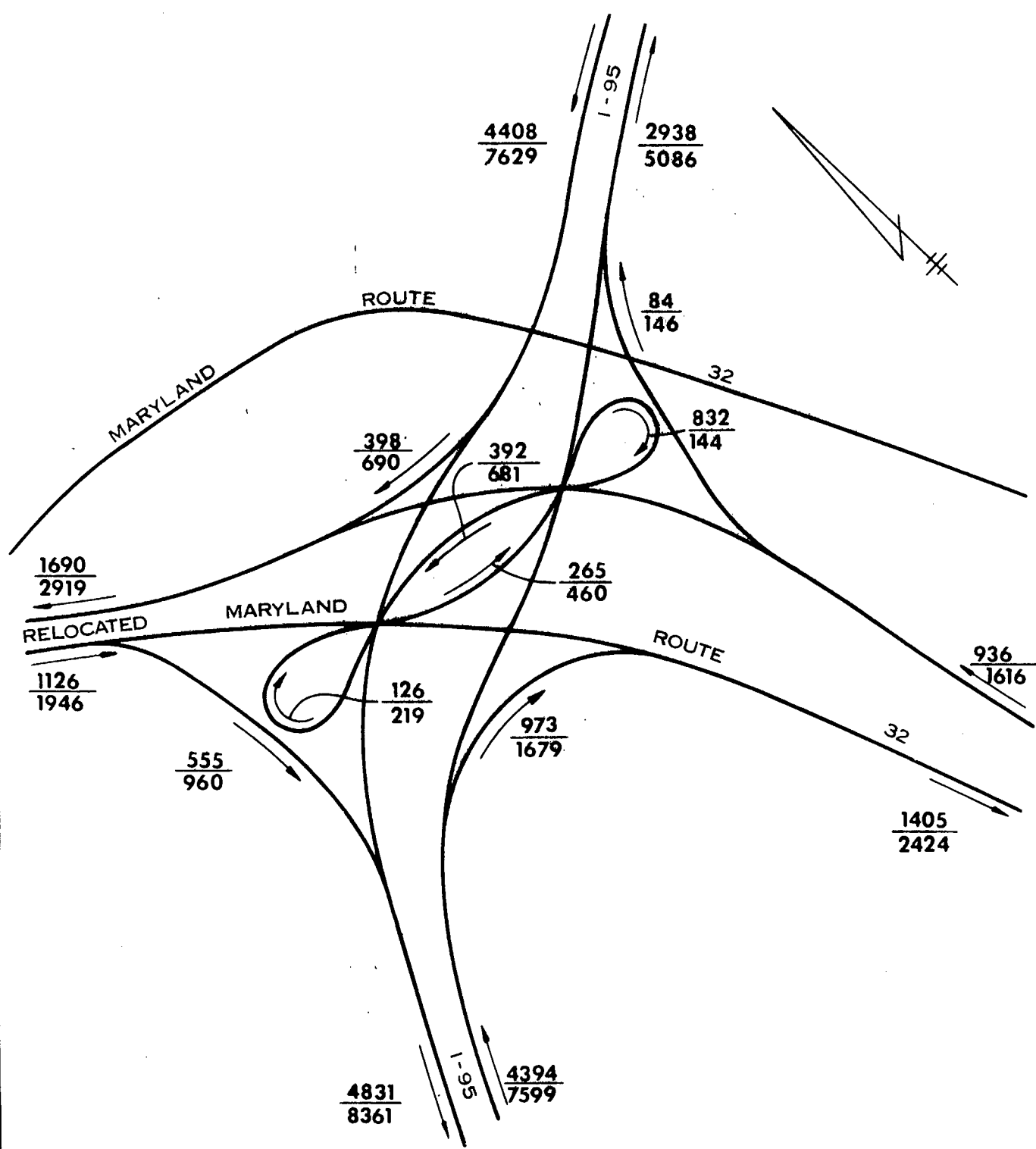


RELOCATED MARYLAND ROUTE 32
I-95 INTERCHANGE
NO SCALE

224

PEAK HOUR TRAFFIC CONSTRUCT

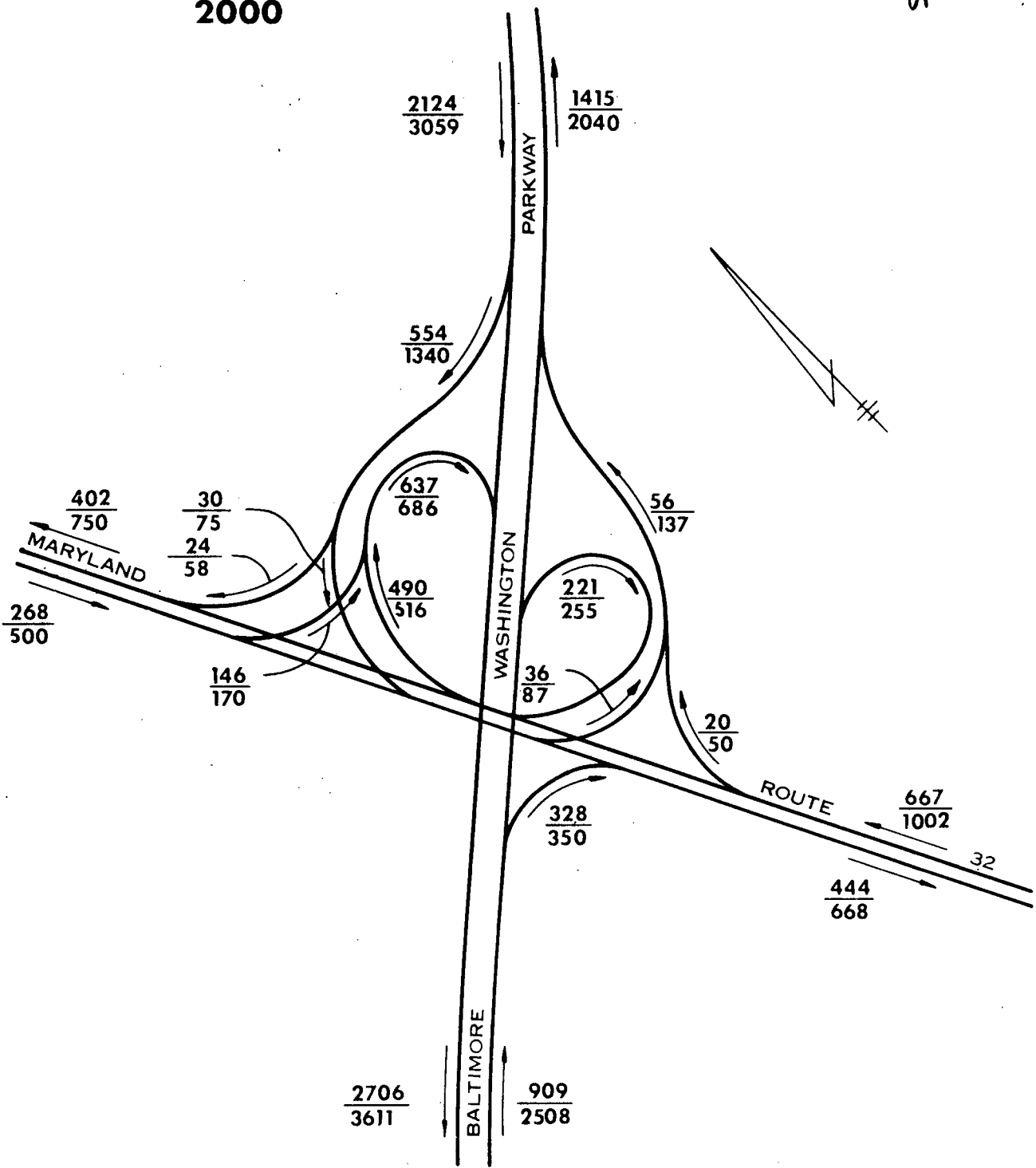
1980
2000



RELOCATED MARYLAND ROUTE 32
I-95 INTERCHANGE
 NO SCALE

PEAK HOUR TRAFFIC
NO BUILD
1980
2000

225

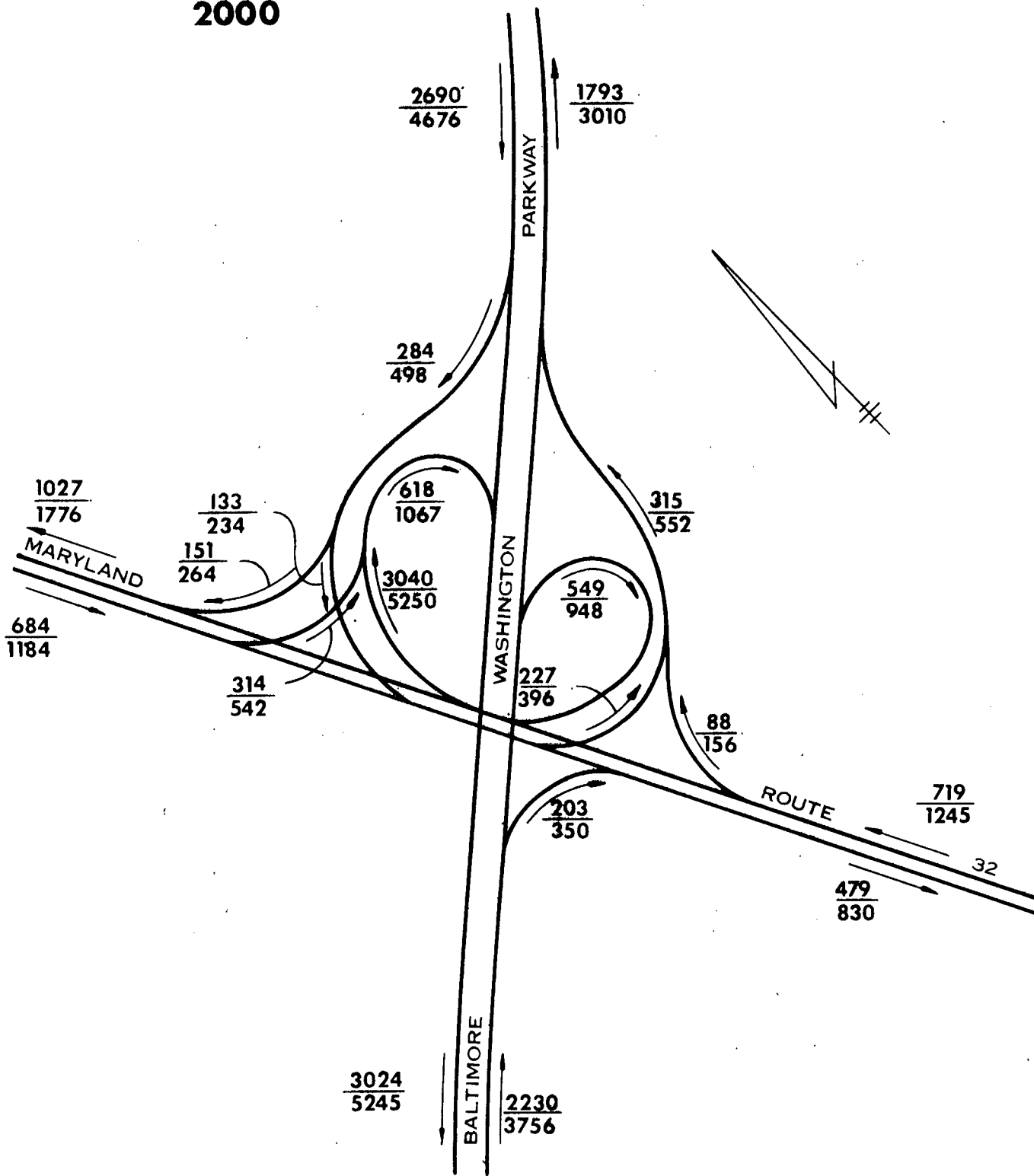


RELOCATED MARYLAND ROUTE 32
BALTIMORE WASHINGTON
PARKWAY
NO SCALE

PEAK HOUR TRAFFIC
CONSTRUCT

1980
2000

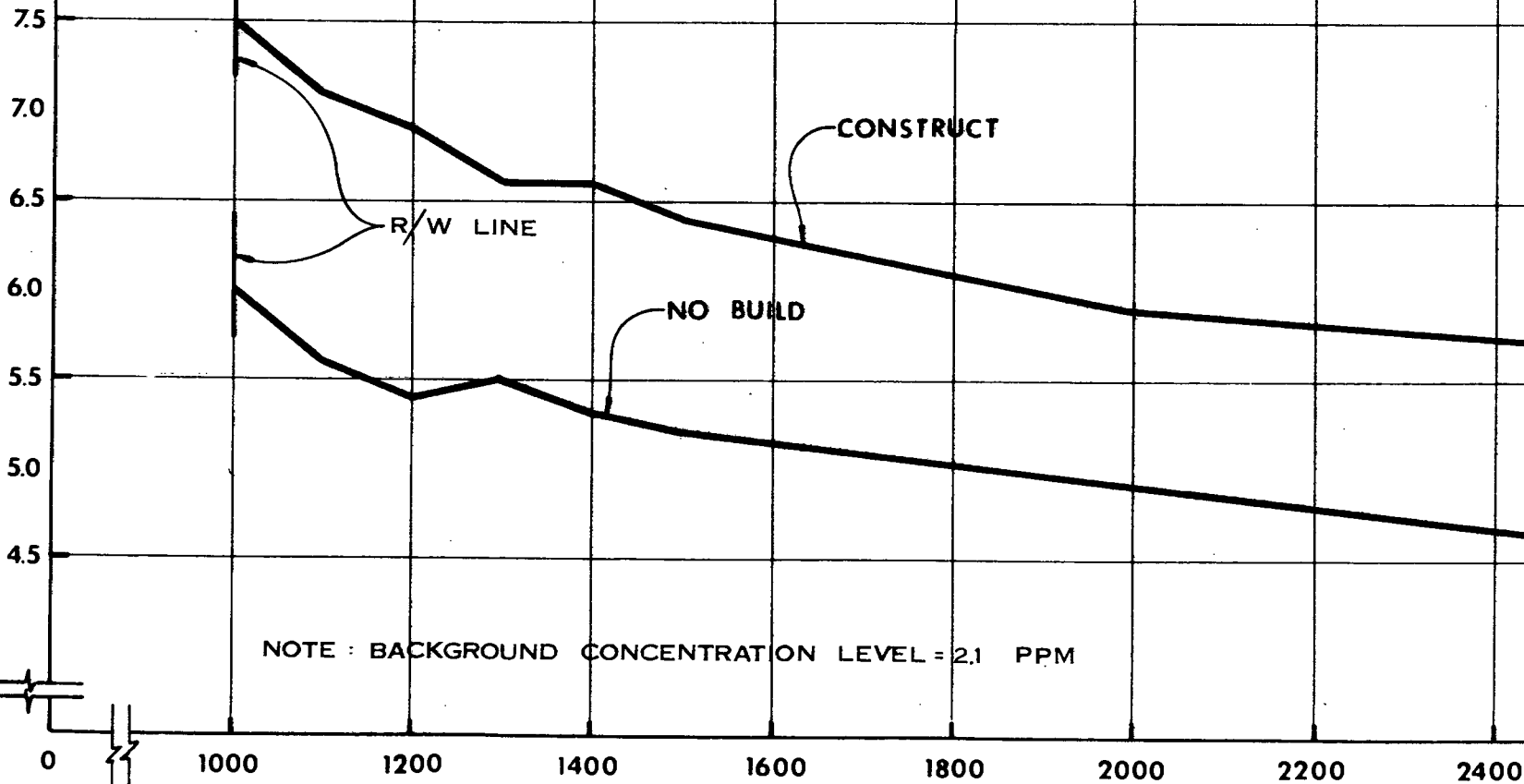
226



RELOCATED MARYLAND ROUTE 32
BALTIMORE WASHINGTON
PARKWAY
NO SCALE

PEAK HOUR CARBON MONOXIDE
CONCENTRATIONS 1980
I-95 -RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



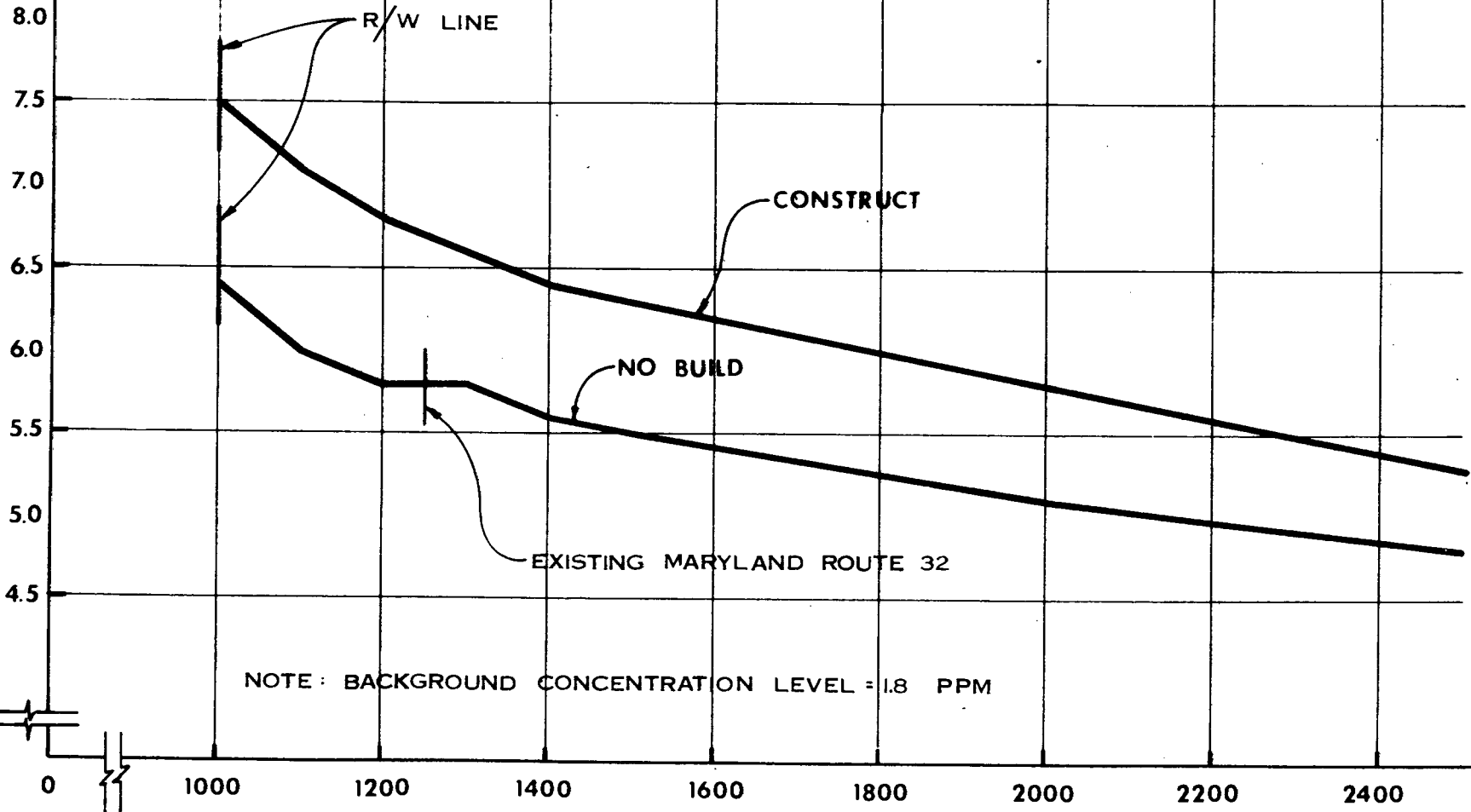
NOTE : BACKGROUND CONCENTRATION LEVEL = 2.1 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

227

PEAK HOUR CARBON MONOXIDE CONCENTRATIONS 2000 I-95 - RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



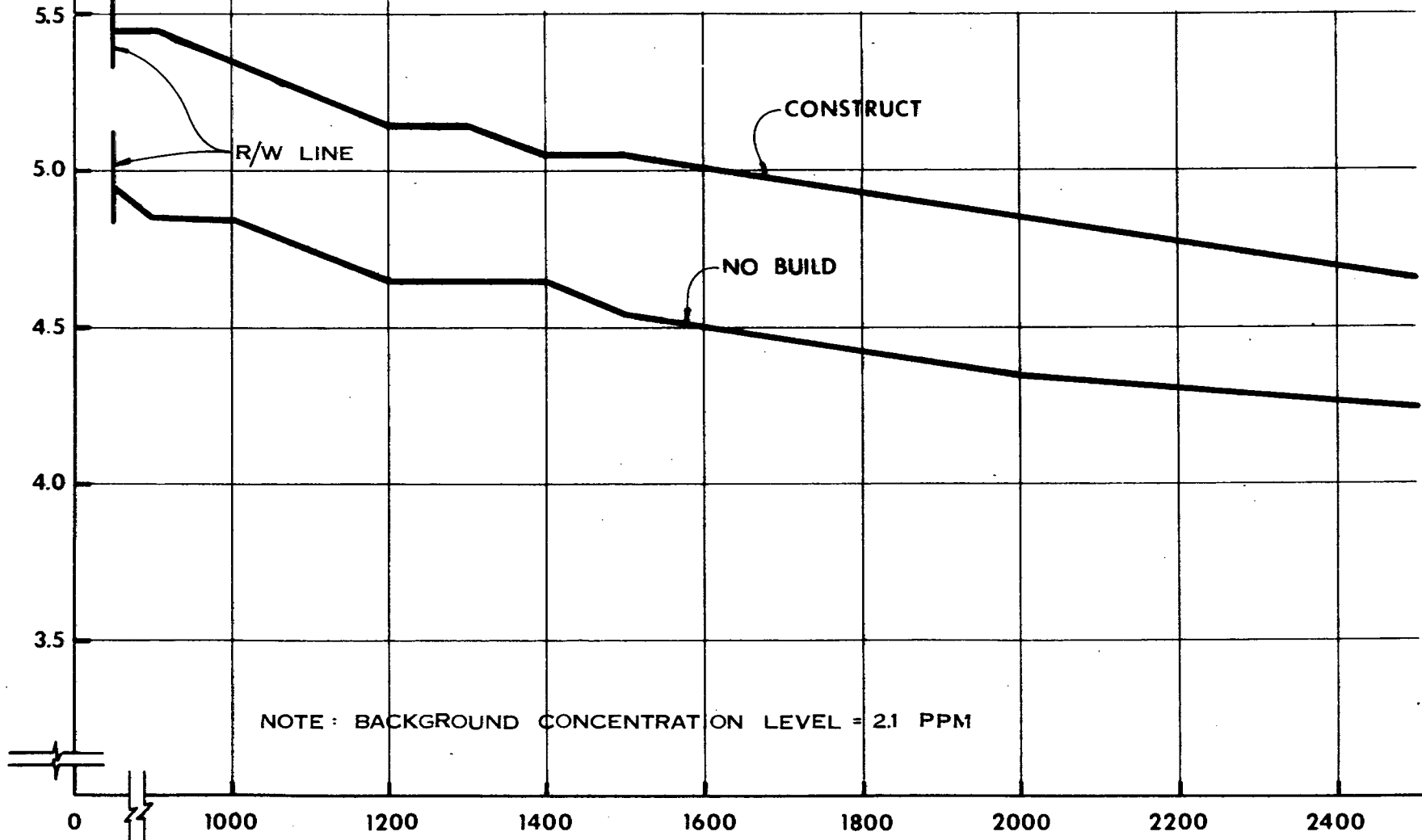
NOTE: BACKGROUND CONCENTRATION LEVEL = 1.8 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

Handwritten signature

PEAK HOUR CARBON MONOXIDE
CONCENTRATIONS 1980
BALTIMORE WASHINGTON PARKWAY
RELOCATED MARYLAND ROUTE 32

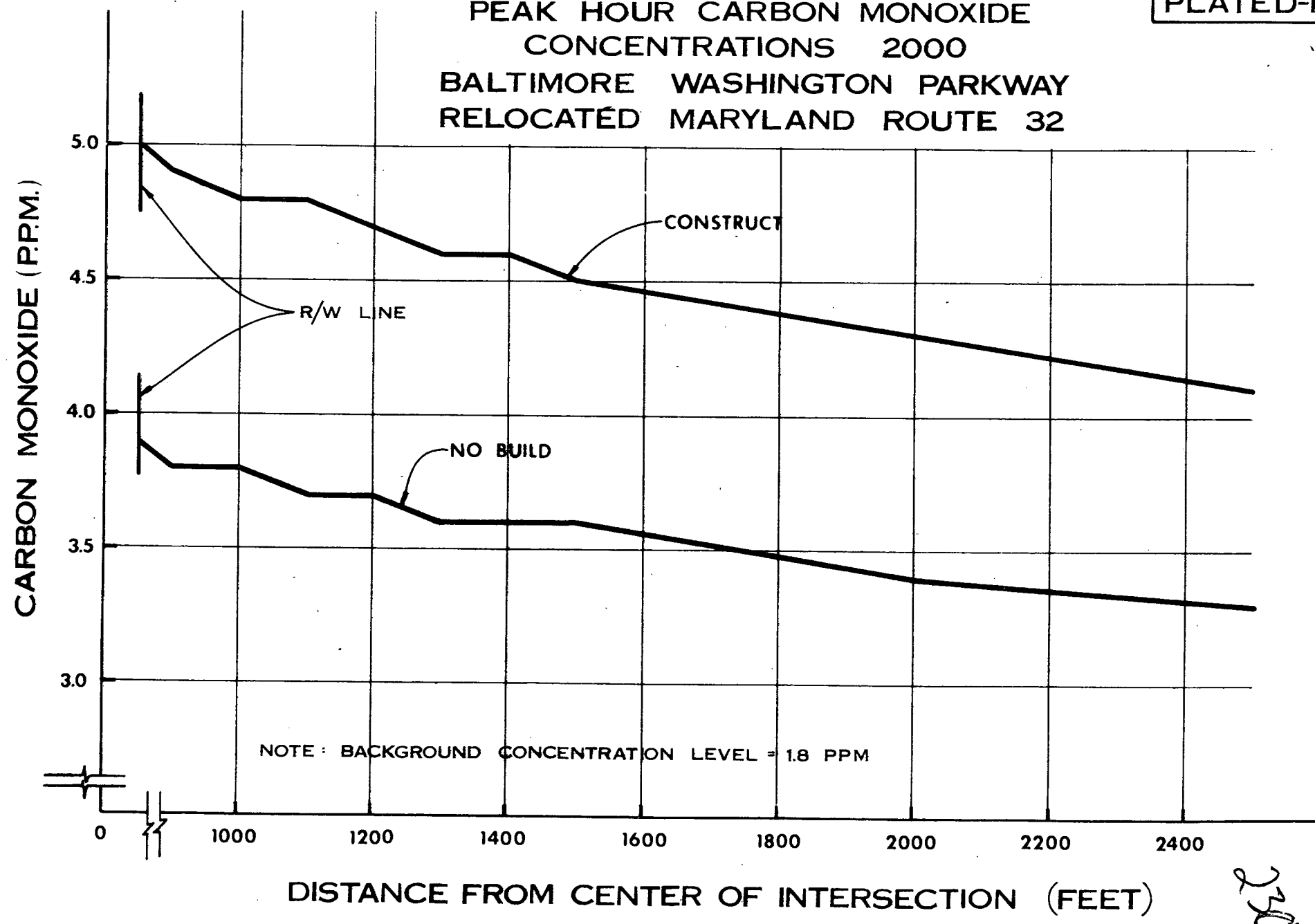
CARBON MONOXIDE (P.P.M.)



NOTE: BACKGROUND CONCENTRATION LEVEL = 2.1 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

PEAK HOUR CARBON MONOXIDE
CONCENTRATIONS 2000
BALTIMORE WASHINGTON PARKWAY
RELOCATED MARYLAND ROUTE 32

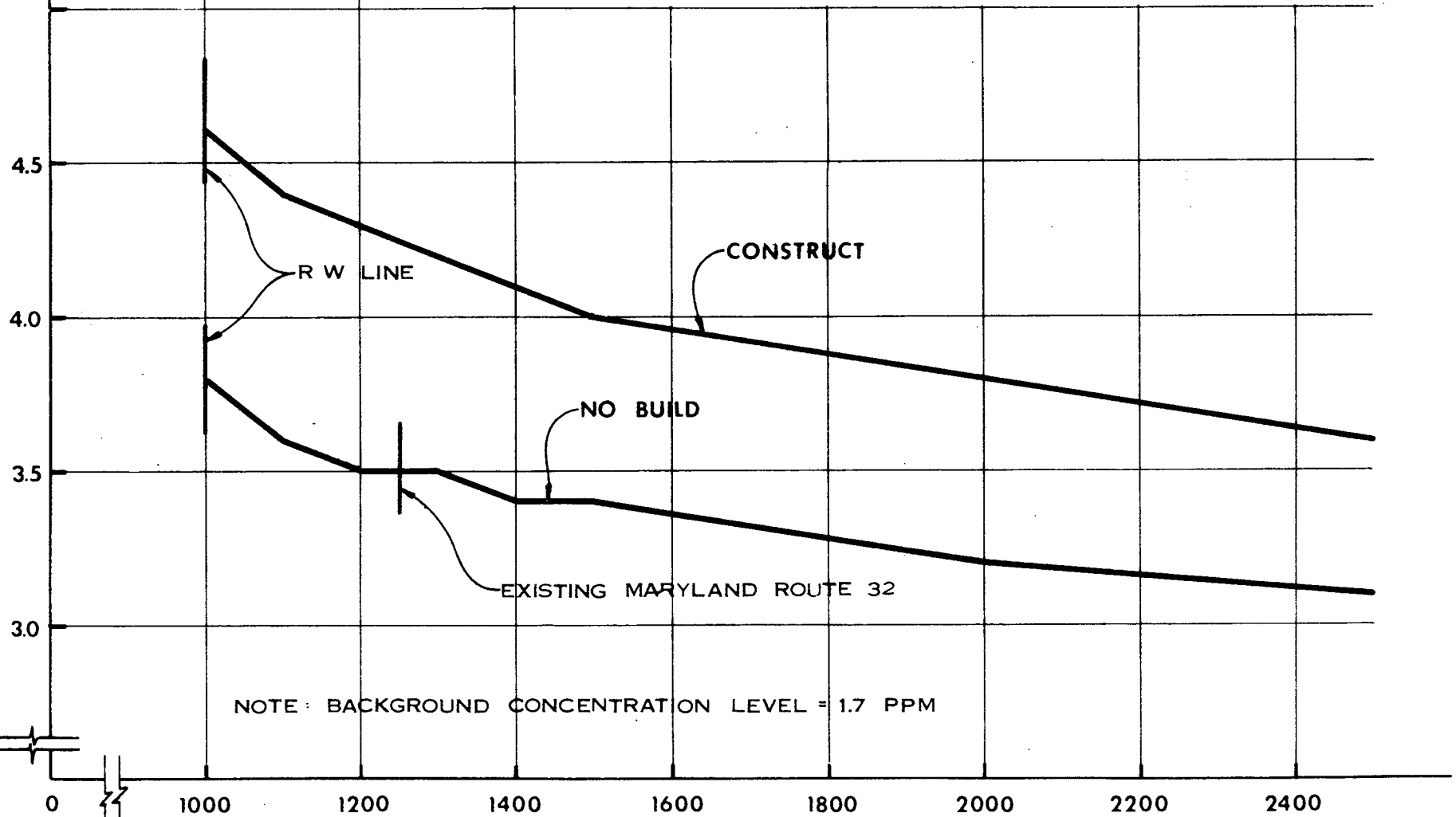


NOTE: BACKGROUND CONCENTRATION LEVEL = 1.8 PPM

230

8 HOUR AVERAGE CARBON MONOXIDE CONCENTRATIONS 1980 I-95 -RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



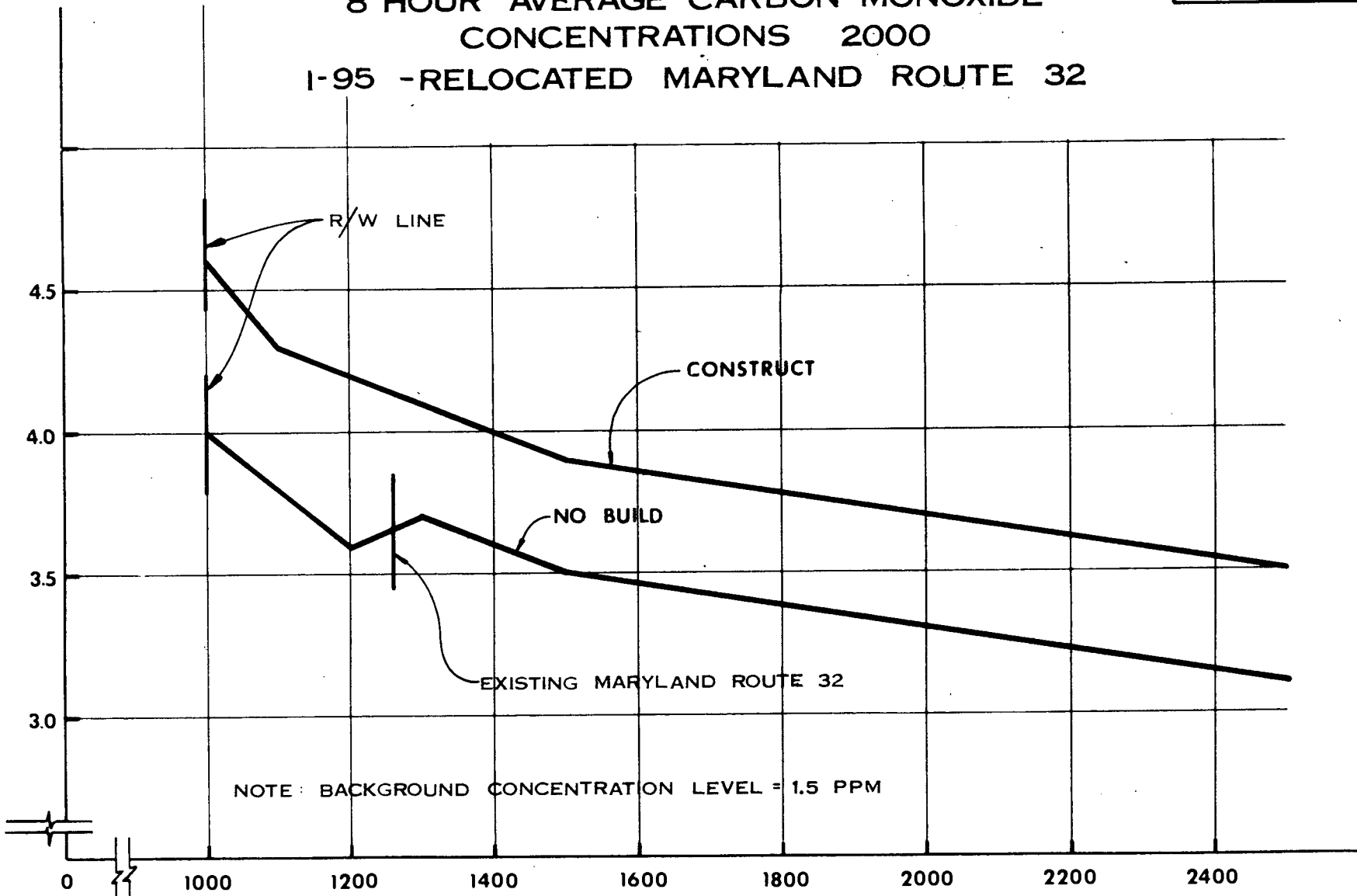
NOTE: BACKGROUND CONCENTRATION LEVEL = 1.7 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

231

8 HOUR AVERAGE CARBON MONOXIDE CONCENTRATIONS 2000 I-95 -RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



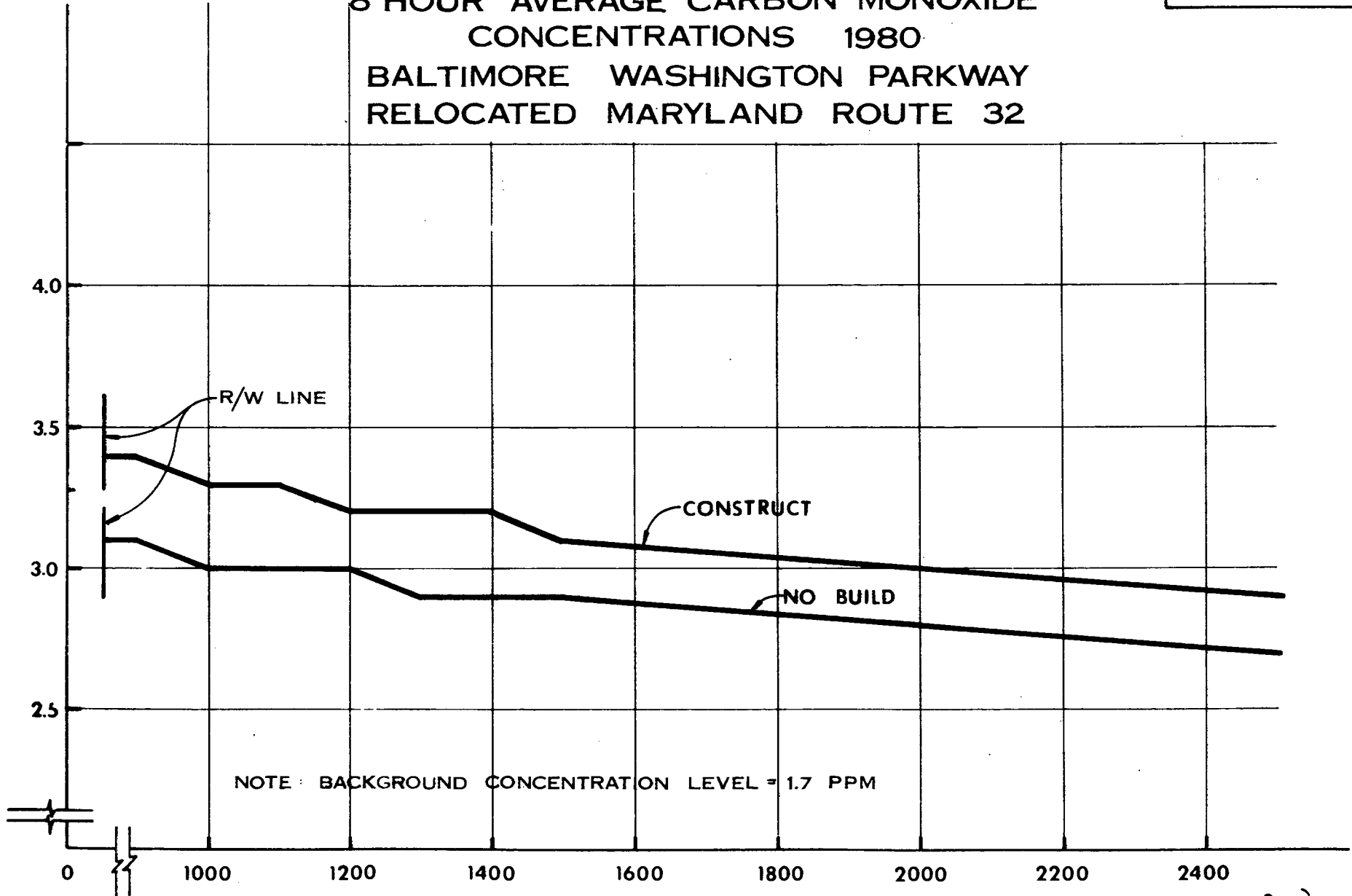
NOTE: BACKGROUND CONCENTRATION LEVEL = 1.5 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

EJR

8 HOUR AVERAGE CARBON MONOXIDE
CONCENTRATIONS 1980
BALTIMORE WASHINGTON PARKWAY
RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



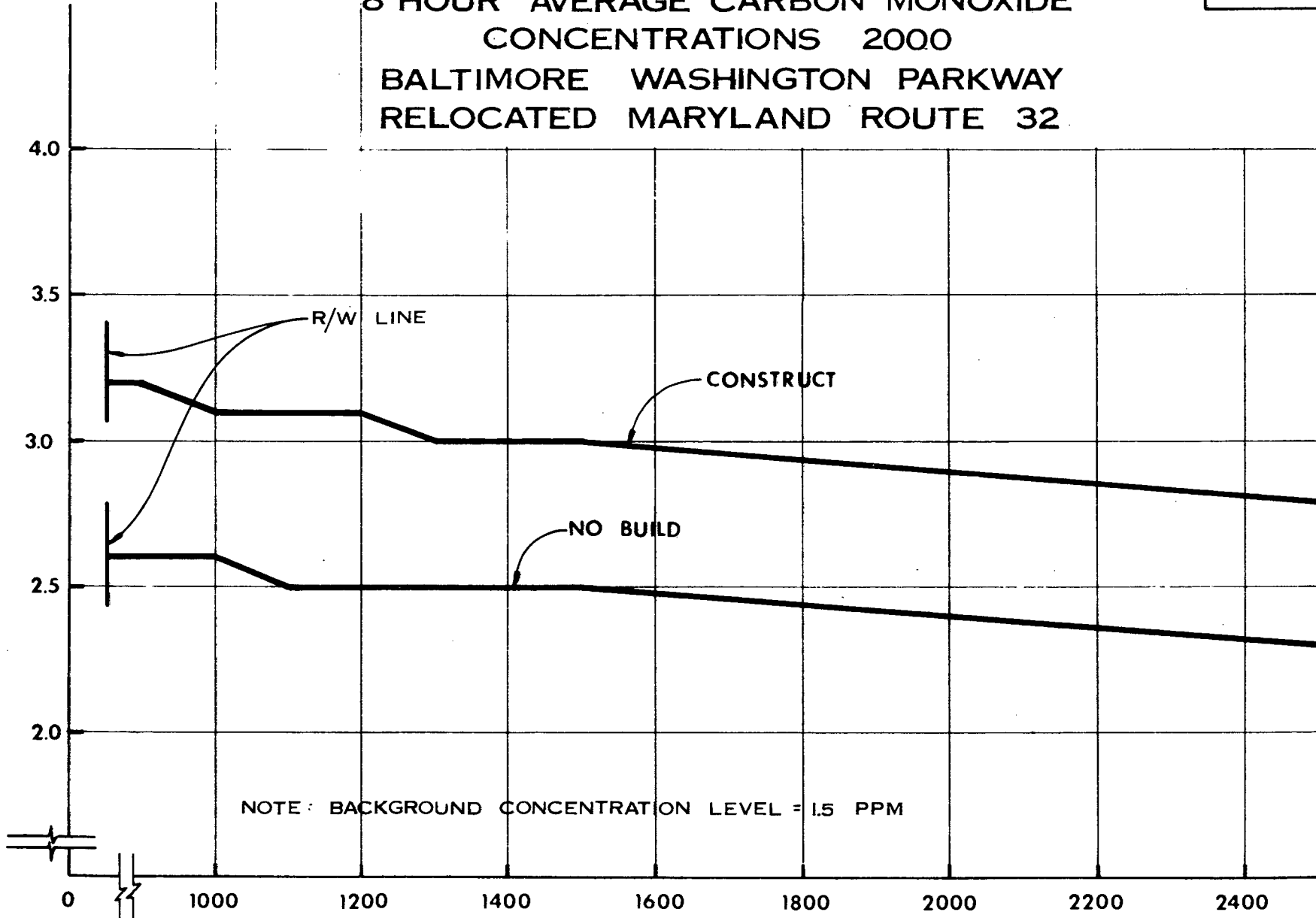
NOTE: BACKGROUND CONCENTRATION LEVEL = 1.7 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

233

8 HOUR AVERAGE CARBON MONOXIDE
CONCENTRATIONS 2000
BALTIMORE WASHINGTON PARKWAY
RELOCATED MARYLAND ROUTE 32

CARBON MONOXIDE (P.P.M.)



NOTE: BACKGROUND CONCENTRATION LEVEL = 1.5 PPM

DISTANCE FROM CENTER OF INTERSECTION (FEET)

h34

235

APPENDIX "E"

Letters and Comments



STATE HIGHWAY ADMINISTRATION

300 WEST PRESTON STREET
BALTIMORE, MD. 21201

(MAILING ADDRESS - P. O. BOX 719, BALTIMORE, MD. 21201)

236

COMMISSION MEMBERS

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STATE HIGHWAY ADMINISTRATOR
AND CHAIRMAN OF COMMISSION

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S. WALTER DOUGLEY, JR.
HARLEY P. BRINSFIELD
WALTER BUCHER
LESLIE H. EVANS
ARTHUR B. PRICE, JR.
FRANK THORP

May 12, 1972

Contract No. HO-292- -771
Patuxent Freeway
Maryland Route 108 to Anne
Arundel County Line

Contract No. AA-739-1-571
HO-292-27-771
Relocated Maryland Route 32
Patuxent Freeway to Baltimore-
Washington Parkway

Re: Draft Environmental Impact
Statement

Transmitted for your review is draft copy of this Administration's "Environmental Impact Statement" dated April 14, 1972, on the above referenced project. The Statement has been prepared in accordance with the Federal Highway Administration's Policy and Procedure Memorandum 90-1 dated August 24, 1971, concerning implementation of Section 102(2) (C) of the National Environmental Policy Act of 1969. Paragraph 6c & d of this directive requires this information be furnished to appropriate Clearinghouse and concerned agencies (Circular BOB A-95).

Those interested in the project are requested to review the enclosed and submit pertinent comments on or before June 30, 1972, to Mr. Philip R. Miller, Chief, Bureau of Special Services, State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21201. All responses will be considered in developing the "Final Environmental Impact Statement", and in preparing the facilities ultimate design.

At the combined Corridor-Design Public Hearing for that portion of the project between Interstate Route 95 and the Baltimore-Washington Parkway held October 19, 1970, public organizations and individuals in attendance were informed of the pertinent project data. In addition, interested parties have been contacted and apprised of the project development in order to establish the necessary planning and design coordination as is included within the Statement. It is intended to conduct a combined Corridor-Design Public Hearing for the portion of the project between U. S. Route 29 and Interstate 95 simultaneously with a Corridor Public Hearing for the portion of the project between Maryland Route 108 to U. S. Route 29.

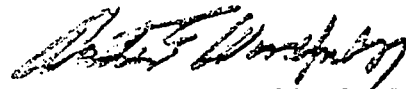
237

Contract No. AA-739-1-571
HO-292- -771

- 2 -

May 12, 1972

Very truly yours,



Walter E. Woodford, Jr.
Chief Engineer

WOW, JR/ggs

Attachments:

Draft Statement ()
Distribution List

CC: State Highway Administrator
Deputy Chief Engineer- Development
Assistant Chief Engineer- Design
Bureau of Highway Design
Bureau of Special Services
Bureau of Bridge Design
Bureau of Location and Surveys
Bureau of Program Scheduling and Control
Bureau of Planning
Bureau of Landscape Architecture
Right of Way Division, Federal-Aid Section
District Right of Way Engineer(s)
District Engineer(s)

Contract No. AA-739-1-571
Contract No. HC-292- -771
Patuxent Freeway
Relocated Maryland Route 32
Maryland Route 103 to
Baltimore-Washington Parkway

238-

DRAFT ENVIRONMENTAL IMPACT STATEMENT

DISTRIBUTION LIST

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 Office of Economic Opportunity
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Mr. John H. Gibson
 Acting State Conservationist
 U. S. Department of Agriculture
 Room 522
 4321 Hartwick Road
 College Park, Maryland 20740 1 Copy

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 State Clearinghouse
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 Baltimore, Maryland 21201 8 Copies

Mr. Harry R. Hughes, Secretary
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 Department of Natural Resources
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Acting Director
Fish and Wildlife Administration
State Office Building
Annapolis, Maryland 21401 1 Copy

Dr. Neil Solomon, Secretary
Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201 1 Copy

Mr. Robert N. Young, Executive Director
Baltimore Regional Planning Council
St. Paul & Monument Streets
Baltimore, Maryland 21202 1 Copy

County Agencies

Mr. George F. Neimeyer, Director
Department of Public Works
1 Broad Creek Parkway
Annapolis, Maryland 21401 1 Copy

Mrs. Marion J. McCoy
Planning and Zoning Officer
The Arundel Center
Annapolis, Maryland 21401 1 Copy

Dr. Edward J. Anderson
Superintendent of Schools
Green Street
Annapolis, Maryland 21401 1 Copy

Mr. William A. Altman
Director of Public Works
County Office Building
Ellicott City, Maryland 21043 1 Copy

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 Director of Planning and Zoning
 County Office Building
 Ellicott City, Maryland 21043 1 Copy

Mr. J. Herbert Clawson, Jr., Chief
 Division of Land Development and
 Transportation Planning
 County Office Building
 Ellicott City, Maryland 21043 1 Copy

Col. F. Leonard Dunn, Director
 Recreation and Park Development
 3450 Court House Drive
 Ellicott City, Maryland 21043 1 Copy

Dr. M. Thomas Goedeke
 Superintendent of Schools
 Howard County Board of Education
 Clarksville, Maryland 21029 1 Copy

Local Elected Officials

The Honorable Joseph W. Alton, Jr.
 Anne Arundel County Executive
 The Arundel Center
 Annapolis, Maryland 21401 1 Copy

The Honorable John H. Downs, Chairman
 Anne Arundel County Council
 The Arundel Center
 Annapolis, Maryland 21401 1 Copy

The Honorable Omar J. Jones
 County Executive
 Court House
 Ellicott City, Maryland 21043 1 Copy

The Honorable William S. Hanna, Chairman
 County Council of Howard County
 Court House
 Ellicott City, Maryland 21043 1 Copy

Total-----65 Copies

247



STATE OF MARYLAND
DEPARTMENT OF WATER RESOURCES
STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

RECEIVED

JUN 2 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

May 31, 1972

Mr. Philip R. Miller, Chief
Bureau of Special Services
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Re: Contract No. HO-292- -771
Patuxent Freeway
Maryland Route 108 to Anne
Arundel County Line

Contract No. AA-739-1-571
HO-292-27-771

Relocated Maryland Route 32
Patuxent Freeway to Baltimore-
Washington Parkway

Draft Environmental Impact Statement

Dear Mr. Miller:

The above referenced project in Howard County has received the necessary review relative to the coordination process. The Department has the following comment:

The proposed alignment would pre-empt the PL-566 Patuxent Watershed Project Site # 1. For further information regarding this flood control project, contact Mr. William Weldon, State Conservation Engineer, U.S.D.A., Soil Conservation Service, Room 522, 4321 Hartwick Road, College Park, Maryland 20740.

112-388-8457
x 8710

Very truly yours,

Robert S. Norton, Jr., Chief
Surface Water Management

Mr. V. De Groot 8509

RSN:MAP:csc

EXHIBIT III

243

June 6, 1972

Mr. Robert S. Norton, Chief
Surface Water Management
Department of Water Resources
State Office Building
Annapolis, Maryland 21401

Contract No. HO-292-771
Patuxent Freeway
Maryland Route 108 to
Anne Arundel County Line

Contract No. AA-739-1-571
HO-292-27-771
Relocated Maryland Route 32
Patuxent Freeway to
Baltimore-Washington Parkway

Re: Draft Environmental Impact Statement

Dear Mr. Norton:

Reference is made to your letter dated May 31, 1972 commenting upon the draft environmental impact statement and advising that the proposed highway improvement would pre-empt the PL-566 Patuxent Watershad Project Site #1.

Page 5 of the statement, copy attached, indicates the proposed dam site IA will not be effected by the proposed highway improvement. This relationship between the dam and the highway was verbally reaffirmed by Mr. Jon V. DeGroot of the Soil Conservation Service during a telephone conversation with this office on June 5, 1972.

The Soil Conservation Service has been furnished a copy of the draft environmental impact statement for review and comment.

Very truly yours,

Philip R. Miller, Chief
Bureau of Special Services

PR:/jlw
Enclosure
CC: Soil Conservation Service
Attn: Mr. John H. Gibson
Mr. R. M. Thompson
Green Assoc.
Attn: Mr. A. F. Orsini

EXHIBIT IV



RECEIVED

RECEIVED

JUN 19 1972

JUN 21 1972

ADMINISTRATOR'S OFFICE

Anne Arundel County
Office of Planning & Zoning
Annapolis, Maryland 21404

DEPUTY CHIEF PROGRAM DEVELOPMENT

June 16, 1972 *b/v*

Mr. David H. Fisher, Administrator
State Highway Administration
P. O. Box #717
Baltimore, Maryland 21203

Re: Draft Environmental Statement for Patuxent Freeway and Maryland Route 32

Dear Dave,

Our review of the above-named draft statement still leaves important issues unresolved regarding the coordination of the pending project with future extensions of the Patuxent Freeway. We cannot accept the statement on page 53 that "no interchange can be provided for the Patuxent Freeway" at the Baltimore-Washington Parkway and that the Route 32 interchange will provide the interconnection between these routes both initially and ultimately.

When we met with you and your engineering staff on April 21st, it was pointed out to us that plans for future extensions of roads are a necessary part of the draft environmental statement requirements, such as in the Route 424 project. We do not believe that this draft statement sufficiently assesses the impacts of succeeding phases in order to justify your selected alternative.

We would like to be advised of your latest studies for resolving the many conflicts which are becoming more apparent along this corridor. We have not yet received your latest engineering plans for review.

We have noted that a letter dated January 5, 1972, regarding Md. Route 424 was inadvertently included in the back section of the report with copies of correspondence. We trust that this letter will be re-filed with your Route 424 records.

Sincerely yours,
Marion J. McCoy
Marion J. McCoy
Planning & Zoning Officer

MJM:RD:asm
cc: R.N. Young, Executive Director, Regional Planning Council

M Woodford
M. Danner
M. R. Thompson } Please arrange to discuss with me by Fri 6/23/72
OTT
6/20

EXHIBIT V

245

RECORDED

JUN 20 1972

ADMINISTRATIVE OFFICE

Review and Comment Transmittal Memorandum
Metropolitan Clearinghouse

Attached to this transmittal letter is a memorandum which presents the Metropolitan Clearinghouse comments and includes a certification of Council action.

You should now complete and file your formal application. A copy of this memorandum and certification must be attached to your application. Please notify the Metropolitan Clearinghouse of the filing date and the amount of federal funds requested as soon as the application is completed. If you have any questions, please contact Robert Vogel (383-5839).

Sincerely,

Robert N. Young
Robert N. Young
Executive Director

- Applicant - 4 copies
- Referral Coordinator - 1 copy
- State Clearinghouse - 1 copy

- cc: Mr. W. E. Woodford
- Mr. H. G. Downs
- Mr. J. L. White
- Mr. R. M. Thompson
- Mr. N. B. Friese

sent 6/20/72
cm

246

REVIEW AND REFERRAL STAFF MEMORANDUM

PROJECT IDENTIFICATION

Jurisdiction: Anne Arundel County and Howard County

Project Name: Revised Environmental Statement Related to the Construction of the Patuxent Freeway and Relocated Md. Rte. 32 from Md. Rte. 108 to the Baltimore-Washington Parkway

Applicant: State Highway Administration
Notification/Application received August 26, 1971

Cost: NA

PROJECT DESCRIPTION

This is the revised draft of the Environmental Impact Statement for the construction of the initial 24 foot roadway of the ultimate dual Patuxent Freeway and Relocated Md. Rte. 32 from Md. Rte. 108 to the Baltimore-Washington Parkway, a distance of 10.4 miles.

STAFF COMMENTS

The Regional Planning Council, at its meeting on June 21, 1968, approved a staff report recommending grant approval for the construction of Md. Rte. 32 from U.S. Rte. 29 to the Anne Arundel County Line. The staff reiterates the need for that facility, as well as the additional mileage presented in this referral.

However, the Regional Planning Council, at its meeting on September 17, 1971, rejected the Environmental Statement as then presented. The Revised Statement attempts to answer the staff comments as follows:

1. Question of availability of replacement housing for displaced low and middle income residents in Laurel or Columbia. Response consisted in assurances that relocation laws will be observed and that specific written assurances as to existence of comparable replacement housing and that an adequate relocation program is functional will be made at a later date.
2. Question as to impact of the project on existing and future development of the area. The Revised Statement addresses this question in a much more thorough manner. However, the final statement should take into account the potential impact of the proposed Marriott recreation park on the highway.
3. Question on the irreversible/irretrievable commitment of resources which was very poorly handled in the original statement. The Revised Statement

addresses this problem in a more rational manner and discusses those elements which are truly irreversible or irretrievable.

4. Question as to the impact of the highway on the water table and streams of the area which the project traverses. The Revised Statement discusses these problems in a more detailed manner and the State Highway Administration agrees to correct problems caused by the project.

The staff would, however, urge the State Highway Administration to coordinate construction of these facilities with local open space plans so as not to preclude the possibility of overpasses for hiking and riding trails, etc.
THE STAFF RECOMMENDS ENDORSEMENT OF THIS ENVIRONMENTAL STATEMENT.

I HEREBY CERTIFY that at its 101th meeting, held on June 16, 1972, the Regional Planning Council concurred in this Review and Referral Staff Memorandum and incorporated it into the minutes of that meeting.

June 16, 1972

Date

Original Signed By

Robert N. Young

Robert N. Young
Executive Director

11-01
Revised Comments

248

June 16, 1972

Mr. David H. Fisher, Administrator
State Highway Administration
P. O. Box #717
Baltimore, Maryland 21203

Re: Draft Environmental Statement for Patuxent Freeway and
Maryland Route 32

Dear Dave,

Our review of the above-named draft statement still leaves important issues unresolved regarding the coordination of the pending project with future extensions of the Patuxent Freeway. We cannot accept the statement on page 53 that "no interchange can be provided for the Patuxent Freeway" at the Baltimore-Washington Parkway and that the Route 32 interchange will provide the interconnection between these routes both initially and ultimately.

When we met with you and your engineering staff on April 21st, it was pointed out to us that plans for future extensions of roads are a necessary part of the draft environmental statement requirements, such as in the Route 424 project. We do not believe that this draft statement sufficiently assesses the impacts of succeeding phases in order to justify your selected alternative.

We would like to be advised of your latest studies for resolving the many conflicts which are becoming more apparent along this corridor. We have not yet received your latest engineering plans for review.

We have noted that a letter dated January 5, 1972, regarding Md. Route 424 was inadvertently included in the back section of the report with copies of correspondence. We trust that this letter will be re-filed with your Route 424 records.

Sincerely yours,

Marlon J. McCoy
Planning & Zoning Officer

MJH:RD:asm

cc: R.N. Young, Executive Director, Regional Planning Council

249



MARVIN MAHOKL
GOVERNOR

MARYLAND
DEPARTMENT OF STATE PLANNING

301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201
TELEPHONE: 301-383-2431

VLADIMIR A. WARR
SECRETARY OF STATE PLANNING
NORMAN HECHE
DEPUTY SECRETARY

June 26, 1972

RECEIVED

JUN 28 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

AA 730-1-571
Ho 202- -771

Mr. Phillip Miller
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Re: 72-5-197 Patuxent Freeway - Route 108 to Anne Arundel County Line
Relocated Md. Route 32

Dear Mr. Miller:

The State Clearinghouse is reviewing the referenced Environmental Impact Statement. In accordance with the procedures established by the Federal Office of Management and Budget Circular A-95, we forwarded copies of this statement to interested State and regional agencies for their comments and recommendations. As of this date, we have not received a reply from U of Md., DNR and DHEMH and will therefore need an extension of time to complete our review.

We are interested in this project and will provide you with the final results of the State Clearinghouse review as soon as possible. Thank you for your cooperation.

Sincerely,

Edwin L. Powell, Jr.
Chief, State Clearinghouse

ELP:ss

cc: R. E. Kendig
Anthony Abar
Jean Schueneman

EXHIBIT VII

2/2/72 (2)

AA-739-1-571



RECEIVED 250

RECEIVED

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III

JUN 30 1972

Office of Water Quality, U.S. Environmental Protection Agency

JUL 7 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

CHIEF ENGINEER

June 27, 1972

RECEIVED

JUL 3 1972

DEPUTY CHIEF ENGR.
DEVELOPMENT

Walter E. Woodford, Jr.
Chief Engineer
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Re: Contract No. HO-292- -771, Patuxent Freeway, Maryland
Route 108 to Anne Arundel County Line; Contract No.
AA-739-1-571, HO-292-27-771, Relocated Maryland Route 32,
Patuxent Freeway to Baltimore - Washington Parkway.

Dear Mr. Woodford:

We have received a revised draft environmental impact statement for the above-referenced project. The new information contained in this document has enabled us to complete our review of the impact of the project under Section 309 of the Clean Air Act Amendments of 1970; we offer these final comments for your consideration in developing the final statement.

Water Quality

The revised impact statement and appended planner's maps indicate that the proposed relocation of Route 32 (and subsequently the six-lane Patuxent Freeway) will affect two riparian environments which county and state officials have shown an interest in protecting. The first of these is the Little Patuxent River between Route 29 and Interstate 95, which has been designated a Conservation Area on the Park and Open Space Map for Howard County, and the other is Wetland Unit No. 1 along Dorsey Run in Anne Arundel Co. The probable impact of the proposed road on these environments should be addressed directly in the course of the statement, perhaps in the section labelled Probable Impact on Environment. A consideration of the highway's impact on the environs of the Little Patuxent Conservation Area would also seem appropriate in the statement's comparison of the favored location to alternate 2 (p.41). (Such consideration was given to Wetland Unit No. 1 in assessing alternate 4.)

6/6/72 Mr. R. M. Thompson - For your action.

H. G. D.

cc: Mr. P. R. Miller

EXHIBIT VII

We have been advised by the Anne Arundel Planning and Zoning Commission that the projected alignment of the Patuxent Expressway east of this ten mile section crosses other portions of the Patuxent watershed and may require extensive filling of low-lying areas. Building the road at the present location may represent a commitment to follow the projected alignment for later segments of the road before alternate locations for these segments have been fully considered from an environmental standpoint. To avoid this possibility, the final statement should consider the proposed section within the context of the Expressway as a whole, the impact of which on other portions of the corridor may depend on the final location and design chosen for this segment.

The revised draft statement's commitment to implement practices outlined in the Federal Highway Administration's Instructional Memorandum 20-3-70 satisfies our previous doubt about the adequacy of planned erosion and sedimentation control measures, as registered in comments to the original draft, November 5, 1971.

Ambient Air Quality and Noise Levels

On the basis of projected ADT's and the emissions data presented in the revised draft statement, we feel that the short term local impact of the facility on ambient air quality will not be significant. We note, however, that projected ADT for the Patuxent Freeway differs from projected ADT for existing Route 32 roughly by a factor of four. Such a difference seems necessarily to be based, at least in part, on the belief that the existence of the road itself will stimulate development of suburban car-dependent communities in the area. If this supposition is correct, the indirect impact of the project on local ambient air quality may be expected to be substantial, if attention is paid to the increase in local traffic (school buses, shoppers, delivery vehicles, etc.) that would necessarily accompany such development.

The magnitude of the Expressway's indirect impact on air quality within the region should be reflected in the statement's consideration of alternatives. A do-nothing alternative is commented on in the draft as are five relatively minor modifications of the far red location. The statement does not consider the relocation of the two-lane facility as an alternative independent of the contemplated high grade expressway. In dealing with the relocation of the two-lane facility as an alternative in itself, the statement should explore the capacity of this or similar facility to safely handle existing and future needs adequately without stimulating the development of other communities of commuters by automobile.

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Finally, we feel it would be appropriate to the statement's discussion of alternatives to deal with the potential use of mass transit in the affected area; particularly, the statement should indicate how various alternatives would affect or be affected by potential mass transit lines to the urban centers of Washington and Baltimore. This suggestion is consistent with the recent Memorandum to Federal Agencies on Procedures for Improving Environmental Impact Statements, in which the Council on Environmental Quality noted that all alternatives reasonably available to the government as a whole must be discussed -- even if some of these alternatives are outside the control of the agency preparing the statement.

Noise

The statement's treatment of construction and traffic noise generated by the proposal meets the criticisms on page 2 of this office's comments (November 5, 1971) to the original draft statement. We note that the projected dBA levels for areas adjacent to the proposed roadway are within the limits proposed for adoption by the Federal Highway Administration.

Thank you very much for the opportunity to review this impact statement. If we may be of further use to you in completing the final impact statement on this project, please let us know. Please send us a copy of the final statement for our files.

Sincerely yours,

Robert J. Blanco

Robert J. Blanco, P.E.

Acting Chief

Environmental Impact Statement Branch

cc in Downs (2)



ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

253

HEALTH AND
ENVIRONMENT

29 JUN 1972

RECEIVED

JUL 6 1972

DEPUTY CHIEF ENGR.
DEVELOPMENT

Mr. Walter E. Woodford, Jr.
Chief Engineer State Highway Administration
P. O. Box 717
Baltimore, Maryland 21203

Dear Mr. Woodford:

This is in response to your letter of May 12, 1972 for review comments on the draft environmental statement for Patuxent Freeway, Md. Route 108 to Anne Arundel County line, and Relocated Md. Route 32, Patuxent Freeway to Baltimore-Washington Parkway, dated April 14, 1972.

The Department of Defense has reviewed this draft EIS as requested and it has been determined that the proposed highway construction project does not have a significant environmental impact on Fort George G. Meade or the area immediately contiguous to this installation. The State of Maryland, Division of Water and Sewerage, has already requested that extra precautions be taken to prevent soil erosion into the Patuxent River. The Department of Defense also requests that these extra precautions be taken because Fort George G. Meade uses this river as its source of water, and excessive soil erosion could create problems at the water treatment plant.

Thank you for giving us the opportunity to review this draft environmental statement.

Sincerely,

John A. Bunker
Deputy Assistant Secretary of Defense
(Environmental Quality)

RECEIVED

JUL 3 1972

CHIEF ENGINEER

cc - Mr. Dooms (2) ✓
Mr. Fricke

EXHIBIT IX

254

OFFICE OF PLANNING
THOMAS G. HARRIS, JR.
OFFICE OF ZONING
HERBERT W. SMULL, CHIEF



DIVISION OF LAND DEVELOPMENT
J. HERBERT CLAWSON, JR., CHIEF
DIVISION OF COMPREHENSIVE PLANNING
GERALD W. VONMAYER, CHIEF

RECEIVED

JUL 5 1972

CHIEF ENGINEER

July 3, 1972

Mr. Walter E. Woodford, Jr.
Chief Engineer
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

OFFICE OF PLANNING & ZONING
COUNTY OFFICE BUILDING
3450 COURT HOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: 465-5000, EXT. 251

RECEIVED

JUL 6 1972

DEPUTY CHIEF ENGR.
DEVELOPMENT

RECEIVED

JUL 10 1972
PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

Re: Contract No. HO-292- -771
Patuxent Freeway - Maryland Route 108
to Anne Arundel County Line

Contract No. AA-739-1-571
HO-292-27-771
Relocated Maryland Route 32
Patuxent Freeway to Baltimore-
Washington Parkway

Draft Environmental Impact Statement

Dear Mr. Woodford:

This office has reviewed the captioned study and finds that the proposals are generally in accordance with the General Plan of Highways for Howard County 1971.

We wish to call your attention to several matters relevant to the study.

- 1). The General Plan of Howard County was adopted by the Howard County Council on December 6, 1971. (Copy of General Highway Plan furnished for your reference).
- 2). The alternate No. 2, as indicated, is not desirable in reference to the proposed land uses and General Highway Plan of Howard County.
- 3). On February 5, 1971, a meeting was conducted by the representatives of the State Highway Administration and the Howard County officials, and there are still

EXHIBIT X

255

Mr. Walter E. Woodford, Jr. -2-

July 3, 1972

some outstanding issues that have to be resolved since this meeting date. Reference to this meeting was contained in letter of transmittal to Mr. Hugh G. Downs, from this office, dated February 9, 1971, and subsequent corrected data contained in letter from Mr. Omar J. Jones from this office dated March 5, 1971.

Trusting the information as noted herein is sufficient for your present needs. Should you have any questions concerning the above, please contact this office at your convenience.

Very truly yours,

JH Clawson
J. H. Clawson, Jr., Chief
Division of Land Development
and Transportation Planning

JHC, JR./sg
Attachment

- cc: Mr. Omar J. Jones
- Mr. William S. Hanna
- Mr. William A. Altman
- Mr. Thomas G. Harris, Jr.

*cc- Mr. Frier
Mr. Downs (2) ✓*

256

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE - 4321 Hartwick Rd., Pa. 522
College Park, Maryland 20740

July 3, 1972

RECEIVED

JUL 6 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

Mr. Philip R. Miller, Chief
Bureau of Special Services
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Miller:

Because of extenuating circumstances we were unable to meet the target date of June 30, 1972 with comments on the Draft Environmental Statement for the Patuxent Freeway - Rt. 108 and Relocated Rt. 32.

We are encouraged to find the recognition given the Middle and Little Patuxent (PL-566) Watershed Project. The statement also adequately recognizes and provides for a construction sediment control program. No doubt the final statement will contain these same provisions.

We appreciate the opportunity to comment on this statement and are sorry to be late.

Sincerely,

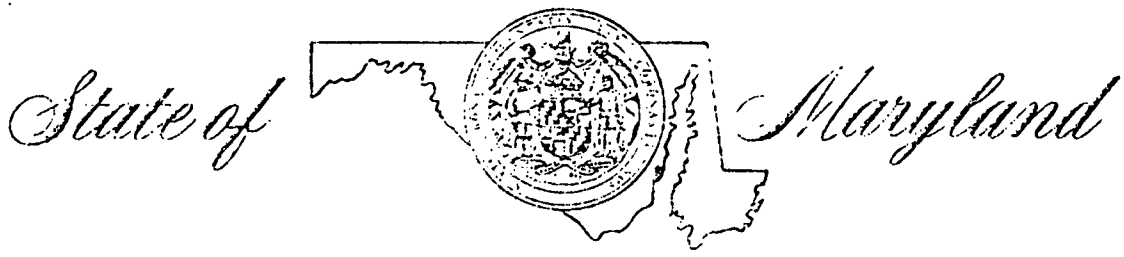
William H. Munkittrick
GRAM T. MUNKITTRICK
State Conservationist

cc: Kenneth E. Grant, Administrator
Dr. T. C. Byerley

EXHIBIT XI



257



DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Neil Solomon, M.D., Ph.D., Secretary
ENVIRONMENTAL HEALTH ADMINISTRATION
610 N. HOWARD STREET • BALTIMORE, MARYLAND 21201 • Area Code 301 • 383-

July 6, 1972

RECEIVED

JUL 19 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

THROUGH: Mr. Howard E. Chaney, Director
Environmental Health Administration *HEC*

Mr. Philip R. Miller, Chief
Bureau of Special Services
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Miller:

RE: Contract No. HO-292 - 771 Patuxent Freeway -
Md. Route 108 to Anne Arundel County Line

Contract No. AA-739-1-571 ✓
HO-292-27-771

Relocated Md. Route 32 - Patuxent Freeway
to Baltimore-Washington Parkway

We have received a copy of the Draft Environmental Impact Statement for the Patuxent Freeway and Relocated Maryland Route 32 and appreciate this opportunity to make our comments.

There are several points which should be clarified concerning air quality. First of all, the nitrogen oxide problem is not given adequate treatment. Maryland has already stated in its Air Quality Implementation Plan for the Baltimore Region that the federal standards for nitrogen dioxide will not be met. This conclusion was drawn after assuming Federal new car standards would be met and all feasible controls would be placed on stationary sources. Some kind of land use and/or transportation control will be needed to enable Baltimore to meet federal standards.

The fact that a 6-lane expressway is planned upwind of Baltimore will certainly not improve the situation. As mentioned, nitrogen oxides from motor vehicles will increase because of higher speeds and greater traffic volumes. The statement on page 31 that "nitrogen oxide emissions from motor vehicles are responsible for only a fraction of man-made totals" implies that transportation is an insignificant factor in NO₂ pollution. Since motor vehicles contribute 45% of man-made nitrogen dioxide in Baltimore according to our inventories (hardly an insignificant fraction), it would appear that the impact on NO₂ levels will be adverse. The statement should be changed accordingly.

July 6, 1972

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There was a reference to the measurement program conducted by ITT Electro-Physics Laboratories, Inc. along I-95 during June and July of 1971. It is true that they found no significant increase in pollutant levels after the opening of the road. Traffic counts, though, were very low when compared to the capacity of the road and the vehicles themselves were generally dispersed. Under these conditions, high roadside concentrations are not to be expected. However, an entirely different situation is likely as increasing industrial and commercial land uses lead to constantly increasing traffic counts. Greater congestion will undoubtedly lead to higher roadside levels of air pollutants.

Looking at the projected traffic counts for 1979, it would appear that the capacity of the 2-lane highway which is planned will be greatly exceeded. We, therefore, made calculations based on a 4-lane and 6-lane highway, using a version of the dispersion model developed by General Electric for New York City.* This model was verified by field measurement of pollutant concentrations. It was discovered that calculations using this model agreed very well with actual measurements. It is the best available means for predicting concentrations near a road.

Congestion at peak hour will be a daily occurrence for portions of the Patuxent Freeway given a 4-lane highway and the projected traffic volumes for 1979. Air Quality projections were made for the most heavily travelled segment, assuming peak hour traffic is 23% of average daily volumes and a peak duration factor of 0.7. Emissions were based on the expected fleet mix for 1979. Predicted levels of carbon monoxide range from 25 ppm on the road to 9 ppm 50 feet from the road. These are not unusual concentrations and can be expected to occur often since the highway as built will be inadequate.

The situation with the 6-lane highway could also be serious in cases where the lanes in the peak direction become congested due to an accident or other similar cause. Under these conditions and the same assumptions as above, carbon monoxide concentrations would range from 35 ppm on the road to 11 ppm at a distance of 50 feet from the road. The Federal standards for carbon monoxide are 35 ppm for 1 hour and 9 ppm for 8 hours - neither one of which is to be exceeded more than once a year.

Although the predicted levels for the Patuxent Freeway appear to be within Federal standards (except on the road itself), it is to be remembered that the actual concentrations will depend on the background of carbon monoxide in the area. Considering the number of freeways which are planned in the vicinity and the increasing industrial development, this background could add significantly to the levels already cited. An estimate of the true air quality will depend on a study of the regional impact of the expressways in the entire corridor. This impact should be investigated, particularly in light of the other freeways which are planned or constructed in the area. It is academic to argue whether the roads are being constructed because of existing land use or whether they are causing the land use. The Patuxent Freeway and similar expressways are opening

* Study of Air Pollution Aspects of Various Roadway Configurations,
General Electric Company, September 1, 1971.

259

Mr. Philip R. Miller

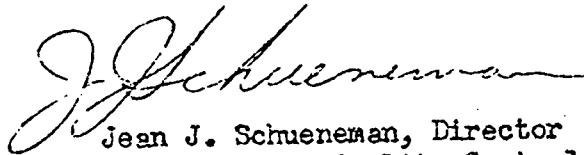
-3-

July 6, 1972

the entire area up to a new industrial, residential and commercial uses. It would be very difficult for this development to take place to any extent without the freeway system. Therefore, the effect of this increased development on air quality in this corridor is certainly a proper subject for discussion in the Environmental Impact Statement.

I hope these comments will prove helpful in preparing the Final Environmental Impact Statement.

Sincerely yours,



Jean J. Schueneman, Director
Bureau of Air Quality Control

JJS:AMD:dab

cc: Mr. John Collins
Edwin L. Powell, Jr.
Howard County Health Department



UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
NORTHEAST REGION
JOHN F. KENNEDY FEDERAL BUILDING
ROOM 2003 J & K
BOSTON, MASSACHUSETTS 02203

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JUL 11 1972
PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

7 JUL 1972

AA 739-1

Mr. Philip R. Miller, Chief
Bureau of Special Services
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Miller:

Pursuant to the State Highway Administration's letter dated May 12, 1972, the Department of the Interior has reviewed the draft Environmental Impact Statement prepared in conjunction with the Patuxent Freeway and Route 32 project, Howard and Anne Arundel Counties, Maryland. Our impressions and comments are as follow.

In the geomorphological description which appears on pages 8 and 9, all of the soils involved in this project are described as presenting a moderate to high susceptibility to erosion. It may well be that construction techniques and procedures over and above the usual will be required to prevent or strictly limit soil erosion. In this regard the discussion of water quality on page 23 appears to contain a contradiction, in that mention is made of the locations and details concerning drainage structures and appurtenances appearing on contract plans, and also that such data is not included as a part of an environmental statement because such data are voluminous (and often non-existent). We suggest that the possibility of erosion poses serious threat, and that the final statement should address itself to this threat in significantly greater detail. The confusing wording cited above should also be eliminated or rewritten.

A second concern involves the intrusion of the proposed highway into the 22 acre wooded area north of the Heritage Heights subdivision. There is no indication regarding ownership, but if this forest tract is in

EXHIBIT XIII

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public ownership, we most strongly suggest that the 6.5 acres required for highway development be replaced by adjoining lands of similar character and usefulness. We also urge that all engineering and silvicultural techniques possible be employed to protect the remaining woodlands from windfall, sudden and dramatic changes in drainage patterns, and the like.

Similarly, we note that the planned development requires Trotter Road to be located through another wooded area of seven acres. The area in question is part of the Middle Patuxent River Valley which, in the vicinity of Columbia, has been the subject of intensive study as a proposed nature preserve - wildlife demonstration area. Since highway relocation on the scale proposed (150 foot RCW) would render this wooded area useless for the purposes mentioned, we urge that Trotter Road be relocated in such a way that damage to the natural environment is held to an absolute minimum. The final environmental statement should, in our view, evidence a commitment in principle to this objective of preserving some small part of the environment. If, in either of the cases cited above, the land is publicly owned, and is used for park, recreation, wildlife or waterfowl (refuge) purposes, then a 4(f) submission is required in accordance with the Department of Transportation Act (Public Law 89-670).

In looking at the plans, we note that a possible conflict may exist between Route 32 and a Land and Water Conservation Fund project funded in part by the Department of the Interior. Specifically, federal funds were involved in the acquisition of 9.5 acres adjacent to the rear of Atholton School off U.S. 29 near Simpsonville. Prior written approval of the Secretary of the Interior is required before such recreation lands can be used for any purpose other than that for which they were acquired.

Finally, the final draft should contain evidence of consultation with the State Liaison Officer for Historic Preservation regarding any adverse effects which the project might have on existing or proposed historic sites. Such information may be obtained from the Director, Maryland Historical Trust, Box 1704, Annapolis, Maryland 21401, who has been designated as the State Liaison Officer for Historic Preservation in Maryland.

Sincerely yours,

Mark Abelson
for Mark Abelson
Regional Coordinator



C.C. AA-739-1-571

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION III
401 NORTH 9TH STREET
PHILADELPHIA, PENNSYLVANIA 19108

RECEIVED

July 11, 1972

OFFICE OF THE
REGIONAL DIRECTOR

JUL 14 1972

CHIEF ENGINEER

MAILING ADDRESS:
P.O. BOX 12900
PHILADELPHIA,
PENNSYLVANIA 19108

RECEIVED

JUL 17 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

Mr. Walter E. Woodford, Jr.
Chief Engineer
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Woodford:

We have reviewed the draft environmental statement pertaining to the Patuxent Freeway, Contract No. HO-292-771, and the relocated Maryland Route 32, Contract No. AA-739-1-571 HO-292-27-771. We concur in your statement concerning the impact of this project upon the environment.

Thank you for letting us review this statement.

Sincerely yours,

John E. McKenna
John E. McKenna
Regional Environmental
Coordinator

cc: Mr. Robert Lanza

*cc Mr. DeLong
Mr. Thompson
Mr. Miller ✓
Mr. Fitch*

EXHIBIT XIV

263



*Transit
State Planning*

MARYLAND

DEPARTMENT OF STATE PLANNING

301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201
TELEPHONE: 301-333-2451

VLADIMIR A. WAHBE
SECRETARY OF STATE PLANNING
EDWIN L. POWELL, JR.
DEPUTY SECRETARY

October 12, 1972

RECEIVED

OCT 13 1972

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

MARVIN MANDEL
GOVERNOR

Mr. Phillip R. Miller, Chief
Bureau of Special Services
State Highway Administration
301 West Preston Street
Baltimore, Maryland 21201

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT REVIEW

Applicant: State Highway Administration

Project: Patuxent Freeway - Rt. 108 to Anne Arundel County Line -
Relecoated Md. Rt. 32

State Clearinghouse Control Number: 72-5-197

State Clearinghouse Contact: Warren D. Hodges (383-2467)

Dear Mr. Miller:

The State Clearinghouse has reviewed the above noted Environmental Impact Statement. In accordance with the procedures established by the Office of Management and Budget Circular A-95, the State Clearinghouse received comments (copies attached) from the following:

Department of Health and Mental Hygiene: the Bureau of Air Quality Control made extensive comments on the air quality data relative to predicted traffic volumes, land use development, nitrogen oxide emissions, and collective impacts with other expressways in the corridor. The Bureau urged that further consideration be given to these concerns.

Department of Natural Resources: expressed a strong interest in the project and noted that the statement needs to more fully address environmental concerns regarding streams, valleys, natural areas, projected land use patterns and impacts on wildlife. The Department also suggested that alternatives be further explored in an effort to minimize adverse impacts. The Department noted that more detailed information is needed on the possible impacts to State recreational and natural properties within the vicinity of the proposed road extensions.

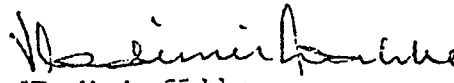
Our staff reviewed this statement and found the consideration of a major portion of the project, instead of statements for segments, to be commendable. However, it was suggested that statements concerning the use of this road as part of the urban development fabric and as a stimulator of growth need further justification, particularly in lieu of stated State policy relative to development in the Baltimore/Washington corridor. The impact statement seems to be ambivalent in addressing

EXHIBIT XV

role that the proposed highway will play in development. In some instances, justification to development is claimed while in other statements acceleration of growth patterns is attributed to the road. This ambivalence should be clarified to better announce the purpose of the proposed construction. Additionally, the alternate design to eight lanes seems to need further justification and in this regard, the concept of continuing Maryland Route 32 northwesterly from Clarksville as a major facility to Route I70W seems questionable.

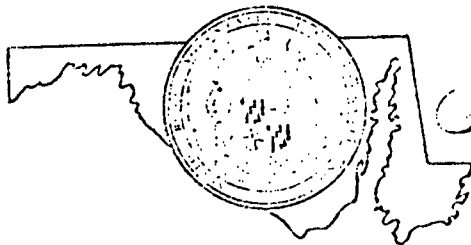
We hope that these comments will assist you in the preparation of your final statement and look forward to continued cooperation with your agency in the clearinghouse review of the complete project presentation.

Sincerely,


Vladimir Wahbe

Enc.
cc: Jean Schueneman
Anthony Abar
Charles Pixton
Madeline Schuster

State of



Maryland

265

DATE OF THE PRINTING	
JUL 14 1972	

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Neil Solomon, M.D., Ph.D., Secretary

ENVIRONMENTAL HEALTH ADMINISTRATION

510 N. HOWARD STREET • BALTIMORE, MARYLAND 21201 • Area Code 301 • 333-

July 11, 1972

TO: Mr. Edwin L. Powell, Jr.
State Clearing House

FROM: Jean J. Schueneman, Director
Bureau of Air Quality Control

RE: Contract No. HO-292 - 771 Patuxent Freeway - Maryland Route 108 to
Anne Arundel County Line

Contract No. AA-739-1-571 - Relocated Maryland Route 32 - Patuxent
HO-292-27-771 Freeway to Baltimore-Washington Parkway

We have a copy of the Draft Environmental Impact Statement for the Patuxent Freeway and Relocated Maryland Route 32 and appreciate this opportunity to make our comments.

There are several points which should be clarified concerning air quality. First of all, the nitrogen oxide problem is not given adequate treatment. Maryland has already stated in its Air Quality Implementation Plan for the Baltimore Region that the federal standards for nitrogen dioxide will not be met. This conclusion was drawn after assuming Federal new car standards would be met and all feasible controls would be placed on stationary sources. Some kind of land use and/or transportation control will be needed to enable Baltimore to meet federal standards.

The fact that a 6-lane expressway is planned upwind of Baltimore will certainly not improve the situation. As mentioned, nitrogen oxides from motor vehicles will increase because of higher speeds and greater traffic volumes. The statement on page 31 that "nitrogen oxide emissions from motor vehicles are responsible for only a fraction of man-made totals" implies that transportation is an insignificant factor in NO₂ pollution. Since motor vehicles contribute 45% of man-made nitrogen dioxide in Baltimore according to our inventories (hardly an insignificant fraction), it would appear that the impact on NO₂ levels will be adverse. The statement should be changed accordingly.

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July 11, 1972

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the road. Traffic counts, though, were very low when compared to the capacity of the road and the vehicles themselves were generally dispersed. Under these conditions, high roadside concentrations are not to be expected. However, an entirely different situation is likely as increasing industrial and commercial land uses lead to constantly increasing traffic counts. Greater congestion will undoubtedly lead to higher roadside levels of air pollutants.

Looking at the projected traffic counts for 1979, it would appear that the capacity of the 2-lane highway which is planned will be greatly exceeded. We, therefore, made calculations based on a 4-lane and 6-lane highway, using a version of the dispersion model developed by General Electric for New York City.* This model was verified by field measurement of pollutant concentrations. It was discovered that calculations using this model agreed very well with actual measurements. It is the best available means for predicting concentrations near a road.

Congestion at peak hour will be a daily occurrence for portions of the Patuxent Freeway given a 4-lane highway and the projected traffic volumes for 1979. Air Quality projections were made for the most heavily travelled segment, assuming peak hour traffic is 23% of average daily volumes and a peak duration factor of 0.7. Emissions were based on the expected fleet mix for 1979. Predicted levels of carbon monoxide range from 25 ppm on the road to 9 ppm 50 feet from the road. These are not unusual concentrations and can be expected to occur often since the highway as built will be inadequate.

The situation with the 6-lane highway could also be serious in cases where the lanes in the peak direction become congested due to an accident or other similar cause. Under these conditions and the same assumptions as above, carbon monoxide concentrations would range from 35 ppm on the road to 11 ppm at a distance of 50 feet from the road. The Federal standards for carbon monoxide are 35 ppm for 1 hour and 9 ppm for 8 hours - neither one of which is to be exceeded more than once a year.

Although the predicated levels for the Patuxent Freeway appear to be within Federal standards (except on the road itself), it is to be remembered that the actual concentrations will depend on the background of carbon monoxide in the area. Considering the number of freeways which are planned in the vicinity and the increasing industrial development, this background could add significantly to the levels already cited. An estimate of the true air quality will depend on a study of the regional impact of the expressways in the entire corridor. This impact should be investigated, particularly in light of the other freeways which are planned or constructed in the area. It is academic to argue whether the roads are being constructed because of existing land use or whether they are causing the land use. The Patuxent Freeway and similar expressways are opening the entire area up to a new industrial, residential and commercial uses. It

* Study of Air Pollution Aspects of Various Roadway Configurations, General Electric Company, September 1, 1971.

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Mr. Edwin L. Powell, Jr.

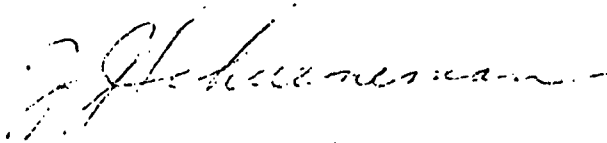
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July 11, 1972

would be very difficult for this development to take place to any extent without the freeway system. Therefore, the effect of this increased development on air quality in this corridor is certainly a proper subject for discussion in the Environmental Impact Statement.

I hope these comments will prove helpful in preparing the Final Environmental Impact Statement.

Sincerely yours,



Jean J. Schueneman, Director
Bureau of Air Quality Control

JJS:AND:dab

cc: Mr. Philip R. Miller
Mr. John Collins
Howard County Health Department

268

Date: October 6, 1972

Maryland Department of State Planning
State Office Building
301 West Preston Street
Baltimore, Maryland 21201

SEARCHED	INDEXED
SERIALIZED	FILED
OCT 10 1972	
FBI - BALTIMORE	

SUBJECT: PROJECT SUMMARY NOTIFICATION REVIEW

Applicant: State Highway Administration

Project: Patuxent Freeway - Route 108 to Anne Arundel County Line
Route 32 to Parkway

State Clearinghouse Control Number: 72-5-197

CHECK ONE

- 1. This agency does not have an interest in the above project. _____
- 2. The above project is consistent with this agency's plans or objectives and we recommend approval of the project. _____
- 3. This agency has further interest in and/or questions concerning the above project and wishes to confer with the applicant. _____
Our interest or questions are shown on enclosed attachment.
- 4. This agency does not believe a conference is necessary, but wishes to make favorable or qualifying comments shown on enclosed attachment. XX

Signature *[Handwritten Signature]*
 Title Chief, Planning & Evaluation
 Agency Dept. of Natural Resources



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COULTER
SECRETARY

JOSEPH H. MANNING
DEPUTY SECRETARY

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
STATE OFFICE BUILDING
ANNAPOLIS 21401

October 6, 1972

COMMENTS OF THE DEPARTMENT OF NATURAL RESOURCES ON PROJECT #72-5-197
Patuxent Freeway - Route 108 to Anne Arundel County Line -
Relocated Route 32

The Department of Natural Resources has an interest in this project and its Draft Environmental Impact Statement.

The Department suggests that the Draft Statement more fully address environmental concerns regarding streams, valleys and projected land use patterns.

There will be major intrusions upon waters and valleys of the Little Patuxent, Middle Patuxent, Cricket Creek, Dorsey Run and a tributary 1,000 feet East of Route 1. The Statement recognizes the need to preserve the integrity of these resources, but the Department suggests that alternatives be more fully explored to insure that the highway impact upon these resources will be absolutely minimal. Interchanges at relocated Trotter Road, future Broken Land Parkway and access proposals near Simpsonville will cross major streams and will be disruptive to numerous tributaries within construction areas.

A major impact of this proposed highway development will be in its improved access and the intrusion into areas now relatively undeveloped that support both large and small game. The carrying capacity of these lands for large game will be virtually obliterated, and the carrying capacity for small game will be substantially reduced. The increased residential and industrial development of the area that will follow the highway development can be expected to lead to the prohibition of consumptive use of wildlife that remains in the area.

The Department of Natural Resources is charged with providing recreational opportunities for citizens of the State and, in this broad charge, has an interest and would wish to foster and encourage fee hunting such as is provided by the game preserve which this project proposes to intersect. Will the land so lost be replaced by contiguous land of similar character for this recreational use?

Future proposed extensions may have some effect or intrusion upon State properties. It appears from the extension map that the Severn Run Natural Environment Area (Anne Arundel County) and the Hugg Thomas Wildlife Management Area (Howard - Carroll County Boundary) may be within the construction limits of the proposed extensions. The Department of Natural Resources would like to have more detailed information prior to committing our position on the project proposal.

DONLEIGH CIVIC ASSOCIATION, (C) SIMPSONVILLE, MARYLAND 21150

271

November 7, 1973

RECEIVED

Ho 292-34-77

Mr. Bernard M. Evans
State Highway Administrator
300 W. Preston Street
Baltimore, Maryland 21201

NOV 12 1973

CHIEF ENGINEER

RECEIVED
NOV 13 1973
EUTHELY DESIGN

Dear Sir:

On Tuesday, November 6, 1973, the Donleigh Civic Association listened to a presentation of a sketch plan for the 171 acres of land surrounding the King's Contrivance Restaurant and lying at the Northeasterly corner of Rt. 29 and new Rt. 32. The presentation included an 18 hole, par 3 golf course and approximately 320 single family medium density units.

A motion was presented endorsing the plan and specifically endorsing the alignment of access roads shown on the State Highway Administration maps. The county proposal under the 1971 general plan of highways for Howard County showing access across the Little Patuxent River to Snowden River Parkway was rejected as undesirable because:

- 1.) It would generate unwanted employment center traffic from the south on the other side of new Rt. 32.
- 2.) It would displace land needed to make the golf course neighborhood concept work.
- 3.) It would necessitate an expensive and extensive span across the wide and environmentally sensitive Little Patuxent Stream Valley.
- 4.) It would be less convenient to Donleigh residents than direct access to new Rt. 32.

Please let it be noted in your records that the members of Donleigh Civic Association do endorse HRD's plan as outlined above. In addition, the association takes the position that the State Highway Administration's plan for service road access in the area (as shown in their August public hearing) be adopted in place of the access configuration shown in the 1971 general plan for highways for Howard County.


Sincerely,

Linda Reed

Linda Reed, President
Donleigh Civic Association

cc: Mr. Hugh G. Downs, Chief Engineer, SMA
Mr. Walter E. Woodford, Jr., Deputy Administrator, SMA
Mr. Anderson Darnos, HRD

J. W. Mr. Wm. F. Lins, Jr. ✓



Maryland Department of Transportation

State Highway Administration

Harry R. Hughes
Secretary
Bernard M. Evans
Administrator

272

December 12, 1973

Mrs. Mary E. Arber
8108 Savage Guilford Road
Jassup, Maryland 20794

Contract No 292-33-771
Patuxent Freeway
Relocated Md. Route 32
I-95 to U. S. Route 1

Dear Mrs. Arber:

Thank you for your letter of October 28, 1973 advising of your concerns as regards the probable consequences of implementing the proposed Patuxent Freeway in the vicinity of Savage, Maryland.

The increase in traffic volumes experienced in your area is symptomatic of the strategic location in the Baltimore Washington corridor. This corridor which features ever increasing social, economic and cultural opportunities is one of the fastest growing areas in the nation. Continued growth in your vicinity is envisioned by the General Development Plan adopted by the Regional Planning Council December 15, 1972. The General Plan for Howard County adopted December 6, 1971 by the Howard County Council designates the eastern portion of the county for organized urban growth during the 1970-1980 period and specifies the Elkridge-Savage corridor area as a major center of land development activity. Transportation facilities, including highways, are required to support growth determined by local, regional and state planning.

The proposed Patuxent Freeway is a major interregional East-West highway transverse to the Baltimore Washington corridor connecting Interstate Route 70N near Cooksville with U. S. Route 50 at Annapolis and providing a more direct highway link between Western Maryland and the Eastern Shore. Mass transit vehicles can take full advantage of the new efficient highway.

The probable environmental impacts of implementing the proposed Patuxent Freeway, including air and noise, were assessed in a draft environmental statement which utilized comments from local, state and Federal agencies, community organizations and interested parties and was circulated to various local, state and Federal agencies during May 1972. A Final Environmental Statement is now being prepared utilizing comments received during the planning process and the early design phase.

This project has been delayed for several years as we attempt to comply with numerous requirements of Federal regulations. On October 10, 1973 approval of the design for an initial 4 lane divided highway was requested from the Federal Highway Administration. The design cannot be completed until environmental issues are satisfactorily resolved and Federal design

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Mrs. Mary E. Arber

Contract No 292-33-771


-2-

approval has been obtained.

If the design is approved, the orderly maintenance of traffic in your vicinity will be a prime consideration within the contract documents. It is expected that a new Savage Road bridge will be available to motorists prior to construction of Patuxent Freeway.

Trusting that this supplies the information you require at this time, I wish to remain

Very truly yours,
Bernard M. Evans
State Highway Administrator

By 
Hugh G. Downs
Chief Engineer

OFFICE OF PLANNING
THOMAS G. HARRIS, JR.
PLANNING
HERBERT W. SMULL, CHIEF



DIVISION OF LAND DEVELOPMENT AND
TRANSPORTATION PLANNING
J. HERBERT CLAWSON, JR., CHIEF
DIVISION OF COMPREHENSIVE PLANNING
GERALD W. VONMAYER, CHIEF

OFFICE OF PLANNING & ZONING
COUNTY OFFICE BUILDING
3450 COURT HOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: 465-5000

RECEIVED

JUL 19 1973

PHILIP R. MILLER
CHIEF BUREAU OF
SPECIAL SERVICES

July 17, 1973

Mr. Philip R. Miller, Chief
Special Services
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21202

Re: Patuxent Freeway (Relocated Md. Rte 32)
Cont. #HO 292-34, -46, -771
From I-95 to Md. Route 108

Dear Mr. Miller:

This office has coordinated the review of the public hearing documents with other Howard County agencies as requested.

The following agencies offer no comments at this time:

- Office of County Council
- Howard County Civil Defense
- Howard County Public School System
- Postmaster, Ellicott City, Maryland

Attached, herewith, are self-explanatory copies of comments received from the following agencies:

- Howard County Police Department
- Department of Parks & Recreation
- Office of Fire Administrator
- Bureau of Engineering, Department of Public Works
- Division of Comprehensive Planning, Office of Planning & Zoning

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Mr. Phillip R. Miller

-2-

July 17, 1973

This office offers the following comments relevant to the Patuxent Freeway:

1. The plan does not indicate the obligation for construction financial responsibility for the future extension of Broken Land Parkway from the interchange limits to the proposed connection with existing Route 32. This question was previously raised in a meeting with the State Highway Administration and Howard County representatives in October 1969.

2. The plan does not reflect extension of Kindler Road as shown on the General Plan of Highways 1971 adopted by the Howard County Council on December 6, 1971.

3. With respect to the access plan alternate for the Holiday Hills subdivision area, we recommend the following order of priority: Alternate C, D and B. The proposed Alternate A route would obviously create an adverse impact on the Middle Patuxent River flood plain valley.

4. The Howard County Department of Public Works is presently evaluating a proposed alternate relocation plan study of Cedar Lane for determination of final route selection.

5. Relocated Trotter Road interchange alignment does not correspond with the General Plan of Highways 1971. See the attached schematic alternate centerline relocations to reflect the alignment and continuity of the Little Patuxent Parkway as shown on official Howard County General Plan.

We offer the following comments on U.S. Route 29 service road supplement plan:

1. The Owen Brown Road Alternate A relocation generally corresponds to the alignment as shown on the General Plan of Highways 1971. Owen Brown Road Alternate B relocation provides a more direct service road continuity but appears to have a more disruptive and adverse effect on the established vicinal residential property development.

276

Mr. Philip R. Miller

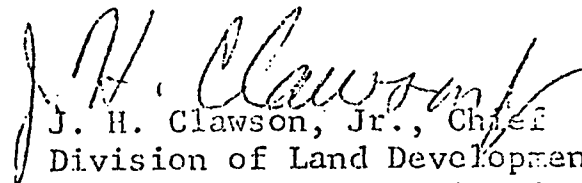
-3-

July 17, 1973

2. The proposed extension of Broken Land Parkway to the west of U.S. Route 29 and the study road traffic circulation pattern generally conforms to the previous proposals of the Howard Research and Development Corporation on schematic plans submitted to the Howard County Planning Board for review of concept considerations.

Trusting the information as furnished, herewith, is sufficient for your present needs.

Very truly yours,


J. H. Clawson, Jr., Chief
Division of Land Development
and Transportation Planning

JHC, JR./sg

cc: Mr. Omar J. Jones
Mr. W. David Watts
Mr. William A. Altman
Mr. Thomas G. Harris, Jr.

277



Office of Fire Administrator

COURT HOUSE
ELLCOTT CITY, MARYLAND 21043
445-8000 EXT. 033

P. F. J. LE PORE
FIRE ADMINISTRATOR

June 11, 1973

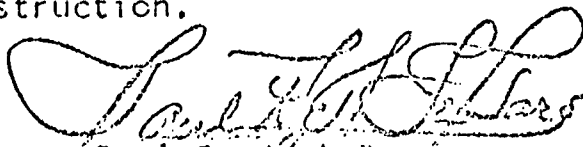
TO: Mr. J. H. Clawson, Jr., Chief
Division of Land Development

SUBJECT: Patuxent Freeway (Relocated Maryland
Route 32 from Maryland Route 108 to I-95)

This office is concerned about the effects the construction will have on the Clarksville Volunteer Fire Station.

A detailed clarification is needed to assure fire station operations and response will not be adversely affected by the proposed construction.

The undersigned recommends a meeting be scheduled to review the proposed construction with representatives of the Fifth District Volunteer Fire Department, DPW, Division of Land Development and the Fire Administrator to completely clarify the uncertainties concerning the proposed construction.


Paul F. J. LePore
Fire Administrator

PFJL/rb
cc: Co. Exec.
DPW
Fire Board
Pres. 5th Dist. Vol. F. D.

RECEIVED

JUN 12 1973

DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
OF HOWARD COUNTY

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING

RECEIVED 276

INTER-OFFICE MEMORANDUM

JUN 3 1973

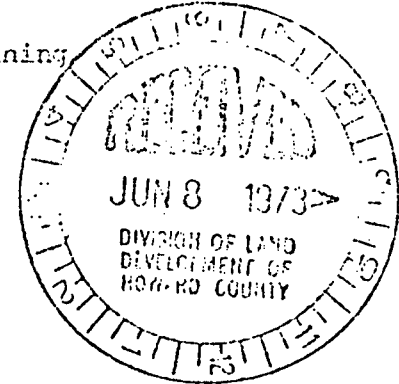
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
OF HOWARD COUNTY

June 7, 1973

TO: Mr. J. H. Clawson, Jr., Chief
Division of Land Development & Transportation Planning
Office of Planning and Zoning

FROM: W. O. Filbert, Chief
Bureau of Engineering
Department of Public Works

WOF
plb:cc



RE: Patuxent Freeway (Relocated Md. Rt. 32 from
Md. Rt. 108 to I-95)

Reference is made to your letter of May 16, 1973, requesting comments from this Department relative to the preliminary plan prepared by the State Highway Administration for relocation of Route 32 from Maryland Route 108 to I-95.

Having reviewed this plan, the following comments are submitted for transmittal to the State Highway Administration:

- 1) The S.H.A. should be advised that Howard County is presently developing the re-alignment of Cedar Lane between existing Owen Brown Road and Pindehl School Road and this alignment will determine the location of the interchange for Cedar Lane.
- 2) The present plan proposes the construction of a service road North of relocated Route 32, which road will terminate approximately midway between Cedar Lane and Trotter Road. It is the opinion of this department that this service road should be extended to Trotter Road; it is felt that this additional construction will alleviate apparent traffic congestion which will develop at Cedar Lane if the industrial traffic (W. R. Grace) is denied access from Trotter Road.
- 3) The S.H.A. should be advised that Howard County has development plans for the Northeast quadrant for the Route 108 and relocated Route 32 intersection. These plans propose construction of additional County office and maintenance facilities.
- 4) The County proposes, within the next several years, to develop plans for the re-location of Trotter Road. Prior to finalizing the relocation of Route 32, the County plans should be incorporated.
- 5) In reviewing the alternate methods for providing access to the Holiday Hills areas, it is recommended that the State include in their plans the construction of alternate alignment "C" and "D". It is felt that these alternates will provide for the best circulation of traffic within the developed areas in the vicinity of Holiday Hills and the development of those lands presently unimproved.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING

INTER-OFFICE MEMORANDUM

279

Re: Patuxent Freeway

(Relocated Md. Rt. 32 from Md. Rt. 108 to I-95)

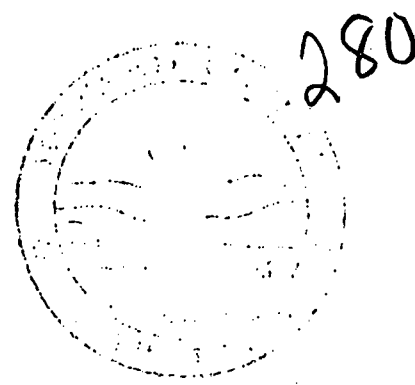
Page 2

- 6) The proposed diamond interchange between Route 32 and Route 108 appears to be sufficient for handling projected traffic, based on present zoning, however, should the zoning in the vicinity materially change, then a full clover-leaf type of interchange should be considered.
- 7) This Department is of the opinion that the information submitted for our review fails to justify the additional costs of providing an interchange midway between Broken Land Parkway and Route 29. It is felt that the service road "C" on the South side of Route 32 should cross Route 32 at approximately Station 760± and continue in an Easterly direction, connecting with Snowden River Parkway, intersecting service road "D" and Carlinda Drive.
- 8) The West end of project where it joins existing Route 32 in Clarksville appears to materially interfere with the proper and safe operation of the Clarksville Fire Station. The West-bound 32 to Northeast Route 108 ramp appears to cross dangerously close to and in front of the station. Should sufficient displacement distance be found not possible, we would suggest that S.H.A. should be obliged to provide a suitable alternative site with quarters.

WOF/vo

cc: Mr. W. A. Altman
Mr. T. G. Harris, Jr.
Mr. G. W. Wehland
Mr. J. E. Kienker

Department of Transportation and Public
Agency Office Building, 2000 North Main Street, Portland, Oregon 97208
PHONE 555-1000



June 1, 1970

LEONARD BROWN
DIRECTOR

LEONARD BROWN
DIRECTOR

TO: Mr. J. H. Johnson, Jr., Chief
Division of Land Acquisition
and Transportation Planning

FROM: F. Leonard Brown

SUBJECT: Patrumat Freeway (Relocated Rd. Route 22 from Rd. Rt. 108 to I-95)

COMMENTS:

- (1) The access ramp connection at Finfill School Road should be eliminated. This construction will retain the Middle Patrumat River as shown on plan.
- (2) The Trotter Road connection should be eliminated. This construction will retain bridge deck. The intersection is not needed as Rt. 108 is only 2 minutes away.
- The entire Trotter Road "Relocated" should be removed. It is not necessary.
- (3) The Little Patrumat Freeway which is not a part of this submission, should be turned north on Cedar Lane and west on Fagnum Farm Road. This then would be an crossing of the Middle Patrumat River and no requirement for "Relocated Trotter Road".

FID/eb

- cc: Mr. William A. Alban
- Dr. M. Thomas Costello
- Mr. William G. Lardner
- Mr. Paul W. J. Leifer
- Postmaster Lester Long
- Chief G. Russell Walters
- Mr. W. David Platt

281

DIRECTOR OF PLANNING
THOMAS S. HARRIS, JR.
OFFICE OF ZONING
HERBERT W. SMULL, CHIEF



DIVISION OF LAND DEVELOPMENT AND
TRANSPORTATION PLANNING
J. HERBERT CLAWSON, JR., CHIEF
DIVISION OF COMPREHENSIVE PLANNING
GERALD W. VONMAYER, CHIEF

OFFICE OF PLANNING & ZONING

COUNTY OFFICE BUILDING
3450 COURT HOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: 493-5000

June 1, 1973

MEMORANDUM

TO: Stephen W. Allwell
FROM: Gerald W. von Mayer
RE: Patuxent Freeway (Relocated Md. Route 32 from Md. Route 108 to 1-95)

After having reviewed the attached copy of the proposed alignment of the Patuxent Freeway, the following comments are given:

1. State Highway Administration should do its utmost to minimize the impact of the proposed highway through both the Little and Middle Patuxent stream valleys as well as Cricket Creek.
2. In reviewing the said plans, this office would question the need for an interchange at Trotter Road, since it is so close to the Clarksville or Route 29 Interchange. Furthermore, the approaches to the proposed interchange at Trotter Road would seem to critically affect some of the valuable ecological areas of the tributary (Cricket Creek) to the Middle Patuxent River.
3. The access from Holiday Hills to Route 32 would seem to be best served by the proposed access road that would tie into relocated Pindell School Road.

GWM

GWM/clc

RECEIVED

JUN 1 1973

DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
OF HOWARD COUNTY



RECEIVED

282

MAY 31 1973

DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
OF HOWARD COUNTY

Howard County Police Department

ELlicott City, Maryland 21043

466-7500

R. WALTERS
CHIEF OF POLICE

May 24, 1973

Mr. J. H. Clawson, Jr., Chief
Division of Land Development
and Transportation Planning
County Office Building
Ellicott City, Maryland 21043

RE: Patuxent Freeway

Mr. Clawson:

In reviewing your correspondence dated 16 May 1973, concerning the proposed relocation of Maryland Route 32 in Howard County which would incorporate the Patuxent Freeway between Maryland Route 108 in Clarksville and the Interstate Route 95, it is our conclusion that such a controlled access arterial highway would be desirable in its function to serve as a major arterial link between the existing Baltimore-Washington Parkway, Interstate 95 and Western Howard County including points north and west.

This highway transportation network as functionally proposed, should have the effect of lessening the present and projected traffic volume on surrounding major, collector and local roadways. These have gradually developed into overloaded principle routes of travel to and from local and distant traffic generators.

When completed, the Patuxent Freeway and relocated Maryland Route 32 should become the most direct, thereby the most desirable, route of travel to and from these inter-city controlled access freeways.

The projected traffic volume should result in a lower volume movement on surrounding roadways, subsequently resulting in a lower degree of collision experience due to a lower point of conflict ratio and less congestion.


2813

May 24, 1973

RE: Patuxent Freeway

Thank you for your interest in contacting us regarding this major highway improvement.

Sincerely,


G. R. Walters
Chief of Police

GRW:et

THE MARYLAND HISTORICAL TRUST

Shaw House · 21 State Circle · Annapolis, Maryland · 21401

(301) 267-1212

(301) 267-1438

May 6, 1975

RECEIVED

MAY 14 1975 4:30 PM

CENTURY ENGINEERING, INC.
32 WEST ROAD
TOWSON, MARYLAND 21284

Mr. William F. Lins, Jr.
Chief, Bureau of Highway Design
Maryland State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203

Dear Mr. Lins:

The Maryland Historical Trust has been asked to comment on the relocation of Md. Rt. 32, Patuxent Freeway, Md. Rt. 108 to Baltimore Washington Parkway. Within the area under consideration, there are numerous historic buildings which are listed on the Trust's survey records. Shown on the enclosed map, these are:

- 37 - Athol; eighteenth century, one and one-half story stone house of four bays
- 39 - Iris Hill or Worthington's Quarter; 1710, two story stone house
- 40 - Moundland; c. 1848, built of local stone
- 41 - Joshua Barney House; c. 1750
- 90 - King's Contrivance; two and one-half story brick eighteenth century
- 157 - Alabama Farm; two story stone
- 158 - River Hill; two story stone
- 161 - Due House; two story stone
- 163 - Tierney Gambrel Roof House (site); burned
- 164 - White Wine and Claret (Welling's Stone House); two and one-half stories
- 165 - Vogel House; two story stone farmhouse much enlarged in early part of twentieth century by concrete blocks simulating stone
- 267 - Wildwood; clapboard house with log part underneath in one section, well preserved log smokehouse south of the house

5574

DISTRIBUTION			
JWA		LM	
ROB		MM	✓
MAC		HEM	
RAC		RAM	✓
DEF		SP	✓
SNG		HRP	✓
ELG		MGR	
JSCH		JTR	
JTJ	✓	RR	
RGJ	✓	JW	
EIK		MM	✓
IPK		MM	✓

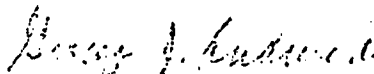
285

Mr. William F. Lins, Jr.
Page Two
May 6, 1975

None of these buildings appear to be in danger except for No. 165, the Vogel House. In order to determine the significance of this house, I asked Mrs. Francis Mason, a member of the Howard County Committee of the Maryland Historical Trust, for her comments. After looking at the exterior of this house, Mrs. Mason felt that since it was in poor condition and had been extensively altered, its historic qualities had been greatly diminished. She did not object to its possible demolition for this highway but hoped that a solution might be found that would avoid all historic sites. The Trust agrees with her position.

Thank you for giving us the opportunity to comment on this project.

Sincerely,



George J. Andreve
Assistant Architectural
Historian

GJA:sh
Enclosure
cc: Mrs. Francis Mason
Mrs. Edwin Gramkow



Maryland Department of Transportation

State Highway Administration

November 24, 1975

Harry R. Hughes
Secretary
Bernard M. Evans
Administrator

286

75 Mr. E. Hodshon: For
D. Honeywell. WFL

RE: Maryland Route 32
From Maryland Route 108
to Baltimore/Washington
Parkway
Contract No. AA 739-1-5

RECEIVED
NOV 28 1975
BUR. HWY. DESIGN

Mrs. Anne Agge
1730 Waldorf Court
Crofton, Maryland 21113

Dear Mrs. Agge:

In accordance with various laws and regulations, the State Highway Administration requests the early review of the captioned project area by local historical interests. We should like to obtain the opinions of the Anne Arundel County Historical Trust, and any other local body or concerned individual regarding historically significant sites potentially affected by the project. If, as a member of the Anne Arundel County Historical Trust, you know of any other local interested party, please notify Ms. Margaret Ballard, 383-6887, of my office so that we can secure their comments.

Enclosed please find a copy of a map which shows the portion of the project within Anne Arundel County. Your comments on this portion will be greatly appreciated.

RECEIVED

DEC 1 1975

Very truly yours,

Eugene T. Camponeschi

Eugene T. Camponeschi, Chief
Bureau of Project Planning

CENTURY ENGINEERING, INC.
32 WEST ROAD
TOWSON, MARYLAND 21204

5574

ETC:MB:bh
Enclosures

cc: Mr. William F. Lins, Jr. ✓
Ms. Margaret Ballard

DISTRIBUTION			
JWA		LM	
ROB		MM	✓
MAC		HEM	
RAC		RAM	✓
DEF		BP	
SNG		HRP	✓
ELG		MGR	
JSCH		JTR	
JTJ	✓	RR	
RGJ	✓	JW	
EJK	✓	MOY	✓
JPK	✓		

State Highway Administration

November 25, 1975

287

RECEIVED

DEC 1 1975

CENTURY ENGINEERING, INC.
32 WEST ROAD
TOWSON, MARYLAND 21284

RE: Maryland Route 32
From Maryland Route 108
to Baltimore/Washington
Parkway
Contract No. 1A 729-1-571
HS 282-27-771

RECEIVED
NOV 23 1975
FEDERAL ROAD

Mr. John H. Pearce
State Historic Preservation Officer
Maryland Historical Trust
Shaw House
21 State Circle
Annapolis, Maryland 21401

11/28/75 Mr. E. Hodshon: For
D. Honeywell.

WEL

Dear Mr. Pearce:

In a letter dated October 13, 1975 to you, our consultant for the captioned project requested some information regarding the Anne Arundel County portion of the proposal. Century Engineering, Inc. advised you that the Historical Field Survey in the project area was conducted solely within Howard County, in fact, only west of U. S. Route 29.

On November 19, 1975, Ms. Margaret Ballard of my staff spoke with George Andrade, Maryland Historical Trust, to determine the remaining necessary coordination between our agencies on this project. It was Mr. Andrade's opinion that another field survey with Federal Highway Administration and State Highway Administration representatives is not needed, due to the basically complete nature of the historical inventory in Anne Arundel County.

However, the State Highway Administration is required to have documentation that the entire scope of the project was considered. It is therefore requested that your office under the captioned plans and submit a complete determination of whether any areas of historical significance may be impacted by roadway development. I should like to remind you that such a letter must include your evaluation of the significance of Site #1, the Shaw House.

5574

Your attention to this matter is greatly appreciated.

Very truly yours,

Eugene T. Campanoschi

Eugene T. Campanoschi, Chief
Division of Project Planning

DISTRIBUTION			
JWA		LM	
ROB		MM	✓
WAC		HEM	
RAC		RAM	✓
DEF		BP	✓
SNG		HRP	✓
ELG		MGR	
JSCH		JTR	
JTJ	✓	RR	
RGJ	✓	JW	
EJK		(MGT)	✓
JPK	✓		

E. D. ...

Mr. William E. ...

RECEIVED



The Maryland Historical Trust

Shaw House, 21 State Circle, Annapolis, Maryland 21401

301: 267-1212 or 301: 267-1438

288

DEC 2 1975

November 24 1975

RECEIVED

NOV 28 1975

DESIGN OFFICE AND
PLANS & PRELIMINARY ENGINEERING

NTURY ENGINEERING, INC.
32 WEST ROAD
TOWSON, MARYLAND 21204

Mr. Robert Hajzyk, Director
Office of Planning and
Preliminary Engineering
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21203

Dear Mr. Hajzyk:

In response to your request for information on the Vogel House in Howard County, whose taking is required by Route 32, I asked the Trust's Architectural Historian, Mr. George Andreve, to visit the site, and we also arranged for a visit and comments by the chairman of the Howard County Committee, Mrs. Edwin Gramkow. We greatly appreciate the assistance of Ms. Margaret Ballard, who personally took photographs and brought them here to enable me to make a determination.

Based on the material thus provided, it is my opinion that this structure is not eligible for the National Register of Historic Places. Also, though, I wish to have some record made of it and some old materials saved for re-use, it is my opinion that this structure does not possess the quality of "significance" which would require a special review under Section 4(f) of the Department of Transportation enabling legislation.

As I have discussed with Mr. Eckhardt, at the appropriate time I would like to have someone from the Trust office and/or committee join with your representative to work out details of a minimal recording (a few photographs and perhaps a floor plan of the old part of the structure) and a selection of materials (if any) to be salvaged and offered for re-use by some appropriate preservation organization. I suggest that at the appropriate time, your representative call Mr. Andreve who can handle these matters.

I appreciate very much your assistance in this matter, and hope that these determinations, opinions, and requests fulfill any need for response from the State Historic Preservation Officer.

Sincerely,

John N. Pearce

John N. Pearce
State Historic
Preservation Officer

JNP:sh
cc: Eugene Camponeschi
Donald Eckhardt
Orwin Talbott
George Andreve
Boots Gramkow
John Clark
Nancy Miller

Department of Economic and Community Development

5574

DISTRIBUTION												
	LM	MM	HEM	RAM	BP	HRP	MGR	JTR	RR	JW		
JWA	ROB	MAC	RAG	DEF	SNG	ELG	JSCH	JTJ	RGJ	EJK	JPK	



The Maryland Historical Trust

Shaw House, 21 State Circle, Annapolis, Maryland 21401
301: 267-1212 or 301: 267-1438

289
RECEIVED

DEC 22 1975

W. S. LINS, JR.
CHIEF, BUREAU OF
HIGHWAY DESIGN

16 December 1975 10 11 9 44

ADDITIONAL
PROJECT PLANNING

Mr. Eugene Camponeschi
Bureau of Project Planning
State Highway Administration
Department of Transportation
300 W. Preston Street
Baltimore, Maryland 21203

Re: Maryland Route 32 from
Maryland Route 108 to
Baltimore/Washington Parkway
Contract No. AA739-1-571
HO292-27-771

Dear Mr. Camponeschi:

I am writing in response to your letter of November 25, 1975, concerning historical properties adjacent to Maryland Route 32. I believe my letter of November 24 to Mr. Robert Hajzyk gives the determination of effect that is required for the portion of the road in Howard County.

In regard to the smaller portion in Anne Arundel County, I feel that no historic properties would be adversely impacted by the proposed construction as the alignment is shown on the attached map. The only historic property near the section Route 32 in Anne Arundel County is Bowie House - Grasslands - and dependencies (#94). The barn is nearest to the present road. Since the proposed road does not have an alignment north of the present road where the barn is located, I feel that there would not be adverse impact to it by the new construction.

In addition, if archaeological remains are found during construction of the new road, I hope that a competent archaeologist will be contacted so that they might be evaluated.

Sincerely yours,

John N. Pearce
State Historic
Preservation Officer

JNP/sc

cc: Robert Hajzyk, Donald Eckhardt, Orwin Talbott
Nancy Miller, Anne Agee, Mrs. Edwin Gramkow
Department of Economic and Community Development

RECEIVED



The Maryland Historical Trust

Shaw House, 21 State Circle, Annapolis, Maryland 21401
301: 267-1212 or 301: 267-1438

Handwritten: 290

MAR 10 1976 3:15 PM

March 1, 1976

CENTURY ENGINEERING, INC.
32 WEST ROAD
TOWSON, MARYLAND 21204

Mr. Eugene T. Camponeschi
Chief, Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21203

ADDITIONAL COPY
PROJECT PLANNING

076 MAR 4 PM 3 04

RE: Maryland Route 32 from
Maryland Route 108 to
Balt./Wash. Parkway
AA 739-1-571
HO 292-27-771

Dear Mr. Camponeschi:

I am writing in regard to a barn which will be demolished if the above mentioned project is carried out. Near Route 32 in Anne Arundel County is Bowie House (Grasslands) and dependencies (#94). The barn in question is part of this farm which is listed in the historic survey records of the Trust. However, I feel that this barn is not eligible to be placed on the National Register. If you concur in these findings, the proposed action will not require review under Section 106 of the Historic Preservation Act of 1966, but might require review under Section 4(f) of the U.S. Department of Transportation Act, if federal funds are involved.

I hope this determination will fulfill any need for response from the State Historic Preservation Officer.

Handwritten: 5574

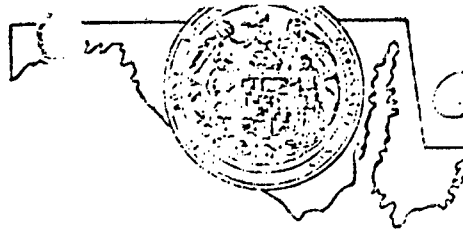
DISTRIBUTION	
JWA	LM
ROB	MM ✓
MAC	HEM
RAC	RAM ✓
DEF	BP ✓
SNG	HRP ✓
ELG	MGR
JSCH	JTR
JTJ ✓	RR
RGJ	JW
EJK	<u>MEM</u> ✓
JPK ✓	

Sincerely,

Handwritten signature: John N. Pearce
John N. Pearce
State Historic
Preservation Officer

JNP:GJA:sh
Enclosure
cc: Mrs. Edwin Gramkow
Mrs. Ann Agee

State of



Maryland

140 292-000-571

291

1975 SEP 8 AM 9 47

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
ENVIRONMENTAL HEALTH ADMINISTRATION

201 WEST PRESTON STREET
BALTIMORE 21201
PHONE • 331-383-3245

AIR QUALITY
PROJECT PLANNING

DONALD H. NORZN
DIRECTOR

Address Replies to P.O. Box 13337
Baltimore, Maryland 21203

September 3, 1975

RECEIVED

OCT 2 1975

WM. F. LINS, JR.
CHIEF, BUREAU OF
HIGHWAY DESIGN

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Camponeschi:

RE: Air Quality Analysis for Maryland Route 32 from Maryland Route 108 to the
Baltimore/Washington Parkway

The Bureau of Air Quality and Noise Control has received the copies of the
above air quality analysis which was forwarded to us on August 12, 1975. After
reviewing this report, we have the following comments.

On page 4, in number 4 of the summary, the comment is made that the capacity
of the proposed Patuxent Freeway would far exceed the projected traffic growth.
Referring to Plate 5, the Average Daily Traffic (ADT) for the most heavily
travelled segment of the proposed freeway is 66,100 vehicles. Assuming a 10%
peak hour factor, this amounts to 6,610 vehicles in the peak one hour period. The
theoretical capacity of an 8 lane divided freeway is 16,000 vehicles/hour. There-
fore, this segment could accomodate 150% more traffic than is projected in the
10 year forecast. This percentage rises to 400% for the less heavily travelled
segments. Why is so much extra capacity being built into this highway? It would
appear that a 6 lane or even a 4 lane highway could serve the expected traffic if
the forecasts are reliable. A highway which is so over-capacity could have a
significant traffic-inducing effect. Even greater amounts of development could
be attracted to the area than are currently foreseen. This, in turn, will cause
higher traffic volumes than originally projected and the larger capacity facility
will be justified. Unless a reasonable rationale exists for building an 8 lane
freeway in this corridor, the plans should be revised.

A second point is the absence of certain air monitoring data for the area.
The only actual data which is documented is that obtained from a special study
of carbon monoxide background concentrations. In addition, there are non-continu-
ous data available for nitrogen dioxide and suspended particulate matter at
Empsonville in Howard County. Although, there are no monitoring sites in Howard
County for photochemical oxidants, it should not be ignored. This project is
located in the Baltimore Metropolitan Air Quality Control Region--an area in which

<input checked="" type="checkbox"/>	CAMPONESCHI	<input type="checkbox"/>	HEIWIG	<input type="checkbox"/>	JANATA
<input type="checkbox"/>	DODSON	<input type="checkbox"/>	HOFFMAN	<input type="checkbox"/>	KOLESK
<input type="checkbox"/>	DORSEY	<input type="checkbox"/>	HOPKINS	<input type="checkbox"/>	SCHNEIDER
<input type="checkbox"/>	JACKSON	<input type="checkbox"/>	HOUST	<input type="checkbox"/>	UHL
<input type="checkbox"/>	ECE	<input type="checkbox"/>	INFO	<input type="checkbox"/>	FILE
<input type="checkbox"/>	ACTION	<input type="checkbox"/>		<input type="checkbox"/>	

292

E. Eugene T. Camponeschi

September 3, 1975

The oxidant concentrations are greatly in excess of the standard. Because of the ubiquitous nature of this pollutant and the high levels which have been recorded in suburban Baltimore and Anne Arundel Counties, it is probably that the standard is also being exceeded in Howard County.

Aside from these considerations, it has been our understanding that a consultant for the State Highway Administration had monitored in the Route 32 corridor during the summer of 1974. Ozone was one of the pollutants which was being measured. The Bureau normally discourages the use of short-term monitoring data for comparison to air quality standards. However, exceptions have been made as in the case of carbon monoxide, where monitoring was performed during a period when the highest concentrations had been observed to occur. The same principle can be applied to oxidant. If the consultant was measuring oxidant during the summer--the season of highest oxidant readings--that data might be valuable and compared to other sites measuring PnOx. If high levels are reported at all sites, then they should be reported.

Once the oxidant problem in Howard County has been addressed, it is necessary to relate the proposed project to it. This is most easily done by reference to the transportation control measures promulgated by the EPA for Baltimore. They are briefly mentioned on page 3 but they need to be discussed in the above context in order to be meaningful.

I hope these comments will prove useful to you in the preparation of the final Environmental Impact Statement.

Very truly yours,



William K. Bonta, Chief
Division of Program Planning
and Evaluation
Bureau of Air Quality and
Noise-Control

WKB:AMD:sez

cc: Howard County Health Dept.
Mr. John Collins, EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

674 AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

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ENVIRONMENTAL
AIR QUALITY
PROJECT PLANNING

015 OCT 2 AM 10 16

Mr. Eugene T. Camponeschi
Chief, Bureau of Project Planning
Maryland Department of Transportation
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Re: Maryland Route 52 from Maryland Route 108
to the Baltimore/Washington Parkway

Dear Mr. Camponeschi:

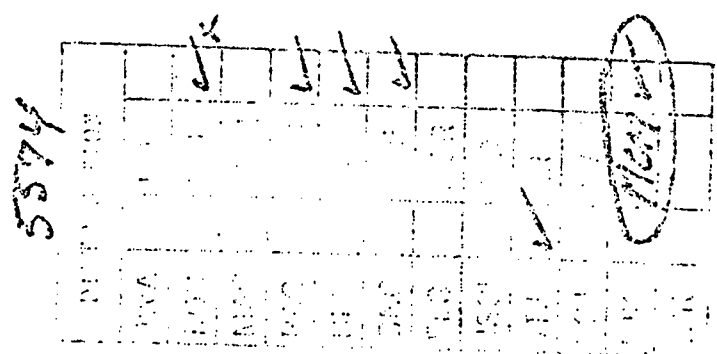
We appreciate the opportunity to review the Supplementary Air Quality Analysis for the above project. While we have no objections with the general approach to the analysis of potential air quality impacts of the proposed project we have outlined below elements in the study where revisions may be necessary to insure adequate study results.

Microscale Air Quality Analysis

It is not clear that the evaluation of carbon monoxide (CO) impacts related to the proposed project fully follows the "worst case" analytical approach necessary for correlation to the applicable National Ambient Air Quality Standards. As these criteria do not allow for exceeding standards in areas of free public access more than once a year, we have found that using a combination of 1) "worst case" traffic conditions, 2) "worst case" meteorological data, 3) "worst case" fleet emission factors (usually in the year of project completion), and 4) "worst case" modeling receptors is necessary to identify and quantify pollution "hot spots".

While the air quality analysis of mid-section traffic links may provide an adequate evaluation of those areas, we note the need to also model the intersections of maximum traffic interface where the highest emission densities might be expected. We would suggest that further study should model the combined impact of the two connections with major radials (I-95 and the Baltimore/Washington Parkway) and attention should also be given to the potential of 1) decreased levels of traffic service at these points, and 2) queuing conditions during peak hour traffic levels. The modeling receptors should also be located at

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right-of-way downwind during worst case meteorological conditions at the intersections. The inclusion of these factors in the CO analysis will allow more accurate comparison with the criteria established by the National Ambient Air Quality Standards.

Regional Air Quality Analysis

While the Supplemental Air Quality Analysis has quantified the projected pollutant burdens from the proposed project there is inadequate discussion of these contributions as they relate to the regional pollutant strategies in the Baltimore Transportation Central Plan and subsequent implications on consistency with the State Implementation Plan.

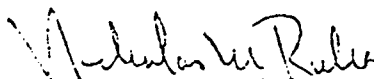
As a circumferential element between the two major southbound radials the travel generated (and development subsequently induced) by the project may be a significant factor in regional air quality conditions and subsequent measures required to attain and maintain standards.

Revisions of the study should address more specifically the route's role in the pollutant reduction requirements as specified in Transportation Control Plan, the growth and development projections induced by this route and their relationship with regional planning objectives.

In conclusion we wonder whether the meteorological data is adequately representative of area conditions or whether more current data would be more appropriate.

We would appreciate receipt of two (2) copies of the revised study if it is to be circulated or five (5) copies of the final Environmental Impact Statement at such time as it is filed with the Council on Environmental Quality. If you have further questions or if we can be of further assistance you may wish to contact Mr. Sam Little of my staff at 215-597-8336.

Sincerely yours,



Nicholas M. Ruha

Chief

EIS and Wetlands Review Section



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Office of County Executive

EDWARD L. COCHRAN
County Executive

August 12, 1975

RECEIVED
COUNTY EXECUTIVE
OFFICE
1 37

Robert House
11150 Ellicott City Maryland 21043
410-5800, Ext. 201

Honorable Harry R. Hughes, Secretary,
Maryland Dept. of Transportation,
Baltimore-Washington International Airport,
P. O. Box 8755,
Baltimore, Md. 21240

Re: Rte. 29-Rte. 108 Interchange
and
Patuxent Freeway (Md. Rte. 32
Reloc.) from U.S. Rte. 29 to
Anne Arundel County Line

Dear Secretary Hughes:

The County Council, the County's legislative delegation, and I are very seriously concerned with the continued delays in State Highway construction in Howard County. In particular, construction of the Patuxent Freeway (Md. Rte. 32 Reloc.) can and should be expedited and planning for the Rte. 29-Rte. 108 Interchange, including the required public hearings, should be accelerated.

It is our understanding that the required public hearings for the referenced segment of Patuxent Freeway were held on October 19, 1970 and August 15, 1973 respectively and that the Final Draft Environmental Impact Statements are in process of preparation, to satisfy final Federal Highway Administration directives.

The Howard County Division of Land Development and Transportation Planning has prepared the accompanying study report that incorporates data compiled from State, County and private developer sources. As set forth in the study report, the acceleration of the construction schedule for this highway project will provide beneficial returns for all concerned levels of government.

THE FRY ALM

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- (1) denied Howard County a major and important segment of its highway system.
- (2) subjected Howard County citizens to inconvenience, loss of time, and increased cost of travel.
- (3) denied regional motorists a direct connection to the west.
- (4) resulted in a high number of accidents.
- (5) been responsible for enormous increases in project costs.

THE NEED FOR THE PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOCATED)

The Patuxent Freeway (Maryland Route 32 Relocated) has been planned by the State as a regional highway having State-wide significance. It connects the State Capitol with the Central Maryland Counties and, via its tie to Interstate Route 70-N, with the Western Maryland Counties. Service is provided to Annapolis, Fort Meade, Columbia, Sykesville and Westminster. Connections are made with such other major highways as U.S. Route 50, Maryland Route 3, the Baltimore-Washington Parkway, U.S. Route 1, Interstate Route 95, U.S. Route 29, Maryland Route 108, Interstate Route 70-N, Maryland Route 26 and U.S. Route 140.

The need for the Patuxent Freeway (Maryland Route 32 Relocated) has long been recognized by State and County planners, County elected officials, and State legislators. The General Plan of Highways for Howard County adopted July 20, 1960, specified a new Maryland Route 32 running from the Anne Arundel County line to Interstate 70-N. This highway corridor was identified as the "Savage-Cooksville Freeway" and described as follows:

FROM US ROUTE 29 TO THE ANNE ARUNDEL COUNTY LINE

TRANSPORTATION CORRIDOR STUDY AREA

INTRODUCTION

The 1971 Howard County General Plan of Highways provides for Howard County to be served by certain Interstate and State Primary Highways which form the framework for the highway network within the County. These major highways have been planned to accommodate interstate, regional and county traffic.

This system of highways includes U.S. Route 1, Interstate Route 95, U.S. Route 29, Interstate Route 70-N, U.S. Route 40, New Maryland Route 100 and the Patuxent Freeway (Maryland Route 32 Relocated). With the exception of Interstate Route 70-N and The Patuxent Freeway (Maryland Route 32 Relocated), these highways are located in the eastern section of the County and are generally oriented in a North-South direction. Although Route I-70N is an East-West facility, it is located along the Northern fringe of the County. The Patuxent Freeway (Maryland Route 32 Relocated) has been planned to provide East-West service for the southern portion of the County and North-South service for the mid-western section.

Whereas most of these major highways, which are all a part of the State Highway System, have either been constructed or reconstructed within the past decade, the construction of the Patuxent Freeway (Maryland Route 32 Relocated) has been continuously delayed. This delay has:

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To direct immediate attention to the impact of the importance of this highway project to Howard County, the study area was confined to the following geographical limits:

The Anne Arundel County line on the easterly limits; relocated Md. Route 175 on the northerly limits continuing with the Little Patuxent Parkway and its future extension on the west and bounded on the southerly limits by Md. Rte. 215.

We believe the study warrants full and complete consideration by all parties and, collectively suggest a conference at your earliest convenience to discuss this matter in greater detail with you and your appropriate staff representatives. We would also like to discuss at that time the status of the Rte. 108-29 interchange and the options available for accelerating that project.

Your personal attention to these vitally important matters will be greatly appreciated.

Sincerely,

Edward L. Cochran
Edward L. Cochran
County Executive

ELC:CBS

- cc: J. Hugh Nichols
- Joel Chasnoff
- James Clark, Jr.
- Hugh Burgess
- Thomas M. Yaeger
- Richard L. Anderson
- Ruth U. Keeton
- Lloyd G. Knowles
- Virginia M. Thomas
- Bernard M. Evans
- William A. Altman
- Thomas G. Harris, Jr.
- Howard A. Landau
- J.H. Clawson, Jr.

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"This route is considered to be a very important highway. Not only does it extend practically the full length of the County, but it serves as an artery carrying Howard County residents between their homes and existing and proposed employment areas in Howard County and Anne Arundel County. The highway will serve traffic going to Annapolis and recreational areas in Anne Arundel County and to Eastern Shore via the Bay Bridge. The highway is planned to be extended north to serve areas around Westminster and Gettysburg, and will ultimately connect with the Pennsylvania Turnpike. There will be connections with Routes 701, 95, 29, Brighton-Marriottsville Freeway and Dorsey-Glenside Freeway within Howard County as well as other major routes Southeast of the County. Interchanges will be located at the above junctions and at intersections with primary roads as shown on the Plan."

A portion of the 1971 General Plan of Howard County adopted December 6, 1971, relating to the Major Thoroughfare Plan (Transportation Corridors) reads as follows:

"The Major Thoroughfare Plan for Howard County is the result of one of several component studies conducted as part of the County's comprehensive planning and development program. The study and its resulting plan was prepared to meet 1985 travel demands in Howard County. It consists of freeways, expressways, arterial and collector routes, and it is designed to serve all travel functions in the County.

Traffic estimates indicate that trip generation within Howard County has increased by about 76 percent during a six year period from 1962 to 1968. This growth in trip generation is expected to continue to increase at an accelerated rate, and by 1975, trip generation will more than double. Much of the increase in traffic generation will occur as would be expected, in the eastern half of Howard County. The continued growth and urbanization of the Ellicott City area, the development of the new town of Columbia and the growth of the industrial-commercial complex along U.S. Route 1 will account for the primary increase in traffic generation within the County. The two new major traffic generators externally, however, have developed near the periphery of the County, in Baltimore County. They are the Social Security Complex which had approximately 12,600 employees in 1970 and which is expected to increase to 30,000 by 1985; and secondly, by the Baltimore Campus of the University of Maryland which had an enrollment of approximately 6,500 students in 1970, and is expected to increase to 20,000 students by 1980. The importance of these two factors are indicated below. The 1985 traffic projection and its distribution indicated the emergence of new major travel-desire corridors. These emerging new travel-desire

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corridors include: (a) travel desire from Columbia toward the University of Maryland in Baltimore County and the City of Baltimore; (b) a travel desire in a north-south direction along U.S. Route 29 and into Baltimore County; (c) a mid-county travel desire in a north-south direction along Maryland Route 32; and (d) an additional travel desire from mideastern portion of the County toward the south and southeastern portion into Prince George's and Anne Arundel Counties.

The Thoroughfare Plan consists of an integrated system of highways which form the skeleton of the thoroughfare network in Howard County. The major improvements of the new Plan consists of already proposed highway improvements (shown in the General Plan of Highways revised in 1966) as well as additional recommendations for new routes and improvements. The basic highway additions reflect the emerging travel-desire corridors discovered in the transportation study. The plan proposes improvements on a number of major local routes which are designed to correct conditions where under-use has been caused by circuitous routing and numerous ninety degree turns. Other minor changes represent a refinement of the 1966 General Plan of Highways designed to provide a far greater degree of efficiency in the movement and flow of the overall network.

The State Roads Commission and its successor, the State Highway Administration has, since at least 1966, included this facility among the "Critical" State Highway needs.

TRAFFIC AS A FACTOR

An examination of the State's traffic data reveals that the average daily traffic (ADT) on existing Maryland Route 32 over the past five years has increased as follows:

<u>Segment</u>	<u>1970</u>	<u>1974</u>
From U.S. Route 29 to Route I-95	1850 ADT	7180 ADT
From Route I-95 to U.S. Route 1	3500 ADT	5030 ADT
From U.S. Route 1 to A.A. Co. Line	2200 ADT	4670 ADT

The projected traffic for existing Maryland Route 32, if the new highway is not constructed is as follows:

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<u>Segment</u>	<u>1978</u>	<u>1996</u>
From U.S. Route 29 to Route I-95	8450	16,500 ADT
From Route I-95 to U.S. Route 1	5800	11,300 ADT
From U.S. Route 1 to A.A. Co. Line	6500	12,500 ADT

For the Patuxent Freeway (Maryland Route 32 Relocated) the projected traffic is as follows:

	<u>1981</u>	<u>1996</u>
From U.S. Route 29 to Route I-95	26,000	44,650 ADT
From Route I-95 to U.S. Route 1	21,700	37,100 ADT
From U.S. Route 1 to A.A. Co. Line	28,750	49,150 ADT

From the above, it is evident that until the Patuxent Freeway (Maryland Route 32 Relocated) is constructed, existing Maryland Route 32 will increasingly become congested and that parallel, lower-classification roads will also become congested, since they would be required to relieve existing Maryland Route 32 by carrying a portion of the traffic which logically and naturally would use Maryland Route 32, but cannot because it is unable to accommodate the demand.

The large increase in traffic on the section from U.S. Route 29 to the Anne Arundel County Line has generally occurred within the past two to three years and reflects the accelerated commercial-industrial land development within the U.S. Route 1 corridor in Howard County and the growth of the New Town District of Columbia as a major employment and population center. During the early phase of Columbia, primary development occurred west of U.S. Route 29 in an area served mostly by U.S. Route 29. During the past few years, however, residential

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and industrial areas east of U.S. Route 29 have grown rapidly. This growth has occurred in areas served by Maryland Route 32. As these areas continue to develop, traffic problems on existing Maryland Route 32 will become even more severe.

This continuing growth pattern is more graphically displayed on the attached maps identified respectively as:

- (1) Columbia Zone and Station Map, Zones in New Town District, Traffic Zones containing Major Development and Traffic Generators
- (2) Major Traffic Generators adjoining Patuxent Freeway Study Area

Some of the major traffic generators in the Patuxent Freeway (Maryland Route 32 Relocated) corridor that are identified on the maps are enumerated below with estimated average daily person trips and the respective basic evaluation criteria and factors:

<u>MAJOR TRAFFIC GENERATORS IN STUDY AREA</u>	<u>ESTIMATED AVERAGE DAILY PERSON TRIPS</u>
1. Sieling Industrial Park	4950 ✓
2. E.G.U. Guilford Industrial Park	1650
3. Baltimore-Washington Industrial Park	3465
4. Patuxent Industrial Park	578
5. Corridor Industrial Park	8943
6. Junction Industrial Park	3630
7. Savage Industrial Park	231
8. Maier Industrial Park	825
9. Greater Baltimore Food Market	13200

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- 10. General Electric Appliance Park 36300
- 11. Hammond Senior High School 1250

LAND USES CONTAINED IN TRAFFIC ZONES
STUDY AREA FOR PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOC.) VEHICLE TRIP RATES

1. Office Sqr. Feet - 3,028,316	14.0
2. Retail Sqr. Feet - 510,435	50.0
3. Mall Sqr. Feet - 2,430,000	33.0
4. Restaurant & Entertainment Sqr. Feet - 109,877	44.0
5. Gas Station Sqr. Feet - 58,500	44.0
6. Amusement Sqr. Feet - 46,975	40.0
7. Hospital Beds - 236	12.0
8. Convention Center Sqr. Feet - 306,000	23.5
9. Industrial Acres - 4,395	27.5
10. School Acres - 401	12.5
11. College Acres - 6,580	1.4
12. Hotel Rooms - 800	4.75

In addition, approximately thirty-eight (38) other land development potential growth areas are located within the Patuxent Freeway (Maryland Route 32 Relocated) corridor and are further identified.

<u>NUMBER</u>	<u>ZONING CLASSIFICATION</u>	<u>POTENTIAL GROWTH AREAS</u>		<u>OFFICE OF PLANNING AND ZONING FILE REFERENCE</u>
		<u>APPROXIMATE ACREAGE</u>	<u>NAME</u>	
1	R-40	6+ A	Kuhn Property	S-71-02
2	R-40	7+ A	Sims Property	S-73-24
3	R-40	120+ A	HRD Property	S-72-09

<u>NUMBER</u>	<u>ZONING CLASSIFICATION</u>	<u>APPROXIMATE ACREAGE</u>	<u>NAME</u>	<u>WING AND ZONING FILE REFERENCE</u>
4	R-40	90± A	Flamwood	S-74-11 304
5	R-40	20± A	Pindell Farm	S-74-01
6	R-40	16± A	Cedar Place	S-73-32
7	S.C.	7± A	VHR, 1/4	S-73-11
8	R-40	130± A	Riverside Estates	S-74-18
9	R-40	53± A	Deercreek	S-72-13
10	R-20	90± A	Hayes Property	S-70-15
11	R-40 & R-20	90± A	Phelps	Phelps
12	R-20	24± A	Leishear Knolls	S-75-13
13	R-20	20± A	Heatherwold	S-75-10
14	O.S.	50± A	Hammond High School	Hammond High
15	R-12	180± A	VKC, 1/1	S-74-14
16	M	50± A	EGU, 2/4	S-72-41
17	O.S.	113± A	VOB, 5/2	S-74-29
18	M	45± A	VOB, 5/1	S-74-16
19	C	24± A	Town Center, 1/3	S-73-21
20	C	45± A	VOM, 3/1	S-74-06
21	C	33± A	VOM, 3/2	S-73-13
22	R-A-1	6± A	VLR, 1/7	S-74-17
23	M	103± A	VLR, 2/1	S-71-15
24	M	18± A	Auto Park	S-73-09
25	M	109± A	Waterloo E.C.	S-71-10
26	M & T-2	90± A	Hock Trailer Park	S-70-11
27	M	105± A	Balto-Wash Ind. Park	BWIP

<u>NUMBER</u>	<u>CLASSIFICATION</u>	<u>ACREAGE</u>	<u>NAME</u>	<u>FILE REFERENCE</u>
28	M	27 <u>+</u> A	White Estates	S-73-27 ³²⁵
29	M	46 <u>+</u> A	Digi Data L.P.	S-72-21
30	M	110 <u>+</u> A	Junction L.P.	S-73-01
31	M	27 <u>+</u> A	Corridor L.P.	S-73-30
32	R-A-1	20 <u>+</u> A	Steech Property	S-73-25
33	R-12	60 <u>+</u> A	Howard Hills	S-68-05
34	R-20	46 <u>+</u> A	Patuxent Manor	S-71-21
35	M	32 <u>+</u> A	U.S. Route 1 Joint Venture	S-74-20
36	S.C.	10 <u>+</u> A	Whiskey Bottom S.C.	P-73-41
37	R-A-1	19 <u>+</u> A	Tyler Gardens	P-73-24
38	M	51 <u>+</u> A	Ho. Co. Title Holding Company	F-74-41

LAND DEVELOPMENT POTENTIAL

<u>LAND USE</u>	<u>TOTAL ACREAGE</u>	<u>ACREAGE DEVELOPED</u>	<u>PERCENT DEVELOPED</u>
O.S.	163	0	0%
R-40	487	18	4%
R-20	225	46	20%
R-12	240	0	0%
R-A-1	45	26	58%
T-2	15	0	0%
S.C.	17	0	0%
B	102	57	56%
M	1041	336	32%

Several important factors contributing to the immediate land development potential growth areas within the Patuxent Freeway (Maryland Route 32 (Relocated)) corridor are reflected in the following Capital Improvement projects related to the availability of public water and sewer service to serve the needs of this potential:

WATER AND SEWER PROJECTS AFFECTING DEVELOPMENT IN THE AREA SURROUNDING THE PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOCATED) ALIGNMENT

Source: Department of Public Works 1975-1976 Capital Budget and 1977-1981 Capital Improvement Program

Water Projects:

- (1) Mission Road Main - Guilford Road to Route 1 - Project Number W-7-8019 - Completion 1979
- (2) Route 32 Main - Route 1 to the County Line - Project Number W-4-8022 - Completion 1976
- (3) Range Road and Sharewood Acres Mains - Route 175 to Grime Road - Project Number W-4-8024 - Completion 1976
- (4) Route 32 Main - Berger Road to Route 29 - Project Number W-4-8031 - Completion 1976
- (5) Participation - Baltimore City, Third Zone - Water to Howard County - Project Number W-4-8051 - Completion 1977
- (6) Atholton Manor Mains - Subdivision - Project Number W-4-8066 - Completion 1976
- (7) Route 29 Main - Route 32 to John Hopkins Road - Project Number W-4-8070 - Completion 1976
- (8) Route 29 Main - Guilford Deans to Route 32 - Project Number W-4-8071 - Completion 1976
- (9) Carter's Lane - Project Number W-6-8084 - Completion 1976
- (10) Route 32 Storage Facility, 1.5.m.g. - Route 1 to County Line - Project Number W-6-8091 - Completion 1976

Sewer Projects:

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- (1) Guilford Outfall and Collectors - Project Number S-4-6021 - Completion 1976
- (2) Harwood Branch Interceptor, Outfalls and Collectors - U.S. Route 1 to U.S. Route 29 - Project Number S-4-6035 - Completion 1976
- (3) Savage Treatment Plant, Fourth Addition - Project Number S-4-6044 - Completion 1977
- (4) Middle Patuxent Interceptors and Collectors - Little Patuxent River to Murray Hill Road - Project Number S-4-6047 - Completion 1978
- (5) Dorsey Run Interceptor, Outfalls and Collectors - I-95 to Pfeiffers Corners - Project Number S-4-6053 - Completion 1981
- (6) Savage Treatment Plant, Third Addition - Project Number S-4-6065 - Completion 1976
- (7) Atholton Manor, Outfalls and Collectors - Project Number S-4-6066 - Completion 1976
- (8) Middle Patuxent Interceptor - Murray Hill Road to Route 29 - Project Number S-4-6069 - Completion 1979
- (9) Middle Patuxent Interceptor - Route 29 to Route 108 - Project Number S-9-6070 - Completion 1981
- (10) Dorsey Run Interceptor, Outfalls and Collectors - Route 1 to I-95 - Project Number S-4-6071 - Completion 1977
- (11) Savage Treatment Plant Sludge Dewatering Facilities - Project Number S-5-6075 - Completion 1976
- (12) Mary Lane Collector - Project Number S-6-6079 - Completion 1977
- (13) Jerry's Drive - Project Number S-9-6085 - Completion 1981

SAFETY AS A FACTOR

Existing Maryland Route 32 from Maryland Route 108 at Clarksville to the Anne Arundel County line is a sub-standard highway with dangerous operating conditions caused by serious physical deficiencies. It is

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narrow (20 to 22 feet in width), has little if any shoulders, has poor sight distances resulting from sharp horizontal curves and short vertical curves, and is bordered by numerous flood objects, such as bridge parapets, poles, trees, signs and fence posts. The portion of existing Maryland Route 32 between U.S. Route 29 and Route I-95 is particularly unsafe. Although the posted speed is 40 mph, there are within the section from U.S. Route 29 to Route I-95 three (3) locations especially posted for speeds significantly below 40 mph. Very few passing opportunities exist. Development which has occurred along the road has created numerous entrances onto existing Route 32. A portion of the highway is located within the flood plain of the Little Patuxent River and often is subject to flooding. During Hurricane Agnes the road was flooded to the extent of eleven (11) feet of water. Under normal flow conditions, the difference in elevation between the river and the road is only six (6) feet. A narrow, one-way bridge carries existing Maryland Route 32 across the Little Patuxent River at Berger Road - this is perhaps the only one-way bridge on any State road in Maryland which carries more than 2,000 vehicles per day. This bridge is the scene of many accidents and will become an even more serious hazard when the Hammond High School is completed. Hammond High is now under construction and scheduled for completion in mid-1976. It is located only one-half mile from the subject bridge and will serve up to 1200 students, commencing with approximately 125 to 150 daily school bus trips with the initial enrollment.

Accident records maintained by the State Highway Administration reveal the following reported accidents:

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u> (1st 6 months)
From U.S. Route 29 to Route I-95 - 2.4 miles	15	31	28	26	14
From Route I-95 to U.S. Route 1 - 1.1 miles	8	9	2	13	6
From U.S. Route 1 to A.A. County Line - 1.5 miles	22	11	7	15	7

It is evident that the largest number of accidents occur on the segment of existing Maryland Route 32 between U.S. Route 29 and Route I-95.

No unusual weather, driver, or vehicle conditions were involved - most of the accidents occurred under clear weather and dry surface conditions. Speed, following too close and failure to grant right-of-way, all relative to the poor characteristics of the existing road, were the principal causes. Twelve of the reported accidents involved collision with the narrow bridge which is located between U.S. Route 29 and Route I-95. As traffic volume continues to increase, the number of accidents can be expected to increase. The opening of Hammond High School, with its additional passenger car and school bus traffic, will also, undoubtedly increase the number of accidents. The condition of the existing road between U.S. Route 29 and Route I-95 will jeopardize the students and faculty served by this school, as well as other motorists.

CONTINUED DELAY IN THE PROGRAM SCHEDULING FOR THE PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOCATED)

The construction of the Patuxent Freeway (Maryland Route 32 Relocated) has been included in the State's Highway Improvement Program since the early 1960's. However, it has been continuously delayed. For instance,

the State Highway Improvement Program for the 1970-74 Fiscal Years (FY) 310
proposed construction of the segment of the Patuxent Freeway (Maryland
Route 32 Relocated) from U.S. Route 29 to Route I-95 in the 1971 Fiscal
Year (July 1, 1970 to June 30, 1971). This scheduling was repeated in
the 1971-75 Program. However, construction was not initiated and the
1972-76 Program deferred the project to FY 1973. The 1973-77 Program
further deferred the project to FY 1974 and, continuing, the 1974-78
Program proposed construction to begin in FY 1976. The FY 1976 date
was retained in the 1975-79 Program, but the 1976-80 Program now again
defers the project start until FY 1979. An eight year delay has resulted
over the past five years.

During this period of delay, the inadequacies of existing Route 32 have
intensified, particularly for the segment from U.S. Route 29 to Route
I-95. This segment, relative to other segments of Maryland Route 32.

- (1) has the worst physical characteristics (narrow bridge,
flooding, curves, etc.)
- (2) has experienced the greatest increase in traffic over the
past four (4) years.
- (3) will continue to have the greatest increase in traffic in
future years until the Patuxent Freeway (Maryland Route 32
Relocated) is completed.
- (4) has experienced the highest number of accidents.
- (5) can be expected to continue a high accident record until the
Patuxent Freeway (Maryland Route 32 Relocated) is completed.
- (6) serves the area of greatest growth.

PRESENT SCHEDULING FOR THE PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOCATED)

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Information obtained from the State Highway Administration and other sources is reflected in the following schedule showing the major activities which must be completed for the construction of the Patuxent Freeway (Maryland Route 32 Relocated) between U.S. Route 29 and the Anne Arundel County Line. Certain activities control this schedule, such as:

To be completed by:

- | | |
|--------------------------------------------------------------------|---------------|
| (1) Approval of Environmental Statement and Location-Design Report | December 1975 |
| (2) Completion of Design and Plans | December 1976 |
| (3) Acquisition of Rights-of-Way | July 1977 |
| (4) Advertise for Bids | April 1978 |

THE PATENT GREEN
(MARYLAND ROUTE 32 RELOCATED)

FROM US ROUTE 29 TO THE ANNE ARUNDEL COUNTY LINE

SHA SCHEDULE

ACTIVITY	FY 76		FY 77		FY 78		FY 79		FY 80	
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
COMPLETE DRAFT E.I.S.										
CIRCULATE DRAFT E.I.S.										
OBTAIN COMMENTS ON DRAFT E.I.S.										
PREPARE FINAL E.I.S.										
SUBMIT FINAL E.I.S.										
OBTAIN APPROVAL OF FINAL E.I.S.										
COMPLETE LOCATION-DESIGN REPORT										
SUBMIT LOCATION-DESIGN REPORT										
OBTAIN APPROVAL OF LOC.-DES. REPORT										
NEGOTIATE CONSULTING ENGINEER AGREEMENT										
PERFORM FINAL DESIGN										
COMPLETE FINAL R/W PLATS										
OBTAIN AUTHORITY TO ACQUIRE R/W										
COMPLETE FINAL PLANS ETC.										
OBTAIN ALL RIGHTS OF WAY										
ADVERTISE & RECEIVE BIDS										
REVIEW BIDS & AWARD CONTRACT										
ISSUE NOTICE TO PROCEED										
CONSTRUCTION										

It should be noted that although the design for the Patuxent Freeway (Maryland Route 32 Relocated) is expected to be completed by December 1976, the State does not anticipate advertising the major portion of the project until April 1978 (near the end of FY 1977). Under this schedule, notice to proceed would be issued to the low bid contractor in July 1978 and construction would begin in August. However, because construction activities would commence in the Fall of the year, completion of construction is not expected to occur until September 1980, or almost the beginning of 1981.

PROPOSED PRIORITY SCHEDULE FOR THE PATUXENT FREEWAY (MARYLAND ROUTE 32 RELOCATED)

The present schedule for the Patuxent Freeway (Maryland Route 32 Relocated) must be viewed as unacceptable. The access, traffic, service and safety problems now associated with existing Maryland Route 32, and which will worsen, cannot be allowed to continue until 1981.

The following presents a schedule for the U.S. Route 29 to Anne Arundel County Line segment which could be achieved if the Patuxent Freeway (Maryland Route 32 Relocated) is given "Top Priority" by the Secretary of Transportation and the State Highway Administration.

FROM US ROUTE 29 TO THE ANNE ARUNDEL COUNTY LINE

PROPOSED PRIORITY SCHEDULE

ACTIVITY	FY 76	FY 77	FY 78	FY 79	FY 80
	1975	1976	1977	1978	1979
COMPLETE DRAFT E.I.S.					
CIRCULATE DRAFT E.I.S.					
OBTAIN COMMENTS ON DRAFT E.I.S.					
PREPARE FINAL E.I.S.					
SUBMIT FINAL E.I.S.					
OBTAIN APPROVAL OF FINAL E.I.S.					
PREPARE LOCATION-DESIGN REPORT					
OBTAIN APPROVAL OF LOC.-DES. REPORT					
NEGOTIATE CONSULTING ENGINEER AGREEMENT					
PERFORM FINAL DESIGN					
COMPLETE FINAL R/W PLATS					
OBTAIN AUTHORITY TO ACQUIRE R/W					
COMPLETE FINAL PLANS ETC.					
OBTAIN ALL RIGHTS OF WAY					
ADVERTISE & RECEIVE BIDS					
REVIEW BIDS & AWARD CONTRACT					
ISSUE NOTICE TO PROCEED					
CONSTRUCTION					

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This proposed schedule differs from the State's schedule principally with respect to the acquisition of rights-of-way and the letting of construction contracts. Under this priority schedule, the design, plans, and acquisition of rights-of-way would be completed in November 1976 and advertising of the project would occur in December 1976. This would permit construction to begin in April 1977. Because of the Spring start, construction could be completed by December 1978. Thus, construction would begin 16 months earlier than the State's schedule and would be completed 21 months, or almost two years, earlier.

An in-depth analysis of the right-of-way requirements for this particular project indicates that right-of-way acquisition can be achieved more quickly than would normally be expected since 1) the State has already acquired a number of properties, 2) most of the remaining land area to be acquired can be obtained by agreement with a single party, The Howard Research and Development Corporation, and 3) there are but a few buildings involved on the other properties to be acquired. It is feasible for all rights-of-way required for the project to be obtained by November 1976 so that construction could begin as soon thereafter as possible.

With regard to construction, since in the State's schedule engineering is to be completed by December 1976 and rights-of-way could also be available by December 1976, it would appear that the delay in construction of the Patuxent Freeway (Maryland Route 32 Relocated) is due entirely to the programming of funds (as compared to scheduling factors). To achieve "Top Priority" completion of the Patuxent Freeway (Maryland Route

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32 Relocated) as is necessary, right-of-way and construction funds will be required beginning in the 1977 Fiscal Year rather than beginning in the 1978 and 1979 Fiscal Year as currently programmed by the State Highway Administration. In other words, the funding proposed in the 1976-80 Program needs to be advanced one (1) year for right-of-ways and two (2) years for construction.

CONCLUSION AND RECOMMENDATIONS FOR NEW ROUTE 32

The Patuxent Freeway (Maryland Route 32 Relocated) has been planned for over fifteen (15) years. Under present programming another six (6) years will pass before it becomes a reality and there is no assurance that further delay will not occur. Howard County needs this highway NOW! Its citizens have been denied its use too long. Not only is this highway an important local facility, but it is also needed on a regional basis for all citizens of the State. The U.S. Route 1 commercial-industrial corridor and Columbia's continued growth accentuates the demand for this facility. Already severe access, traffic and safety problems will increase if the State's program does not keep pace with the growth of Columbia and adjoining areas. The construction of the Patuxent Freeway (Maryland Route 32 Relocated) has, under the State's program, already been planned and, to some extent, funded. The implementation of the State's program for the Patuxent Freeway (Maryland Route 32 Relocated) on a "top priority" basis is all that is required.

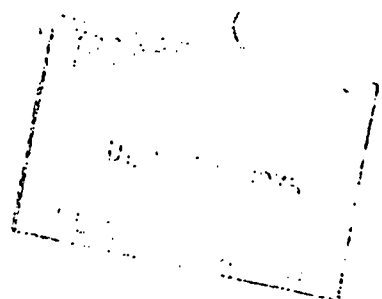
Accordingly, it is recommended that the State re-examine its scheduling and programming, especially for the segment of the Patuxent Freeway

(Maryland Route 32 Relocated), between the Anne Arundel County Line and U.S. Route 29. In so doing, an accelerated schedule for right-of-way acquisition should be established and adhered to. Consideration should be given to dividing the project into stages - i.e. bridges at Guilford-Gerwig Roads; bridges over Little Patuxent River; bridges over U.S. Route 29; segment from Route I-95 to Broken Land Parkway; segment from Broken Land Parkway to U.S. Route 29 - and provisions made to proceed with these individual contracts as soon as possible. For example, bridge contracts can readily be cleared for construction and the segment from Route I-95 to Broken Land Parkway is less complex for right-of-way acquisition than the area required for the U.S. Route 29 - Patuxent Freeway (Maryland Route 32 Relocated) Interchange. Re-examination of the State's Primary Highway Program could reveal that certain projects for which funds are programmed in Fiscal Years 1977 and 1978 are not as far advanced in the pre-construction phases as the Patuxent Freeway (Maryland Route 32 Relocated), and, therefore, changes can be made to advance the Patuxent Freeway (Maryland Route 32 Relocated) project as suggested here and set forth on the Proposed Priority Schedule. Acceleration of the Patuxent Freeway (Maryland Route 32 Relocated) as advocated would benefit the State as follows:

- (1) Provide for timely completion of an important segment of the State Highway System.
- (2) Fulfill a commitment to Howard County residents and other motorists.
- (3) Relieve congestion, improve safety and decrease maintenance costs on existing roads.

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- (4) Stem the rising cost of the project. Timely right-of-way acquisition and earlier construction completion will reduce the inflationary or escalation costs. The longer the project is extended, the higher the cost. Predicated upon the modest inflationary provisions included in the State's 1976-1980 Program, advancing the project as recommended will reduce the cost by approximately \$2,400,000.
- (5) The State has not been able to obtain reimbursement from the Federal Highway Administration for the cost of constructing the Patuxent Freeway (Maryland Route 32 Relocated) interchange on Route I-95, because reimbursement is conditional upon construction of the Patuxent Freeway (Maryland Route 32 Relocated). Accelerating its completion will allow the State to recover over \$1,000,000 sooner. Annual interest on this amount is approximately \$60,000.
- (6) Encourage rational growth and, in particular, continued development in one of the State's major industrial areas.



December 19, 1975

Colonel Clyde H. Patterson, Post Commander
Fort George G. Meade - Building #4317
Maryland 20755

AA 739-1-571

Dear Colonel Patterson:

On December 4, 1975, several representatives of the State Highway Administration visited Ms. Meade of the Post Engineer's Office at Fort Meade to discuss the proposed Patuxent Freeway (Pt. Meade Throughway) as it passes through your installation (map attached).

Maryland is also actively planning for the segments of this facility both east and west of Fort Meade. Project Information Sheets detailing these segments, as well as the section planned to pass through the Post, are provided for your information.

Our objective in writing to you is to seek a written memorandum of understanding from the Department of Defense that the Army is still interested in the development of this facility to replace Moore Road as the State route crossing the Post. We are also interested in the extent to which the Army will participate in its implementation in concert with State efforts on the total proposal. The identification of your prime concerns relative to the development of this facility is also of primary importance to this Administration. We believe Ms. Meade will acquaint you with the specific details covered at our meeting.

Construction of the facility is still some years away at this point, but staging is moving as rapidly as the Public Hearing process, 5574 and financial circumstances of the Maryland Department of Transportation will permit.

We will appreciate your early reply.

Sincerely,

Robert J. Hajzyk, Director
Office of Planning and
Preliminary Engineering

RJH:SLA:RMP
Enclosure

cc: Ms. Margaret Meade
Mike West

Arnold Gardner
J. Vernon Lentz

Don Hon...
JPK

DISTRIBUTION		
JWA		LM
ROB		MM ✓
MAC		HEM
RAC		RAM ✓
DEF		EP
SNG		HRP
ELG		MGR
JSCH		JTR
JTJ	✓	RR
RGJ		JW
ELK		(circled)
JPK		✓

HOWARD COUNTY
DEPARTMENT of RECREATION & PARKS
GORMAN PLAZA BUILDING
8950 ROUTE 108
COLUMBIA, MARYLAND 21045
(301) 997-7616 or 997-7617

THEODORE H. SCHAEFER, JR.
DIRECTOR

MEMORANDUM

RECEIVED

FEB 26 1976

DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
OF HOWARD COUNTY

To: J. Herbert Clawson, Jr.
From: Theodore H. Schaefer, Jr.
Subject: Middle Patuxent - Hopkins Area
Date: February 27, 1976

In a meeting held February 24, 1976, to discuss the intersection of new Maryland Route 32 with the designated open space of the Middle Patuxent - Hopkins Area, the County Executive, along with representatives of the Department of Recreation and Parks, Department of Public Works, and Office of Planning and Zoning addressed the conflicts brought forth by the State Highway Administration (SHA).

It was agreed that there is no way to avoid crossing designated open space with any road alignment due to the linear quality of the stream valley system. Also, Mr. Camponeschi's request will be impossible for the County to grant as it does not own the areas under discussion.

Finally, it was decided that as long as the SHA agrees to the following consideration, there is no conflict between the proposed Maryland Route 32 and the County stream valley park system as delineated on the General Plans of 1962 and 1971:

- a. Allow access for the southern end of the Middle Patuxent Environmental Area.
- b. Accommodate adequate flow of pedestrian, equestrian and other non-motorized vehicle traffic as established by the Department of Recreation and Parks around and/or under any structures (i.e. bridges).
- c. Consult with the Department of Recreation and Parks concerning the esthetics of the road and its structure where SHA cross the proposed parklands.

Sincerely,

Theodore H. Schaefer, Jr.

Theodore H. Schaefer, Jr.
Director

cc: Edward Cochran
Thomas Regan
Jack Helm
Medaldo Loria
Ed Shull

TBS, JR:ES:bkd



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

DIRECTOR, OFFICE OF
PLANNING & PRELIMINARY ENGINEERING

RECEIVED

JUN 25 1976

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In Reply Refer To:
L7619-MQ
(ER-76/415)

JUN 24 1976

Dear Mr. Ackroyd:

This is in response to the request for the Department of the Interior's comments on the Supplement to Draft Environmental Statement, Section 4(f) Statement for Historical Sites, for relocated Maryland Route 32 in Anne Arundel and Howard Counties, Maryland.

We have reviewed the subject document, which discusses the impacts on a historical property identified as No. 94, Grasslands Farm, in Anne Arundel County. The appropriation of 8.35 acres of land and the loss of a deteriorated 1-1/2 story barn are the major impacts to the subject property. The State Historic Preservation Officer has indicated that he considers the barn as ineligible for inclusion in the National Register of Historic Places and that the loss of this deteriorated structure will not significantly diminish the historic qualities of the site. However, further clarification is needed.

The Federal Highway Administration should apply the criteria of eligibility for listing on the National Register of Historic Places to Grasslands Farm. In addition, the proposed project site should be surveyed for evidence of archaeological remains to further determine the possibility of Section 4(f) involvement. If the property is found not eligible and no significant archaeological sites are discovered, then the substantive and procedural measures to preserve cultural resources would be complete. Should the farm or sites be found eligible, then further procedural steps would be required to satisfy the requirements of the Advisory Council on Historic Preservation (36 CFR, Part 800) and Section 4(f). Evidence of these determinations should be included in the Final Environmental Statement. Finally, the Federal Highway Administration should, with the concerned parties, agree upon suitable mitigation measures affecting the barn.

This Department's letter of July 7, 1972, (copy enclosed) commenting on the draft environmental impact statement for the highway project raised other concerns of interest. The project sponsor and/or the Federal Highway Administration should respond as appropriate to those concerns.

We concur that (1) there is no feasible and prudent alternative to use of the historic Grasslands Farm, and (2) the project, as planned, includes all

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possible planning to minimize harm to this property, providing the issues raised above are addressed in the Final Statement.

We shall appreciate receiving copies of the Final Environmental Statement and the Final Section 4(f) Statement when they become available.

Sincerely yours,

(Sgd) Stanley D. Doremus

Deputy Assistant Secretary of the Interior

Mr. Richard Ackroyd
Division Administrator
Federal Highway Administration
George H. Fallon Federal Building
Room 206
31 Hopkins Plaza
Baltimore, Maryland 21201

Enclosure

cc: Mr. Robert J. Hajzyk
Maryland DOT



The Maryland Historical Trust

Shaw House, 21 State Circle, Annapolis, Maryland 21401

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Mr. Eugene I. Camponeschi
Bureau of Project Planning
State Highway Administration
Maryland Department of Transportation
300 West Preston Street
P.O. Box 717
Baltimore, Maryland 21203

March 16, 1977

Re.: Maryland Route 32 from Maryland Route
108 to Baltimore/Washington Parkway
AA 739-1-571
HO 292-27-771

Dear Sir:

This letter is in regard to Grasslands, a farm located near proposed improvements to the project listed above. Previously, I wrote that only the barn was not eligible for the National Register. I would like to clarify any problems that might have arisen concerning this project by stating that I do not believe the entire farm to be eligible for the National Register.

Sincerely yours,

John N. Pearce
State Historic Preservation
Officer

GJA:JNP:bjn

_____	_____	_____	_____
ACTION	WFO	HELWIG	JANATA
CAMPONESCHI	CATHERMAN	HOFFMAN	KOLLER
SCHIFFER	DOUGEN		WILLIAMSON
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

L EGE

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APPENDIX "F"

Maryland Environmental Assessment Form.

ENVIRONMENTAL ASSESSMENT FORM (EAF)

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This form is to assist the reviewers in determining whether a proposed action could cause significant natural and socio-economic environmental effects and thus require an Environmental Effects Reports.

DEPARTMENT Maryland Department of Transportation DIVISION State Highway Administration

OTHER State Highway Administration

PROJECT TITLE Relocated Md. Route 32 (Patuxent Freeway)

PREDICTED DATES: COMMENCEMENT 1977 COMPLETION 1980

PROJECTED COST \$41,888,000.00

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A.	Land Use Considerations	<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
1.	Will the action be within the 100 year floodplain?	<u>X</u>	<u> </u>	<u> A </u>
2.	Will the action require a permit for construction or alteration within the 50 year floodplain?	<u>X</u>	<u> </u>	<u> B </u>
3.	Will the action require a permit for dredging, filling, draining, or alteration of a wetland?	<u>X</u>	<u> </u>	<u> C </u>
4.	Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?	<u> </u>	<u> X </u>	<u> </u>
5.	Will the action occur on slopes exceeding 15%?	<u>X</u>	<u> </u>	<u> D </u>
6.	Will the action require a grading plan or a sediment control permit?	<u>X</u>	<u> </u>	<u> E </u>
7.	Will the action require a mining permit for deep or surface mining?	<u> </u>	<u> X </u>	<u> </u>
8.	Will the action require a permit for drilling a gas or oil well?	<u> </u>	<u> X </u>	<u> </u>
9.	Will the action require a permit for airport construction?	<u> </u>	<u> X </u>	<u> </u>
10.	Will the action require a permit for the crossing of the Potomac River by conduits, cables, or other like devices?	<u> </u>	<u> X </u>	<u> </u>
11.	Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river, or wildland?	<u>X</u>	<u> </u>	<u> F </u>

Comments Attached

Yes

No

12. Will the action affect the use of any natural or man-made features that are unique to the county, state, or nation?

X

13. Will the action affect the use of an archaeological or historical site or structure?

X

G

B. Water Use Considerations

14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?

X

H

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 storm water or reduce the absorption capacity of the ground?

X

I

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?

X

19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?

X

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

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Comments
Attached

Yes

No

21. Will the action result in any discharge into surface or sub-surface water?

 X

 J

22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?

 X

C. Air Use Considerations

23. Will the action result in any discharge into the air?

 X

 K

24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?

 X

 L

25. Will the action generate additional noise which differs in character or level from present conditions?

 X

 M

26. Will the action preclude future use of related air space?

 X

27. Will the action generate any radiological, electrical, magnetic, or light influences?

 X

 N

D. Plants and Animals

28. Will the action cause the disturbance, reduction, or loss of any rare, unique, or valuable plant or animal?

 X

 O

29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?

 X

 P

30. Will the action require a permit for the use of pesticides, herbicides, or other biological, chemical, or radiological control agents?

 X

 Q

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E.	Socio-Economic	<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
	31. Will the action result in a preemption or division of properties or impair their economic use?	<u>X</u>	<u> </u>	<u>R</u>
	32. Will the action cause relocation of activities, structures, or result in a change in population density or distribution?	<u>X</u>	<u> </u>	<u>S</u>
	33. Will the action alter land values?	<u>X</u>	<u> </u>	<u>T</u>
	34. Will the action affect traffic flow and volume?	<u>X</u>	<u> </u>	<u>U</u>
	35. Will the action affect the production, extraction, harvest, or potential use of a scarce or economically important resource?	<u> </u>	<u>X</u>	<u> </u>
	36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?	<u> </u>	<u>X</u>	<u> </u>
	37. Is the action in accord with Federal, State, Regional, and local comprehensive or functional plans--including zoning?	<u>X</u>	<u> </u>	<u>V</u>
	38. Will the action affect the employment opportunities for persons in the area?	<u> </u>	<u>X</u>	<u>W</u>
	39. Will the action affect the ability of the area to attract new sources of tax revenue?	<u>X</u>	<u> </u>	<u>X</u>
	40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	<u> </u>	<u>X</u>	<u> </u>

	<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
41. Will the action affect the ability of the area to attract tourism?	<u> </u>	<u> X </u>	<u> </u>
F. Other Considerations			
42. Could the action endanger the public health, safety, or welfare?	<u> </u>	<u> X </u>	<u> </u>
43. Could the action be eliminated without deleterious effects to the public health, safety, welfare, or the natural environment?	<u> </u>	<u> X </u>	<u> </u>
44. Will the action be of statewide significance?	<u> X </u>	<u> </u>	<u> Y </u>
45. Are there any other plans or action (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?	<u> </u>	<u> X </u>	<u> </u>
46. Will the action require additional power generation or transmission capacity?	<u> </u>	<u> X </u>	<u> </u>
G. Conclusion			
47. This agency will develop a complete environmental effects report on the proposed action.	<u> X </u>	<u> </u>	<u> Z </u>

COMMENTS

- A. The freeway would cross both the Little and Middle Patuxent Rivers, as well as several of their tributaries. These crossings would be designed so as not to increase the 100 year floodplain by more than one foot in elevation.
- B. All construction or alteration within the 50 year floodplain would be designed to minimize impact to the stream environment. The 50 year floodplain would not be increased by any construction related to this project.
- C. The Anne Arundel County Wetland Unit No. 1, located on Dorsey Run just south of the existing Maryland Route 32 alignment, would be affected by this project. This property is currently in private ownership, and Relocated Maryland Route 32 would cross the property on dual structures to minimize impact on the wetland's resources. A single bridge for the frontage road will also cross Dorsey Run. This is a non-tidal, freshwater wetland area.
- D. Between Newberry Drive and Cedar Lane, Relocated Maryland Route 32 crosses the Middle Patuxent River. At this location, the stream valley is narrow with steep slopes--in excess of fifteen percent. Construction would not destroy the protective vegetation on these slopes, as the roadway will be bridged over the stream valley. There would be no bridge piers in the waterway.
- E. A comprehensive grading and sediment control plan would be completed by the Maryland State Highway Administration and approved by the appropriate reviewing agencies prior to the start of construction activities.
- F. Relocated Maryland Route 32 would intrude into the Anne Arundel County Wetlands Unit No. 1, but the roadway would be bridged over Dorsey Run to allow use of the wetlands resources below. Two parks--the Middle Patuxent Environmental Area and Murray Hill--are proposed by the Howard County government adjacent to the roadway. These parks are still in the planning stages with only a few small parcels of land acquired at this time. The major impact to these parks from Relocated Maryland Route 32 would be the noise resulting from motor vehicle operations adjacent to the park boundaries. The roadway would cross the Little and Middle Patuxent Rivers and several of their tributaries which are part of the Patuxent River System. The Patuxent River has been declared a scenic river under the Scenic Rivers Act of the State of Maryland (1972). In keeping with the intent of

this legislation, all river crossings necessitated by the project would attempt to preserve the scenic integrity of the river setting.

- G. Separate historical and archeological surveys have been made of the project corridor. One historical site, the Vogel House (Maryland State Inventory Number 165), would have to be destroyed. The Maryland State Historical Preservation Officer has made the ruling that this action is not a significant impact on the historical quality of the local area. A barn and corn crib located on the historic property known as "Grasslands Farm" (Number 94) will also be taken by this action. In the opinion of the State Historic Preservation Officer, neither of these sites is eligible for listing on the National Historic Register. All Federal, State, and local laws and regulations will be observed in obtaining these sites or portions thereof necessary for highway purposes. The archeological survey indicates that no significant archeological sites would be affected by this project.

- H. Several of the stream crossings necessitated by the proposed project would change the course or cross-section of the streams. These stream modifications would be minor and are only intended to promote the free flow of water beneath the freeway so that flooding on the roadway or adjacent properties would not occur or be held to a minimum. Low flow channels would be provided in these modifications to ensure that aquatic biota would be able to pass upstream or downstream under low flow conditions. The most significant alteration of a stream would be the relocation of 1,300 feet of Guilford Branch in the vicinity of the U. S. 1 interchange.

- I. Paving the four lane/eight lane freeway facility would change the absorption capacity of the land use for the roadway. The impact resulting from this paving would not be significant for two reasons. First, a stormwater drainage plan would be implemented for the entire project to ensure that stormwater flows are adequately handled and mitigated, where possible, through vegetative planting. Second, the area to be paved under this project is very small in comparison to the total drainage area of the surrounding water-courses.

- J. There will be no direct discharge to surface water resources per se. However, stormwater may wash contaminants off the highway and into local streams. Based on previous experience locally, these contaminants should not have any degree of adverse impact on the surrounding environment.

- K. The discharge to the air would not be from the facility itself, but would result from the construction equipment employed to build the roadway, and the motor vehicle traffic utilizing the roadway upon completion. The impact of air pollutants, specifically Carbon Monoxide, generated by Relocated Maryland Route 32 has been modeled. This analysis shows that the National Ambient Air Quality Standards of 35 ppm for one hour, and 9 ppm for eight hours would not be violated.
- L. Air quality levels in the study area would be affected by the construction and operation of this facility. However, mathematical projections indicate that air quality standards would not be exceeded (see Comment K).
- M. Noise generated by construction activities and the increase in motor vehicle traffic using the completed facility would produce higher noise levels than are currently being experienced in the study area in general. An attempt has been made to locate the freeway as far away as possible from noise sensitive land uses. In the few cases where increased noise levels are predicted to be a problem, noise barriers would be considered as a means of amelioration, where feasible.
- N. Lighting will be installed along the freeway, especially at interchanges, aiding motorists in reading traffic signs and observing merging traffic.
- O. A rare plant, the coralroot orchid, has been identified in a 22 acre wooded tract within the proposed right-of-way. The proposed Relocated Maryland Route 32 would require the clearing of seven of these acres, thereby reducing the orchid's habitat.
- P. Some woodlands and open fields would be lost to roadway construction, reducing available wildlife habitat areas. These losses would not have a major impact on most species of wildlife using the area. Generally, loss of wildlife would be proportional to loss of habitat.
- Q. Herbicides may be used seasonally for maintenance purposes for weed control within the freeway right-of-way. De-icing chemicals would also be employed during the winter months when required, to keep the roadway free of ice and snow.

R. The State Highway Administration would compensate all property owners for the fair market value of their property or any part thereof which might be taken for the freeway right-of-way. In the process of alignment determination, consideration has been given to the maintenance of economic usage of adjacent properties. Entire parcels would be taken where the economic use of the remaining portion of a parcel would be severely limited. Service roads will be provided to those properties which would be denied access to the local transportation network by construction of the freeway.

S. Ten families, totaling twenty-six people, would require relocation as a result of this project. Only two businesses would be relocated, and no active farming operations or non-profit organizations should be adversely affected. Increased population density may be realized as a secondary impact of the roadway due to the improved transportation access that would be provided.

T. Land values in the area adjacent to the proposed freeway should increase in value because of improved travel time between homes, businesses, and industries.

U. Traffic flow will be greatly increased by the limited access four lane/eight lane freeway. Obstructions to present traffic flow, such as narrow bridges, stoplights, uncontrolled access, and narrow roadways would be by-passed. Total traffic volume would also increase due to the attraction potential of the safer and more efficient Relocated Maryland Route 32.

V. This freeway is part of the General Development Plan for Anne Arundel County (1968) and the General Plan for Howard County (1971). Relocated Maryland Route 32 has also been included in the Baltimore Regional Planning Councils' General Development Plan (1972).

W. Employment opportunities would not be directly affected by this project. However, new employers may be encouraged to relocate to this area, and residents of the area may be better able to travel to job sites throughout the region as a result of improved transportation access.

X. The roadway should help to attract new sources of tax revenue to Howard and Anne Arundel Counties as land uses in the roadway corridor become more fully developed. The roadway would be an integral factor in fulfilling the land use plans of Howard and Anne Arundel Counties.

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- Y. This freeway would be of statewide significance in connecting the Eastern Shore of Maryland with Western Maryland. It would provide a direct connection between these two regions of the State, while by-passing the heavily congested areas of Baltimore and Washington, D.C.
- Z. A comprehensive Environmental Impact Statement has been completed for this project and is available for review from:

Eugene T. Camponeschi, Chief
Bureau of Project Planning
Maryland State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Telephone: (301) 383-6887
Office Hours: 8:30 A.M. - 4:30 P.M.
Monday - Friday

APPENDIX "G"

References

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