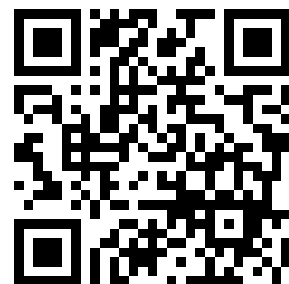


---

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google<sup>TM</sup> books

<https://books.google.com>



FHWA-MD-830012-D





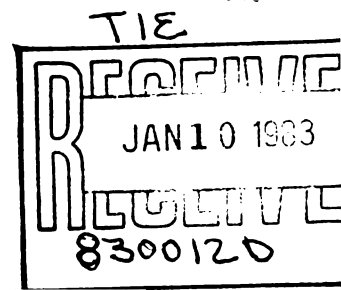
**TRANSPORTATION LIBRARY**

**APR 1993**

**NORTHWESTERN UNIVERSITY**







# **Draft Environmental Impact Statement Section 4 (f) Evaluation**

**Report No. FHWA-MD-EIS-83-01-D**



## **TRANSPORTATION IMPROVEMENTS IN THE INTERSTATE 595 CORRIDOR FROM I-95 TO I-170**

**Prepared By**

**U.S. Department of Transportation  
Federal Highway Administration  
Region 3**

**Maryland Department of Transportation  
and State Highway Administration  
Interstate Division for Baltimore City**

**January 1983**





# Maryland Department of Transportation

State Highway Administration

Lowell K. Bridwell  
Secretary

M. S. Caltrider  
Administrator

FHWA-MD 830012-D



3 5556 021 206 552

PLEASE REPLY TO:  
INTERSTATE DIVISION FOR  
BALTIMORE CITY  
1225 N. CHARLES STREET  
BALTIMORE, MARYLAND 21218

January 10, 1983

## Interstate 595/Transportation Improvements in the Interstate 595 Corridor

### Draft Environmental Impact Statement/ 4(f) Evaluation

Enclosed for your review and comment is the subject environmental document. The document has been prepared in accordance with the revisions to FHPM 7-7-2, the CEQ Regulations, DOT Order 5610.1c and Section 4(f) of the DOT Act of 1966.

You are requested to provide any comments on or before March 11, 1983 to:

Mr. Edward A. Terry, Jr.  
District Engineer  
Federal Highway Administration  
The Rotunda - Suite 220  
711 W. 40th Street  
Baltimore, Maryland 21211

or

Mr. Robert D. Douglass, Chief  
Bureau of Design  
Interstate Division for Baltimore City  
2225 North Charles Street  
Baltimore, Maryland 21218

All responses will be considered in preparing the facility's ultimate design and in developing the final environmental document.

An Informational Public Meeting is scheduled for Wednesday, January 26, 1983 in the auditorium of Southwestern High School, 200 Fonthill Avenue, from 7:00 to 10:00 p.m.

A Location Public Hearing is scheduled for Thursday, February 10, 1983 in the auditorium of Southwestern High School, 200 Fonthill Avenue, from 10:00 a.m. to 10:00 p.m. Public organizations and individuals in attendance will be informed of the pertinent project data at the meeting.

Distribution of the document is made on behalf of the Federal Highway Administration.

Sincerely,

William K. Hellmann, Chief  
Interstate Division for Baltimore City

WKH/GLK/js  
Enclosure

My telephone number is 396-7290

Teletypewriter for Impaired Hearing or Speech

383-7555 Baltimore Metro — 565-0451 D.C. Metro — 1-800-492-5062 Statewide Toll Free

P.O. Box 717 / 707 North Calvert St., Baltimore, Maryland 21203 - 0717

Digitized by Google





# **Draft Environmental Impact Statement/ Section 4 (f) Evaluation**

**Report No. FHWA-MD-EIS-83-01-D**



## **TRANSPORTATION IMPROVEMENTS IN THE INTERSTATE 595 CORRIDOR FROM I-95 TO I-170**

**Prepared By**

**U.S. Department of Transportation  
Federal Highway Administration  
Region 3**

**and**

**Maryland Department of Transportation  
State Highway Administration  
Interstate Division for Baltimore City**

**January 1983**

TRANSPORTATION  
LIBRARY

TD

195. R63M3

.B197in

INTERSTATE 595 IN BALTIMORE CITY, MARYLAND  
FROM INTERSTATE 95 TO INTERSTATE 170  
DRAFT  
ENVIRONMENTAL IMPACT STATEMENT/SECTION 4(f) EVALUATION

Submitted Pursuant to 42 U.S.C. 4332(2)(c), 49 U.S.C.  
1653(f) and 16 U.S.C. 470(f) by the  
U.S. Department of Transportation  
Federal Highway Administration  
and  
Maryland Department of Transportation  
State Highway Administration  
and the  
Interstate Division for Baltimore City

11/5/83      Emil Elinsky      Division Administrator  
Date of Approval      For FHWA      Title

The following persons may be contacted for additional information concerning this document:

Mr. Edward A. Terry, Jr.  
District Engineer  
Federal Highway Administration-  
Maryland Division  
The Rotunda, Suite 220  
711 West 40th Street  
Baltimore, Maryland 21211  
(301) 962-4010

Mr. Robert D. Douglass  
Chief, Bureau of Design  
Interstate Division for Baltimore  
City  
2225 North Charles Street  
Baltimore, Maryland 21218  
(301) 396-7295

Office Hours: 7:45 a.m. to 4:15 p.m.      Office Hours: 8:30 a.m. to 4:30 p.m.

The proposed action is the construction of a highway facility in the Gwynns Falls Corridor, linking I-95 and I-170 in Baltimore, Maryland. The proposed facility would improve north-south traffic flow in the southwestern section of the City, and would provide improved access to the downtown area from I-95 via I-170. The feasibility of a tie-in with Hilton Parkway/Edmondson Avenue is also being evaluated in this study. This connection would relieve traffic on local north-south roadways.

Comments on this Draft Environmental Impact Statement are due by March 11, 1983, and should be sent to Mr. Robert D. Douglass at the above address.

## 1. DESCRIPTION OF ACTION

The proposed action is the construction of a highway facility in the Gwynns Falls Corridor, linking I-95 and I-170 in Baltimore, Maryland. The proposed facility would improve north-south traffic flow in the southwestern section of the City, and would provide improved access to the downtown area from I-95 via I-170. The feasibility of a tie-in with Hilton Parkway/Edmondson Avenue is also being evaluated in this study. This connection would relieve traffic on local north-south roadways.

This Draft Environmental Impact Statement describes and evaluates the environmental effects that could result from the implementation of these transportation improvements to the traffic network in Southwest Baltimore.

## 2. ALTERNATIVES CONSIDERED

The four "Build" Alternatives presented in this Draft Statement are three interstate connector plans and one boulevard/parkway plan, identified as Alternatives 1, 2, 3 and 4. Alternatives 2 and 4 would include ramp connections to Wilkens and Frederick Avenues. These alternatives represent the maximum and minimum regarding connections to the local street system.

Also studied in this document are three alternatives to connect the proposed project to the Hilton Parkway/Edmondson Avenue area. The three Hilton Parkway/Edmondson Avenue alternatives, designated A, B and C, would connect to the mainline south of Baltimore Street and would tie into Hilton Street/Hilton Parkway.

The "No-Build" Alternative would include modifications to the western terminus of I-170 to provide an appropriate terminus for this facility and the permanent closing of the existing partial ramps at I-95 in the southern portion of the study corridor. No connector between I-95 and I-170 would be constructed.

The "No-Action" Alternative is also considered with the Action Alternatives in this Draft Statement. This alternative assumes only those roadway or capital improvements currently programmed within the study area would be implemented, and no new facility would be constructed.

Alternative 4, with its signalized, at-grade intersections, would not meet Interstate standards which require full control of access. Adoption of Alternative 4 would result in a section of highway that would not qualify for Interstate designation or funding.

The City and State have advised FHWA that in the event the City and State elect to seek approval of Alternative 4, they would request

under the provisions of Section 103(e) of Title 23, U.S. Code, that the U.S. Secretary of Transportation withdraw approval of that section of Interstate Route 595 that would not meet Interstate standards, and that the Federal share of the cost in the then current Interstate Cost Estimate be made available to finance Alternative 4 and other improvements permissible under Section 103(e) of Title 23, U.S. Code.

FHWA evaluation of such requests, and the final determinations made concerning Interstate designations and funding, would consider the transportation, social, economic and environmental aspects of the entire route.

A Preferred Alternative would be selected following the receipt of agency and public comments on this document and from the Public Hearing to be held for this project.

### 3. SUMMARY OF IMPACTS

The following is a summary of the significant impacts anticipated to result from the proposed improvements.

The proposed project would not divide any communities or require the taking of any residences or churches. The project would produce beneficial impacts to the community such as improving access, reducing automobile and truck traffic on local streets, creating employment opportunities and generating income.

There are approximately 13 businesses which could be displaced by the proposed project. All of these firms can be relocated in the Baltimore area.

The majority of the land uses in the project corridor are industrial or open space. The corridor between I-95 and Wilkens Avenue is primarily industrial. North of Wilkens Avenue the corridor follows Gwynns Falls Stream, and would impact open space areas. From Baltimore Street to I-170, the project corridor contains industrial uses bordering the Conrail/Amtrak line. The Hilton Parkway Connector would impact a quarry and open space areas. The potential for induced development is not expected to be great for any of the project alternatives.

All of the mainline alternatives would visually impact the valley between Wilkens Avenue and Baltimore Street. Each alternative's potential for visual impacts would depend on the proximity of the roadway with respect to the stream and recreation center, the selection of the interchange option at Wilkens and Frederick Avenues, the selection of the over Conrail/Amtrak option, and the amount of cut/fill required. Of the three Hilton Parkway Connector alternatives,



Plan A would produce the least impact to the plateau near the high school while Plan C would have the least impact to Daisy Hill Field and the Hilton Recreation Center.

The transportation effectiveness of the proposed project would be influenced by the type of facility selected (interstate or boulevard) and the inclusion of an interchange at Wilkens and Frederick Avenues and the Hilton Parkway Connector. An interstate-type facility would provide the highest capacity, the shortest travel times and the greatest transportation benefits. Alternatives 2 and 4 would provide access to Wilkens and Frederick Avenues and would significantly reduce traffic volumes on these two roadways east of the Gwynns Falls. West of the Gwynns Falls traffic volumes would be approximately equal with or without an interchange. The Hilton Parkway Connector would be expected to greatly reduce traffic volumes on Hilton Street.

Predicted future noise levels in the project corridor were analyzed for each alternative. Alternatives 1 and 3 would produce noise levels exceeding the FHWA noise abatement criteria (67 dBA  $L_{eq}$ ) at nine receptor locations (six of these receptors have existing levels in excess of the FHWA criteria). With Alternative 2, noise levels would exceed FHWA criteria at ten receptors, six of which currently experience noise levels exceeding FHWA criteria. Alternative 4 would produce noise levels at seven receptor locations exceeding FHWA noise abatement criteria, however, five of these locations have ambient noise levels already exceeding the FHWA criteria.

No violations of either the one- or eight-hour National Ambient Air Quality Standard for CO would occur with any of the study alternatives.

Construction of the proposed project would increase the total vehicle miles traveled (VMT) by approximately 6 percent (compared with the "No-Build" case); however, the improved traffic flow with the proposed project would decrease daily fuel consumption by approximately 13 percent (compared with the "No-Build" case).

Alternative 4 would require the greatest amount of cut/fill and would have the greatest impact on the topography and soil. Alternatives 1, 2 and 3 would be constructed on structure throughout the majority of their lengths, and would disturb less soil, reducing the potential for soil erosion and sedimentation. Alternative 3 and Alternatives 1 and 2 with an under Conrail/Amtrak design would require approximately 40 foot cuts into the high school bluff.

The Gwynns Falls would not be relocated or channelized by the proposed project, and no significant impacts to ground or surface waters are anticipated. Erosion and sediment control measures will be used during construction to minimize erosion and sedimentation impacts.

Each of the alternatives would result in the removal of existing wooded acreage and a reduction in the available habitat. Alternative 2 would remove the greatest amount of woodland, approximately 14.0 acres, with Alternative 1 removing 11.4 acres, Alternative 4 removing 7.9 acres, and Alternative 3 removing 7.5 acres. The Hilton Parkway Connectors would remove woodland east of Hilton Street. The estimated acreages are: Connector A - 4.1 acres; Connector B - 4.8 acres; and Connector C - 4.1 acres.

The proposed project is expected to have little adverse effect on the flood flows within the stream valley. The majority of the sections of highway located within the floodplain would be constructed on structure, but the project would produce an increase in flood levels to some degree.

No property will be required from any of the identified historic sites or districts.

One archaeological site, Three Mill site, may be potentially impacted by the proposed project.

Gwynns Falls Park, Daisy Hill Field, Gwynns Falls Recreation Center and Southwestern High School (athletic fields and passive recreation area) may be impacted by the proposed project. Alternative 1 would require 3.8 to 4.0 acres of land from Gwynns Falls Recreation Center; from 3.3 to 10.6 acres (depending on profile option) of land from Gwynns Falls Park; and approximately 6.4 acres from Southwestern High School.

Alternative 2 would require 4.7 to 4.8 acres of Gwynns Falls Recreation Center property and 11.5 to 13.4 acres of Gwynns Falls Park property including a portion of the Three Mill archaeological site; and 4.0 to 4.2 acres of Southwestern High School property. Alternative 3 would require 3.4 to 3.6 acres at the Gwynns Falls Recreation Center, 5.8 acres of land from Gwynns Falls Park, and 2.7 acres from Southwestern Hill School. Alternative 4 would include 3.4 acres of property from the Gwynns Falls Recreation Center, 9.6 acres from Gwynns Falls Park (including a portion of the Three Mill archaeological site) and 4.2 acres from Southwestern High School. Hilton Parkway Connector A would remove 3.4 to 4.7 acres of Gwynns Falls Park, and 1.0 to 2.3 acres at Southwestern High School. Hilton Parkway Connector B would remove from 1.0 to 2.2 acres of Gwynns Falls Park, 7.5 acres of Daisy Hill Field and from 1.5 to 3.8 acres of Southwestern High School. Hilton Parkway Connector C would remove from 5.0 to 6.2 acres of Gwynns Falls Park, 0.5 acres of Daisy Hill Field and from 1.5 to 3.8 acres of Southwestern High School.

4. OTHER FEDERAL ACTIONS REQUIRED

This proposed project may require a Section 404 permit, depending on the alternative selected in the Final Environmental Impact Statement.

No other Federal actions are required for the proposed project.

5. This Statement was made available to the EPA and the Public on January 10, 1983.

6. DATE AND TIME OF PUBLIC HEARING

February 10, 1983 from 10:00 a.m. to 10:00 p.m.

PLACE

The Southwestern High School

## Table of Contents

	<u>Page</u>
List of Tables . . . . .	x
List of Exhibits . . . . .	xi
List of Appendices . . . . .	xiv
 Section I: Purpose of and Need for the Project	
Introduction. . . . .	I-1
Statement of Need . . . . .	I-3
 Section II: Alternatives	
Alternatives . . . . .	II-1
TSM Alternative . . . . .	II-11
"No-Build" Alternative. . . . .	II-11
"No-Action" Alternative . . . . .	II-11
 Section III: Affected Environment	
Socioeconomic Conditions. . . . .	III-1
Existing Land Use . . . . .	III-7
Visual and Aesthetic Resources. . . . .	III-8
Existing Traffic Facilities . . . . .	III-10
Community Noise Environment . . . . .	III-15
Ambient Air Quality . . . . .	III-18
Topography, Geology and Soils . . . . .	III-21
Water Quality . . . . .	III-22
Ecology . . . . .	III-24
Wetlands. . . . .	III-26
Floodplains . . . . .	III-26
Historic Resources. . . . .	III-27
Archaeological Resources. . . . .	III-28
Park and Recreation Areas . . . . .	III-29
 Section IV: Environmental Consequences	
Socioeconomic Effects . . . . .	IV-1
Land Use Impacts. . . . .	IV-3
Visual and Aesthetic Effects. . . . .	IV-4
Transportation Effectiveness. . . . .	IV-8
Noise Impacts . . . . .	IV-11
Air Quality Impacts . . . . .	IV-15
Relocation. . . . .	IV-24

## Table of Contents—Continued

	<u>Page</u>
Energy Consumption. . . . .	IV-29
Topography, Geology and Soils Impacts . . . . .	IV-32
Soil Erosion and Sediment Control . . . . .	IV-33
Water Quality Impacts . . . . .	IV-34
Ecological Impacts. . . . .	IV-34
Floodplain Impacts. . . . .	IV-35
Historic Impacts. . . . .	IV-38
Archaeological Impacts. . . . .	IV-38
Park and Recreation Area Impacts. . . . .	IV-38
Functional Replacement. . . . .	IV-39
 Section V: Section 4(f) Evaluation	
Introduction. . . . .	V-1
Project Description . . . . .	V-1
Description of Section 4(f) Lands	
in Project Corridor . . . . .	V-2
Description of Proposed DEIS Alternatives . . . . .	V-4
Alternatives to Avoid 4(f) Properties . . . . .	V-18
Advantages and Disadvantages of	
4(f) Avoidance Alternatives . . . . .	V-21
Project Mitigation/Coordination Items . . . . .	V-22
 Section VI: List of Preparers	
 Section VII: List of Agencies, Organizations	
and Individuals to Whom Copies of This	
Statement Have Been Sent	



## List of Tables

<u>Number</u>	<u>Title</u>	<u>Page</u>
II-1	Public Land Acquisition . . . . .	II-4
II-2	Alternatives Cost Comparison. . . . .	II-5
III-1	Population Trends and Minority Group Distribution. . . . .	III-2
III-2	Employment in Study Area Regional Planning Districts. . . . .	III-4
III-3	Household Income in the Study Area Regional Planning Districts . . . . .	III-5
III-4	Housing in the Study Area Regional Planning Districts. . . . .	III-6
III-5	Existing Radial Routes (Inbound- Outbound Streets) . . . . .	III-11
III-6	Noise Abatement Criteria/Activity Relationships . . . . .	III-17
III-7	Existing Noise Levels in Project Corridor . . . . .	III-19
III-8	CO Concentrations at 200 Read Street Station 1981. . . . .	III-20
IV-1	Design Year (2005) Local Street Volumes . . . . .	IV-9
IV-2	Predicted Future Noise Levels . . . . .	IV-12
IV-3	Noise Mitigation Summary Chart. . . . .	IV-16
IV-4	Future Carbon Monoxide Concentrations Including Background - Alternative 1. . . . .	IV-19
IV-5	Future Carbon Monoxide Concentrations Including Background - Alternative 2. . . . .	IV-20
IV-6	Future Carbon Monoxide Concentrations Including Background - Alternative 3. . . . .	IV-21
IV-7	Future Carbon Monoxide Concentrations Including Background - Alternative 4. . . . .	IV-22
IV-8	Anticipated Commercial Acquisition/ Relocation. . . . .	IV-26
IV-9	I-595 "No-Build" Energy Consumption . . . . .	IV-30
IV-10	I-595 "Build" Energy Consumption. . . . .	IV-31
V-1	4(f) Property Acquisition . . . . .	V-6
V-2	Acreage of 4(f) Lands Eligible for Functional Replacement. . . . .	V-24

## List of Exhibits

<u>Exhibit Number</u>		<u>Following Page</u>
I-1	Vicinity Map. . . . .	I-1
I-2	Project Corridor. . . . .	I-1
II-1	Alternative 1 Interstate Without Ramps from I-95 South of Wilkens Avenue to North of Frederick Avenue . . . . .	II-4
II-2	Alternative 1 Interstate from North of Frederick Avenue to I-170 at Pulaski Street . . . . .	II-4
II-3	Typical Sections Alternatives 1, 2, 3 and 4 . . . . .	II-4
II-4	Alternative 1 Looking North from the Gwynns Falls Recreation Center . . . . .	II-4
II-5	Alternative 2 Interstate with Ramps from I-95 South of Wilkens Avenue to North of Frederick Avenue . . . . .	II-6
II-6	Alternative 2 Interstate from North of Frederick Avenue to I-170 at Pulaski Street . . . . .	II-6
II-7	Typical Sections Interchange Ramps. . . . .	II-6
II-8	Alternative 1 Looking East on Frederick Avenue . . . . .	II-6
II-9	Alternative 2 Looking West on Wilkens Avenue . . . . .	II-6
II-10	Alternative 2 - Section Looking North from Gwynns Falls Recreation Center . . . . .	II-6
II-11	Alternative 2 - Aerial View at Southwestern High School . . . . .	II-6
II-12	Alternative 2 Looking North from Wilkens Avenue . . . . .	II-6
II-13	Alternative 3 Double-Decked Interstate Without Ramps from I-95 South of Wilkens Avenue to North of Frederick Avenue . . . . .	II-8
II-14	Alternative 3 Double-Decked Inter- state from North of Frederick Avenue to I-170 at Pulaski Street . . . . .	II-8

# List of Exhibits—Continued

<u>Exhibit Number</u>		<u>Following Page</u>
II-15	Typical Sections Alternative 3 . . . . .	II-8
II-16	Alternative 3 - Section Looking North from Wilkens Avenue. . . . .	II-8
II-17	Alternative 4 Boulevard from I-95 South of Wilkens Avenue to North of Frederick Avenue. . . . .	II-8
II-18	Alternative 4 Boulevard from North of Frederick Avenue to I-170 at Pulaski Street . . . . .	II-8
II-19	Alternative 4 Looking North from the Gwynns Falls Recreation Center . . . . .	II-8
II-20	Alternative 4 Looking West on Frederick Avenue . . . . .	II-8
II-21	Alternative 4 Looking West on Wilkens Avenue . . . . .	II-8
II-22	Alternative 4 - Section Looking North from the Gwynns Falls Recreation Center. . . . .	II-8
II-23	Alternative 4 - Section Looking North from Wilkens Avenue. . . . .	II-8
II-24	Alternative A Hilton Parkway Connector Utilizing Existing Ellicott Driveway. . . . .	II-9
II-25	Typical Sections Hilton Parkway Connector. . . . .	II-9
II-26	Alternative B Hilton Parkway Connector West of Gwynns Falls and South of Daisy Hill Field. . . . .	II-9
II-27	Alternative B - Section through Daisy Hill Field Looking South . . . . .	II-9
II-28	Alternative C Hilton Parkway Connector West of Gwynns Falls and North of Daisy Hill Field. . . . .	II-10
II-29	I-170 Western Terminus I-595 "No-Build" Alternative . . . . .	II-11
III-1	Regional Planning Districts in Project Area . . . . .	III-1
III-2	Aerial View - I-95 Interchange Area . . . . .	III-7
III-3	Aerial View - South of Wilkens Avenue . . . . .	III-7
III-4	Aerial View - Wilkens Avenue to Frederick Avenue . . . . .	III-7

# List of Exhibits—Continued

<u>Exhibit Number</u>		<u>Following Page</u>
III-5	Aerial View - South of Conrail/ Amtrak Railroad . . . . .	III-7
III-6	Aerial View - Between Conrail/ Amtrak Railroad and Franklin/ Mulberry Corridor. . . . .	III-7
III-7	Aerial View - West of I-170 Terminus. . . . .	III-7
III-8	Aerial View - Hilton Parkway Connector Corridor . . . . .	III-7
III-9	Existing Traffic Facilities . . . . .	III-11
III-10	Air and Noise Receptors . . . . .	III-19
III-11	Historical Resources and Park and Recreation Areas . . . . .	III-27
IV-1	Floodplain Impacts at Carroll Park. . . . .	IV-36
IV-2	Floodplain Impacts at Gwynns Falls Recreation Center. . . . .	IV-36
V-1	Project Corridor. . . . .	V-1
V-2	Corridor 4(f) Properties. . . . .	V-3
V-3	Alternative 1 - Section 4(f) Impacts. . . . .	V-5
V-4	Alternative 1 - Section 4(f) Impacts. . . . .	V-5
V-5	Alternative 2 - Section 4(f) Impacts. . . . .	V-9
V-6	Alternative 2 - Section 4(f) Impacts. . . . .	V-9
V-7	Alternative 3 - Section 4(f) Impacts. . . . .	V-9
V-8	Alternative 3 - Section 4(f) Impacts. . . . .	V-9
V-9	Alternative 4 - Section 4(f) Impacts. . . . .	V-11
V-10	Alternative 4 - Section 4(f) Impacts. . . . .	V-11
V-11	Alternative A - Section 4(f) Impacts. . . . .	V-13
V-12	Alternative B - Section 4(f) Impacts. . . . .	V-15
V-13	Alternative C - Section 4(f) Impacts. . . . .	V-17
V-14	Parkland Avoidance Alternative. . . . .	V-19
V-15	"No-Build" Alternative. . . . .	V-20
V-16	Potential Functional Replacement Areas. . . . .	V-24

## List of Appendices

<u>Appendix</u>	<u>Title</u>	<u>Page</u>
A	History of the Project . . . . .	A-1
B	Department of Natural Resources Letter on Endangered Species . . . . .	B-1





## **Section I:**

---

# **Purpose Of And Need For Project**





## SECTION I: PURPOSE OF AND NEED FOR THE PROJECT

### INTRODUCTION

The proposed action is the construction of a highway facility in the Gwynns Falls Corridor, linking I-95 and I-170 in Baltimore, Maryland (see Exhibit I-1). The proposed facility would improve north-south traffic flow in the southwestern section of the City, and would provide improved access to the downtown area from I-95 via I-170. The feasibility of a tie-in with Hilton Parkway/Edmondson Avenue is also being evaluated in this study. This connection would relieve traffic on local north-south roadways.

The project study area, shown on Exhibit I-2, is located in and adjacent to the Lower Gwynns Falls Valley in Southwest Baltimore. The project corridor generally follows the Gwynns Falls Stream, extending from I-95 in the south to I-170 in the northeast and Hilton Parkway/Edmondson Avenue in the northwest.

Baltimore, Maryland's largest city and the ninth largest city in the nation, situated 37 miles from Washington, D.C. and 100 miles from Philadelphia, is and always has been a major transportation hub on the Atlantic seaboard.

The Port of Baltimore, the principal terminal for the interchange between waterborne and land carriers in the Middle Atlantic Region, is the fourth largest seaport in the nation. Founded approximately 250 years ago, the Port of Baltimore has been one of the dominant economic factors throughout the State of Maryland and the region. This east coast port is a major supplier to Chicago, Pittsburgh, St. Louis and other markets to the west and south. With the growth of containerization, an increasingly larger share of the cargo is being transported by truck, placing a greater demand on the existing highway and street system.

With a population of over 2 million, the Baltimore Metropolitan Region includes the City of Baltimore and the counties of Baltimore, Anne Arundel, Carroll, Harford and Howard. As the Baltimore Metropolitan Region has grown, so has the demand on the City's traffic and transportation systems. Today, approximately one-third of the motor vehicles registered in the State of Maryland are in the metropolitan region. Approximately one-half of the population in the region now lives outside the City limits and nearly one-third of the employment generated within the City is held by nonresidents. It is estimated that one-half of the vehicles using City streets and highways originate or terminate outside its boundaries. The City has been confronted with the growing problem of providing for the smooth flow of traffic within the City and of establishing links between the City and its rapidly expanding metropolitan area.





CATON

TO I-695

WASHINGTON

BOULEVARD

B.&O.

WESTERN MARYLAND RAILROAD

TO BALTIMORE

ON DAISY FIELD

IVEWAY  
CEMETERY

STREET

FRANKLIN

AVENUE

HILTON

PARKWAY

EDMONDSON

FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
PROJECT CORRIDOR		
DATE JAN. 83	SCALE 1" = 1,000'	EXHIBIT NO. I-2



The major transportation network in the Baltimore area is comprised of a beltway encircling the City and two major interstate routes running north and south and east and west. The current status of the Interstate System in Baltimore is shown on Exhibit I-1.

The Baltimore Beltway, I-695, is 51 miles long, surrounds the City and primarily serves the Baltimore County suburbs. With the exception of a two-mile stretch through the City at the mouth of the Harbor and a five-mile section through Anne Arundel County, the Beltway lies entirely in Baltimore County. Since the Beltway's construction, a tremendous amount of development including major shopping malls, industrial parks and housing subdivisions, has occurred on adjacent lands.

Interstate 83 (Jones Falls Expressway) and I-95 are the only freeways connecting the Beltway and the downtown area. Interstate 83 extends from the Beltway north of the City into the heart of the downtown area. Interstate 95 approaches Baltimore from the southwest, connecting the Washington Beltway with the Baltimore Beltway. Once inside the Baltimore Beltway, I-95 proceeds easterly across the City before rejoining the Beltway in the Overlea area of Baltimore County.

Other interstate facilities in the Baltimore area are I-70, I-170, I-395 and I-895. Interstate 70 is the major east-west freeway for Western Maryland, and has brought most of Howard County and southern Carroll County within an easy drive of the Baltimore Beltway. Columbia and areas around Ellicott City, and to a lesser extent Sykesville, have developed since the completion of I-70. After interchanging with the Beltway west of Baltimore, I-70 continues approximately 2.0 miles before terminating at the City line.

Originally planned as a spur linking I-70 to downtown, Interstate 170 (1.6 miles long running from Pulaski Street to Greene Street), currently serves traffic in the Route 40/Franklin Street/Mulberry Street Corridor. Approximately 2.5 miles long, I-395 serves as a connector from I-95 south of the City to the downtown area. Interstate 895 is a toll facility, also known as the Harbor Tunnel Thruway. This roadway runs south of the City adjacent to the Baltimore County/Anne Arundel County line. After the Harbor Tunnel crossing, I-895 proceeds north, through East Baltimore and ties into I-95.

This proposed project would link existing I-95 on the southwest side of the City to existing I-170 in the Franklin/Mulberry Corridor. Alternatives for the proposed roadway include interstate- and boulevard-type facilities and the "No-Action" Alternative. This Environmental Impact Statement describes the project alternatives and assesses the anticipated impacts associated with each alternative.



## STATEMENT OF NEED

If Baltimore City is to remain a viable urban center, it is imperative that fast and efficient vehicular access be provided to the various parts of the City where people and businesses are located or are being sought. When this access was afforded to large areas of the adjacent counties by the construction of the Baltimore and Washington Beltways and other freeways, many employers left the City.

In this context, it is important to provide convenient transportation to Baltimore City to retain the commercial and industrial firms that remain and to seek to have new ones locate here. One of the most important questions asked by firms considering a move into Baltimore is what major highways are or will be in place to provide access for people and goods. This is especially true of industries which depend on prompt deliveries to or from their facilities.

The proposed project will be designed to do the following:

- . Provide regional access connecting downtown and West Baltimore with western Baltimore County, Howard County and points beyond.
- . Provide a more attractive route for intracity movements between southwestern, western and central Baltimore City.
- . Relieve Hilton Street, Fulton Avenue and Monroe Street.
- . Reduce traffic on other streets in West Baltimore.
- . Make full use of the existing portion of I-170.
- . Provide an alternate route to I-395, Russell Street and the Martin Luther King, Jr. Boulevard.

The following subsections describe these objectives in greater detail.

### Provide Regional Access

The network of freeways in and around Baltimore provide large areas with highspeed, convenient transportation. The proposed project would provide West Baltimore with access to this existing large regional highway network. This network includes:

### The Baltimore Beltway (I-695)

This facility wraps around Baltimore City threading together the various suburban communities in Baltimore and Anne Arundel Counties. Since it was opened, a tremendous amount of development has occurred on adjacent land, including most of the region's major shopping malls and industrial parks as well as numerous housing subdivisions. The proposed project would connect West Baltimore to the Baltimore Beltway via I-95.

### Jones Falls and Harrisburg Expressways (I-83)

The Jones Falls Expressway is the most heavily used commuter route into and out of Baltimore City. It has provided impetus for major new development in north central suburban Baltimore County. Together with its extension, beyond the Beltway (the Harrisburg Expressway), it has spurred major industrial, retail and residential development in the Timonium and Cockeysville areas.

### Glen Burnie Corridor (Baltimore-Washington Parkway, and Glen Burnie Bypass, Route 3)

With the opening of the route, many areas of Anne Arundel County have experienced major residential development as large areas became convenient to the Baltimore region. Severna Park, Pasadena, Crofton and Millersville are several of these areas. Traffic from the proposed project would reach these areas via I-95 and the Beltway.

### John F. Kennedy Memorial Highway (I-95 North)

The Kennedy Highway facilitated development in Harford County and northeastern Baltimore County by connecting them to the Baltimore area. Harford County experienced the most development, particularly the communities of Joppatowne, Edgewood and Belair. More recently, the Whitemarsh area of Baltimore County has expanded with the construction of a major retail shopping mall and many large subdivisions. The Fort McHenry Tunnel and the proposed project will link West Baltimore to these northeastern areas.

### I-70

Interstate 70 extends westward from the Baltimore City line. It has brought most of Howard County and southern Carroll County within an easy drive of the Baltimore Beltway and the western suburbs. Development in Columbia and Ellicott City and, to a lesser extent, Sykesville, has occurred since the completion of I-70. Although the extension of I-70

into West Baltimore (the former Leakin Park Expressway) has been deleted, the project would provide access from West Baltimore to existing I-70 via I-95 and the Beltway as well as by U.S. Route 40.

### I-95 South

Unlike the facilities mentioned above, I-95 serves not only to stimulate outlying areas such as Jessup and Columbia, but is triggering development in Baltimore City as well. This is because I-95 goes through areas with vacant land available for development. Significant industrial development has already occurred in the Caton Avenue area adjacent to I-95, and more development is planned.

The proposed project would link West Baltimore and the western CBD with the freeway network described above via I-95. Trips between areas such as Mondawmin and Columbia would become much easier than they are today. West Baltimore would also become a more attractive location for commercial and industrial firms based on this increased accessibility to most other points in the region.

### Provide a More Attractive Route for Intracity Movements

Currently, there are no expressway links connecting the northern CBD, the North Avenue Corridor and the Walbrook-Forest Park area to the south, west and east. Interstate 70 was designed to link these areas with the rest of west and southwest Baltimore and, via I-95, to South and East Baltimore. Trips between these areas must use the surface streets of West Baltimore along with all other trips by cars, trucks and buses destined for other areas. The proposed project would perform this function without this congestion, since it would link the same City neighborhoods to I-95 exclusive of other local and regional traffic.

### Relieve Hilton Street, Fulton Avenue and Monroe Street

There are two major north-south through routes in West Baltimore today, Hilton Parkway/Hilton Street/Caton Avenue/Patapsco Avenue and the one way pair of Fulton Avenue and Monroe Street.

Hilton Street is the bottleneck of the Hilton/Caton/Patapsco route, being the narrowest and most residential segment in the route. There are two congested and confusing intersections along the route at Frederick and Wilkens Avenues. At Wilkens Avenue, left turns are not permitted from Caton Avenue and long queues of cars form in the peak hours. At Frederick Avenue, left turns are permitted, but they must be made to or from connector roadways rather than Hilton Street itself, making the intersection confusing. Considerable delays occur at both intersections during peak traffic periods.

The proposed project with its Hilton Parkway Connector would relieve substantial portions of traffic on Hilton Street south of Edmondson Avenue.

I-595 would reduce traffic on Fulton and Monroe Streets south of existing I-170 to the extent that through trips now using Fulton and Monroe to reach I-95 would instead choose the more rapid I-595 connection to I-95.

#### Reduce Traffic on Many Streets in West Baltimore

Today, the major streets in West Baltimore carry large numbers of vehicles from the western portions of the City and suburbs to downtown.

Although its potential for attracting traffic away from existing surface streets is slightly less than that of former I-70, a 1979 West Baltimore traffic survey indicated that the proposed project has the potential to achieve considerable traffic reductions on portions of West Baltimore streets.

The maximum traffic reductions which would be expected to occur in the local area east of Hilton Street and the Gwynns Falls, if the project were constructed are shown in the following tabulation. These diversions presume that connections to Hilton Street and Frederick and Wilkens Avenues would be built. Anticipated reductions in traffic could be expected to diminish the farther away from the project corridor one travels.

<u>Street</u>	<u>Area</u>	<u>Potential Traffic Reduction</u>
Caton Avenue	Between I-95 and Frederick Avenue	30 percent
Wilkens Avenue	East of the Gwynns Falls	50 percent
Frederick Avenue	East of the Gwynns Falls	40 percent
Edmondson Avenue	East of the Gwynns Falls	20 percent
Franklintown Road	Between Hilton Parkway and Edmondson Avenue	10 percent
North Avenue	Between Monroe Street and Hilton Parkway	20 percent

<u>Street</u>	<u>Area</u>	<u>Potential Traffic Reduction</u>
Windsor Mill Road	Between Bloomingdale Avenue and Hilton Parkway	10 percent
Gwynns Falls Parkway	Between Monroe Street and Hilton Parkway	10 percent

Streets north of Gwynns Falls Parkway could experience volume reductions ranging from 0 to 10 percent.

#### Make Full Use of Existing I-170

Interstate 170 is a freeway constructed between Franklin and Mulberry Streets at a cost of approximately \$97 million. It was intended that the facility would connect to I-70. Currently, the facility serves to replace U.S. 40 for its 1-1/2 mile length, but is underutilized due to its isolation from the rest of the regional expressway network. The proposed project would provide the intended connection to I-95 and thus allow I-170 to realize its potential as a major route between the CBD and many points along the regional expressway network rather than its current role as a road between the CBD and West Baltimore.

#### Provide an Alternate Route to I-395, Russell Street and the Martin Luther King, Jr. Boulevard\*

Currently, the major route from Anne Arundel County and from the Washington, D.C. area to Baltimore is via Russell Street (Baltimore-Washington Parkway). This facility currently carries 65,000 vehicles per day, more than any other nonfreeway facility in the region.

Interstate 395 which was opened to traffic in early December 1982, is expected to significantly reduce traffic on Russell Street. Both of these facilities, however, effectively terminate south of the downtown area, merging with and placing their heavy traffic loads onto existing streets. Russell Street terminates at Camden Street; I-395 terminates at Camden Street, Conway Street, and the Martin Luther King, Jr. Boulevard. Pratt and Lombard Streets, already heavily burdened with traffic, will probably incur greater traffic loads and congestion in some areas after I-395 is opened.

---

\* Formerly City Boulevard/Harbor City Boulevard

The proposed project would provide a bypass of this area. Traffic coming north on I-95 into Baltimore would have the options of using Russell Street or I-395, both of which lead to the Charles Center and Inner Harbor areas, or I-395 and the Martin Luther King, Jr. Boulevard, or I-595 in order to bypass the CBD core and head for areas north of the core. Thus, the proposed project is expected to provide some relief to downtown Baltimore streets, such as Pratt, Lombard, Paca, Greene, St. Paul, Calvert, Charles and Maryland/Cathedral/Liberty and the Martin Luther King, Jr. Boulevard.





## **Section II :**

---

## **Alternatives**





## SECTION II: ALTERNATIVES

### ALTERNATIVES

Numerous preliminary alternative alignments for the proposed project were developed during the initial study phase. Flexibility of alignments was limited by the defined project endpoints: the I-95 connection ramps on the south, and I-170 in the Franklin/Mulberry Corridor on the north. Additional constraints included the topography of the valley, the Gwynns Falls Stream, the roadways traversing the valley, the Western Maryland and Conrail/Amtrak rail corridors and the development adjacent to the valley.

Alternatives investigated included the location of the highway east or west of the stream, and considered stream and railroad crossings, access to Wilkens Avenue and Frederick Avenue, a connection to Hilton Parkway/Edmondson Avenue and the interchange with I-95. Feasible combinations of these elements were evaluated with each alignment.

Both interstate and boulevard/parkway-type facilities were considered and included alignments from previous studies as well as new alignments and concepts. A total of fourteen alternative alignments, consisting of eleven interstate and three boulevard/parkway-type facilities, were developed.

The preliminary alternatives were reviewed prior to the initiation of detailed environmental study, and those alternatives that did not appear reasonable based on environmental impacts or engineering constraints were eliminated. Three Interstate Connector Plans and one Boulevard/Parkway Plan were retained for further development and are identified as Alternatives 1-4.

The alternatives retained for further study represent the maximum and minimum regarding connections to the local street system and a range of interchange possibilities exists between the two extremes. For the purposes of this location study, the two extremes, which would also result in the maximum and minimum environmental impacts, have been retained for in-depth discussion.

In addition to the four alternatives retained for further study, eight interstate and two boulevard alternatives were studied and eliminated from further consideration. These alternatives featured alignments located to the east and/or west of the Gwynns Falls. Some of the alternatives included bifurcated roadways with and without connections to Frederick Avenue and Wilkens Avenue. These alternatives were dropped because of anticipated adverse impacts upon various resources in the corridor, including the Gwynns Falls Recreation Center, the Southwestern High School athletic

track, the Western Maryland Railroad and the Gwynns Falls Stream itself, necessitating major stream relocations or extensive longitudinal bridge pier construction. Some alternatives would have eliminated the baseball fields associated with the Gwynns Falls Recreation Center, necessitated either reconstruction or complete removal of the Southwestern High School track or would have had adverse impacts upon residential properties due to their close proximity.

Numerous vertical alignments were considered for each of the roadway alternatives. Because of the extensive relocation that would be required for Mulberry Street, a large storm drain and various other utilities, the concept of crossing under the Conrail/Amtrak Corridor at Mulberry Street was determined to be impractical. Therefore, all of the alternatives presented in this statement cross over the railroad at Mulberry Street. Where the roadway mainline crosses the Conrail/Amtrak Corridor at Baltimore Street to start down the Gwynns Falls Valley, studies have shown that both over and under options are feasible, and both are evaluated in this document.

Profile options under Wilkens Avenue were investigated and eliminated. The proposal would have required reconstruction, to raise the grade, of Wilkens Avenue to obtain the necessary vertical clearances to avoid construction below the 50- or 100-year flood elevation, resulting in major impacts to residential properties along the street. All roadway alternatives in this document cross over Wilkens Avenue.

The option to pass under Frederick Avenue would also require reconstruction of the existing Frederick Avenue structure over the Gwynns Falls to avoid conflict with the 50- or 100-year flood elevations. This reconstruction, unlike that at Wilkens Avenue, could be accomplished with minimal impact to adjacent housing, therefore, both crossing options are being considered at Frederick Avenue. Hydraulic studies conducted have indicated that with the under option at Frederick Avenue there exists a potential conflict with the AASHTO criteria for the 50-year flood elevation. If this under Frederick Avenue alternative is selected for further consideration in the Final Environmental Impact Statement, additional detailed hydraulic analysis would be performed to determine if a conflict would result. If this study concludes that a conflict would occur, this option would be dropped from further consideration.

All of the alternatives would necessitate the termination of Wilmarco Avenue west of the Ramp A to southbound I-95. To maintain access, a road to the B&O Railroad yard east of I-595 would be built beneath the structures carrying the proposed facility over the Gwynns Falls.

The four alternatives retained for further development and environmental impact assessment are described in detail as follows.

## Alternative 1

Alternative 1 is an interstate-type facility (see Exhibits II-1 through II-4) that would provide a connection between I-170 and I-95 with no points of access from the local street system. As with each of the four study alternatives this alternative originates at the existing terminus of I-170 east of Pulaski Street and consists of two two-lane roadways with shoulders. After crossing Mulberry Street, the alignment would continue westerly on separate parallel structures, pass over the Conrail/Amtrak rail corridor and proceed parallel to and north of the Conrail/Amtrak Corridor to a second crossing of the Conrail/Amtrak Corridor in the vicinity of Baltimore Street, where two crossing options would be available, over or under the railroad. Beyond this crossing, the roadways widen to three lanes in each direction to allow for the Hilton Parkway Connector and the alignment turns in a southerly direction passing just east of the Southwestern High School running track, cutting through an existing wooded bluff that juts out into the valley. At this point, the roadways would diverge slightly and continue parallel to the Gwynns Falls, converging again just south of the Frederick Avenue crossing. Two crossing options (over and under) are feasible at Frederick Avenue. The option of going under Frederick Avenue would require relocation of the section of Frederick Avenue over the Gwynns Falls. South of Frederick Avenue the alignment continues on structure, above and parallel to the Gwynns Falls Recreation Center. The southbound roadway would be located directly above the home plate area of the baseball field furthest from the Recreation Center Building. The alignment would then cross the Gwynns Falls just north of Wilkens Avenue, pass over Wilkens Avenue and continue on structure to its interchange with I-95. At the I-95 interchange, the ramp movements to and from the north cross the B&O Railroad yard, the Western Maryland Railroad and connect with the existing I-95 ramps in the vicinity of Washington Boulevard. Ramp movements to and from the south serving I-95 parallel the B&O Railroad yard prior to connecting with existing I-95.

Alternative 1 would not have any points of access from the local street system between I-170 and I-95. Local traffic in the immediate study area would continue to access I-95 as it does today by way of Caton Avenue, Russell Street and/or Washington Boulevard.

Alternative 1 would acquire 3.8 acres of land from the Gwynns Falls Recreation Center with the profile option over Frederick Avenue and 4.0 acres with the under option. Acreage required from the Gwynns Falls Park would range from 3.3 to 10.6 acres depending upon the profile option as shown in Table II-1. Approximately 6.4 acres would be required from the Southwestern High School property regardless of the profile option. Construction costs would range from \$132,799,193.00 to \$150,837,685.00 as shown in Table II-2.

Exhibit II-3 indicates the typical sections for Alternative 1.

Table II-1  
Public Land Acquisition

	Gwynns Falls Park	Gwynns Falls Recreation Center	Daisy Hill Field	Southwestern High School
<b><u>Mainline Alternatives</u></b>				
Alternative 1				
Over/Over <sup>a</sup>	3.3	3.8	---	6.4
Over/Under	10.6	4.0	---	6.4
Under/Over	10.2	3.8	---	6.4
Under/Under	10.6	4.0	---	6.4
Alternative 2				
Over/Over	11.5 <sup>b</sup>	4.8	---	4.0
Over/Under	12.5 <sup>b</sup>	4.7	---	4.0
Under/Over	12.4 <sup>b</sup>	4.8	---	4.2
Under/Under	13.4 <sup>b</sup>	4.7	---	4.2
Alternative 3	5.8	3.6	---	2.7
Alternative 4				
Over/ -	9.6 <sup>b</sup>	3.4	---	4.2
Under/ -	9.6 <sup>b</sup>	3.4	---	4.3
<b><u>Hilton Parkway Connector</u></b>				
Alternative A <sup>c</sup>				
1	3.4	---	3.0	2.0
2	3.6	---	3.0	1.0
3	4.7	---	3.0	2.3
4	3.4	---	3.0	1.0
Alternative B <sup>c</sup>				
1	1.3	---	7.5	2.6
2	2.2	---	7.5	2.4
3	2.0	---	7.5	3.8
4	1.0	---	7.5	1.5
Alternative C <sup>c</sup>				
1	5.3	---	0.5	2.6
2	6.2	---	0.5	2.4
3	6.3	---	0.5	3.8
4	5.0	---	0.5	1.5

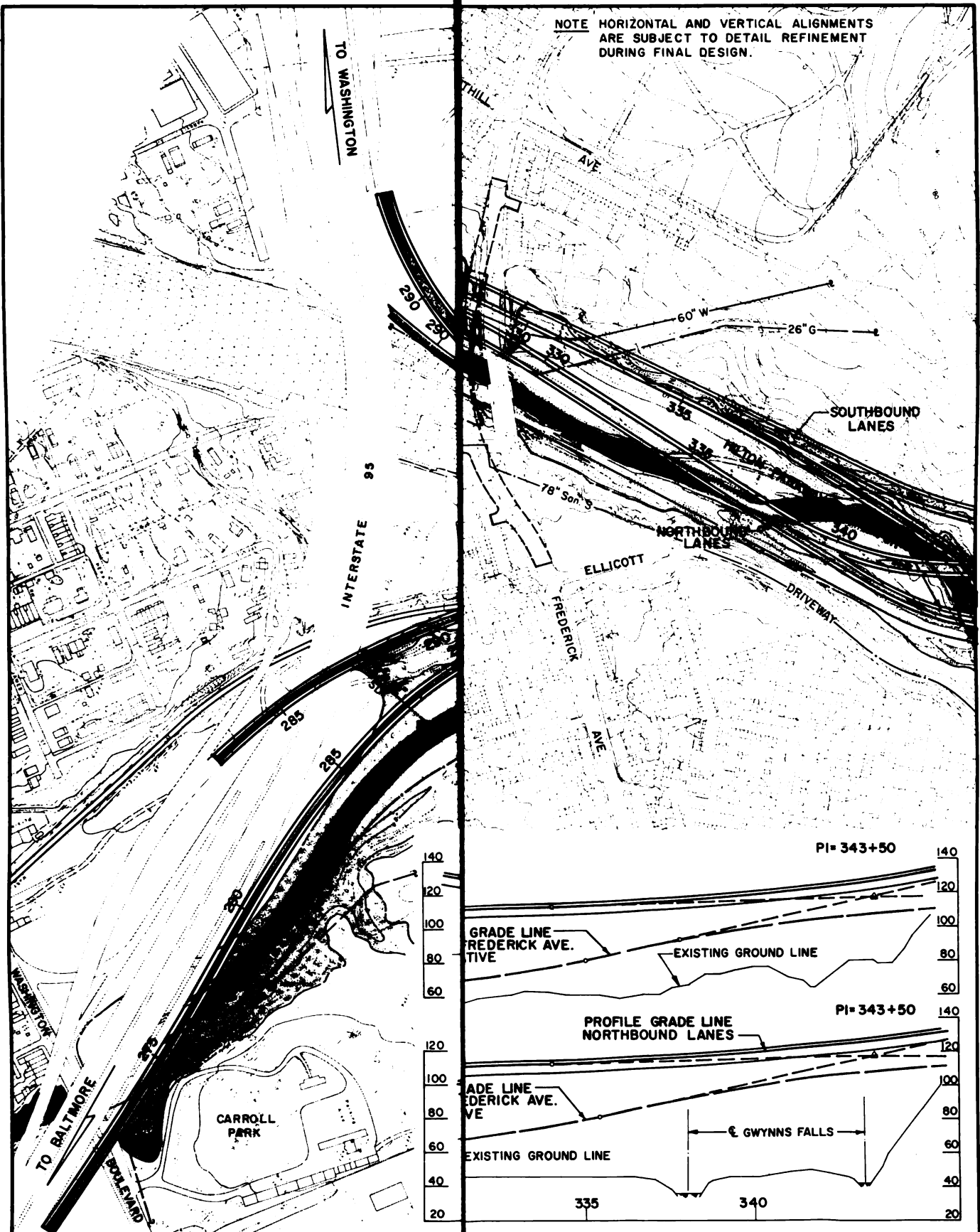
<sup>a</sup> Over/Over - Profile options at the Conrail/Amtrak Corridor/Frederick Avenue Crossings.

<sup>b</sup> Includes a portion of the Three Mill Archaeological Site.

<sup>c</sup> To determine total acreage requirements, add acreage from Hilton Connector Alternative to appropriate mainline alternative.



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS  
ARE SUBJECT TO DETAIL REFINEMENT  
DURING FINAL DESIGN.



#### LEGEND

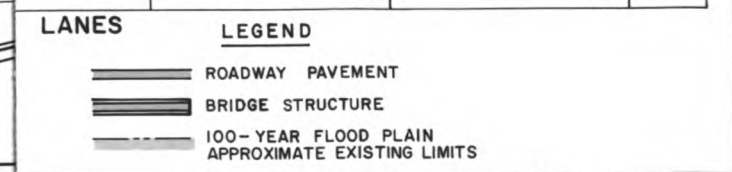
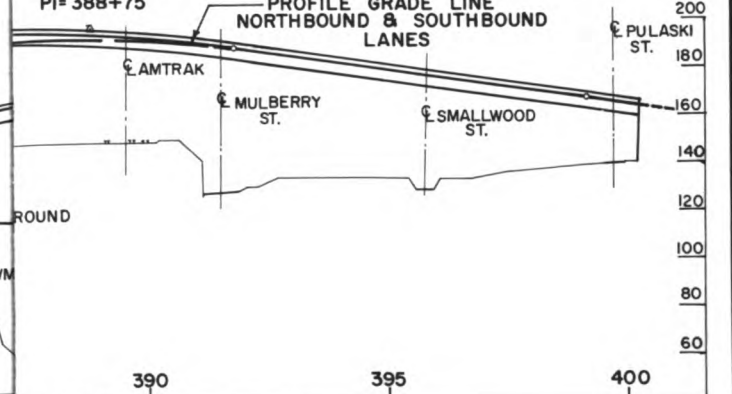
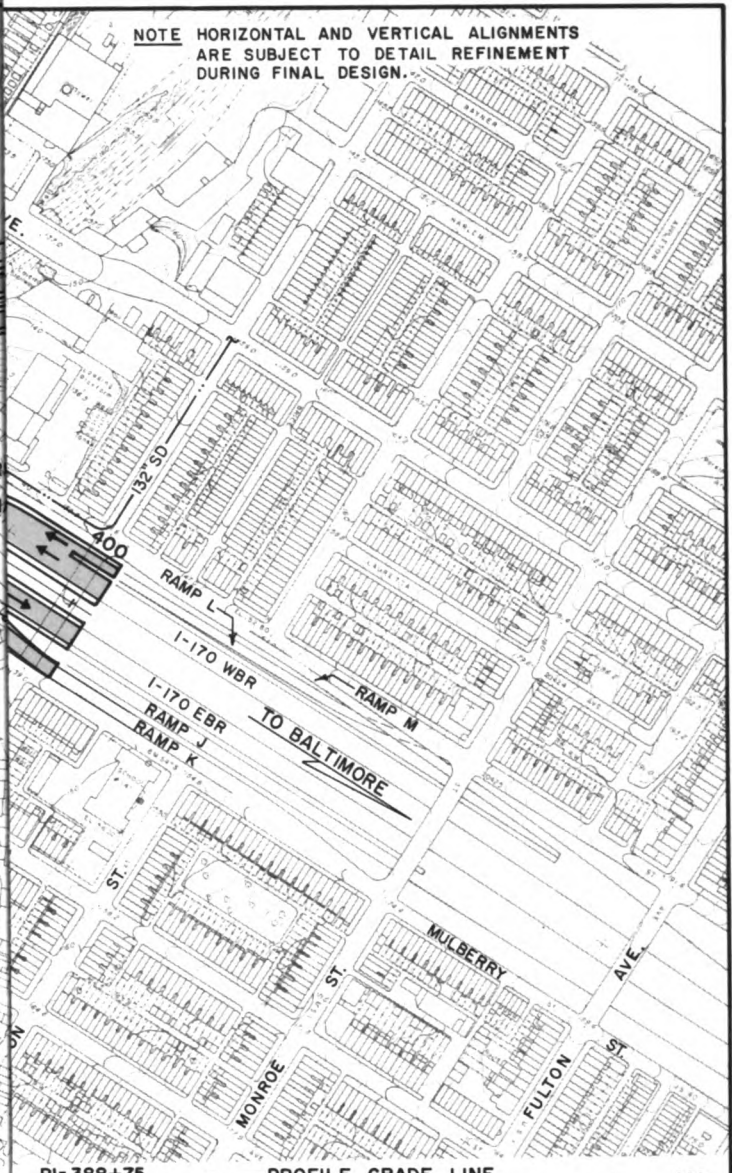
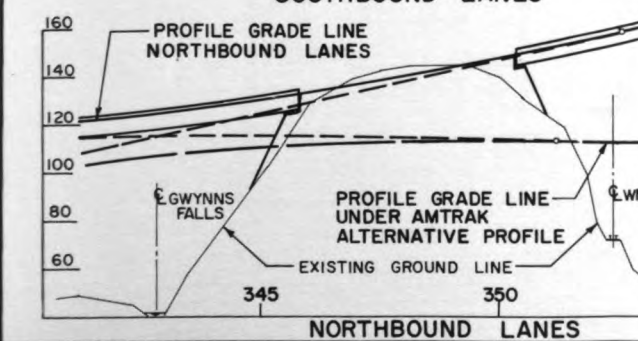
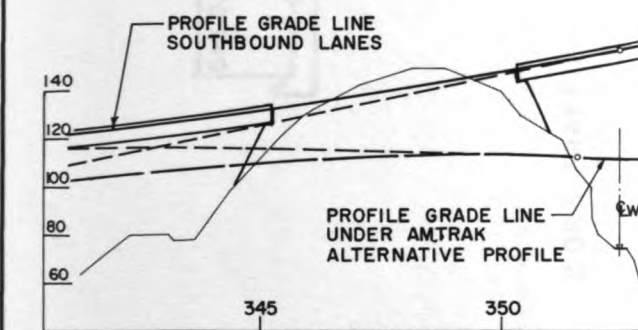
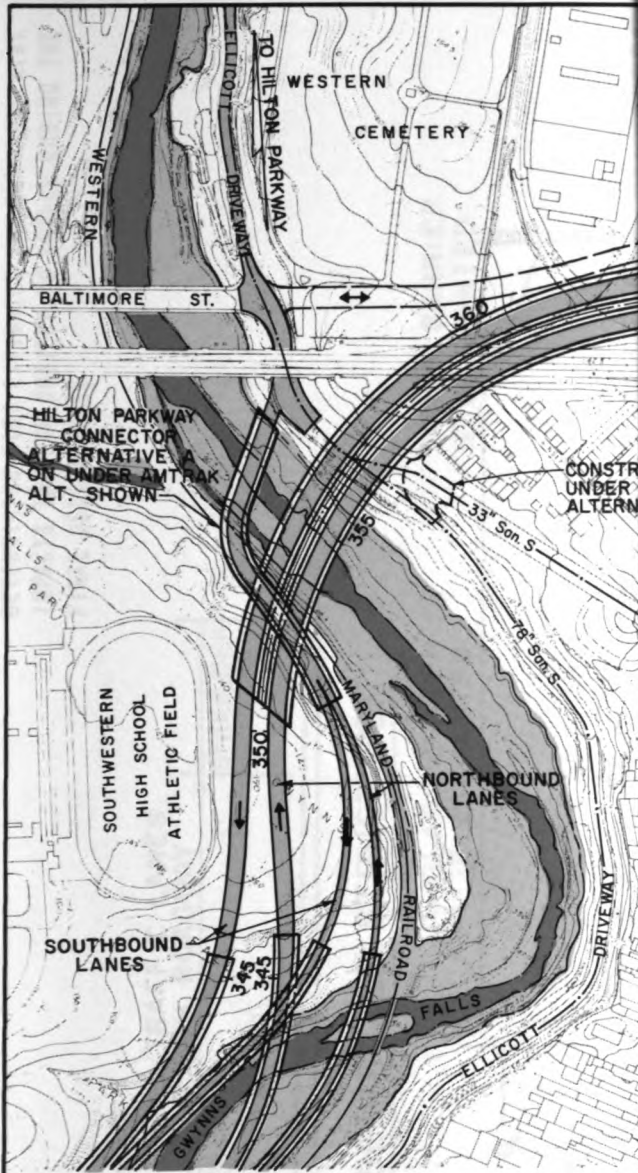
- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

AND PROFILE  
ALTERNATIVE I  
GRADE WITHOUT RAMPS  
FREDERICK AVE. TO NORTH OF FREDERICK AVE.

EXHIBIT  
II - I

DATE: JAN. 83





**AND PROFILE  
ALTERNATIVE I**  
INTERSTATE  
DERICK AVE. TO I-170 AT PULASKI ST.

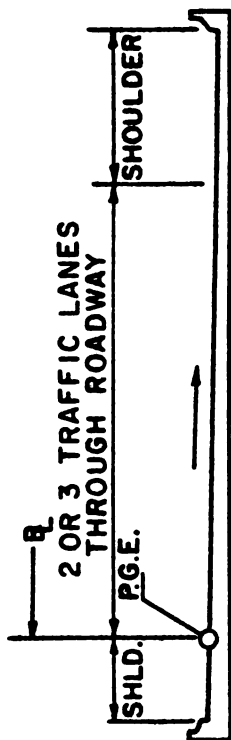
**EXHIBIT  
II-2**

**DATE: JAN. 83**

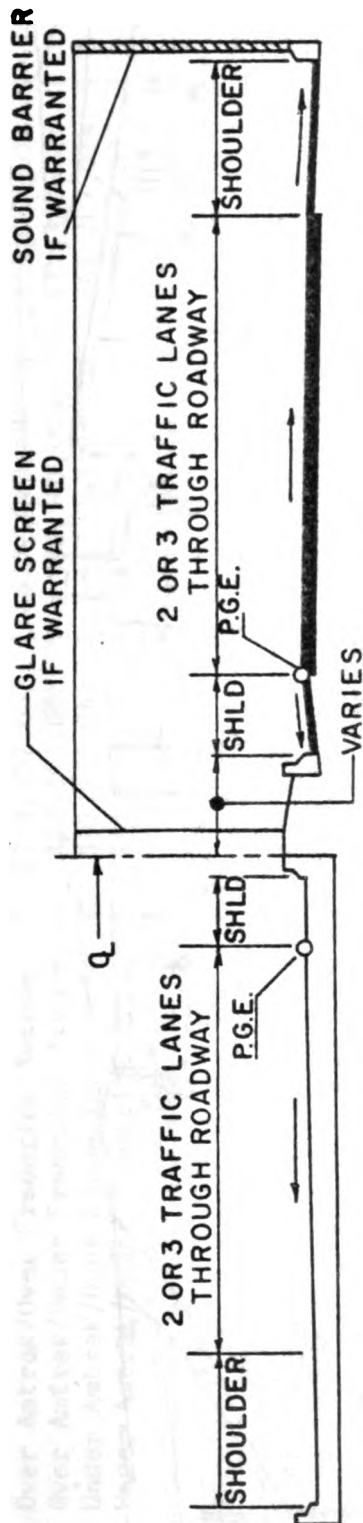




NOTE: THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

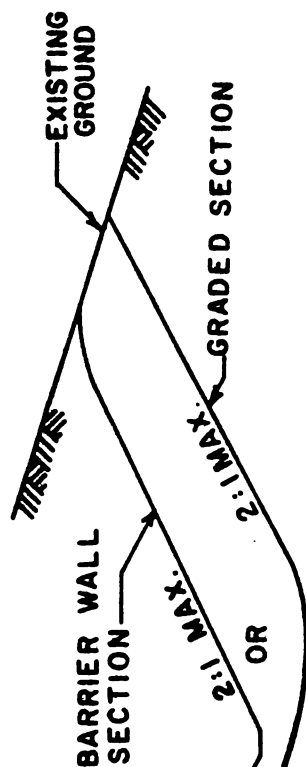


**SEPARATED STRUCTURE**



**HALF SECTION-OVERPASS STRUCTURE**

**HALF SECTION-UNDERPASS STRUCTURE**

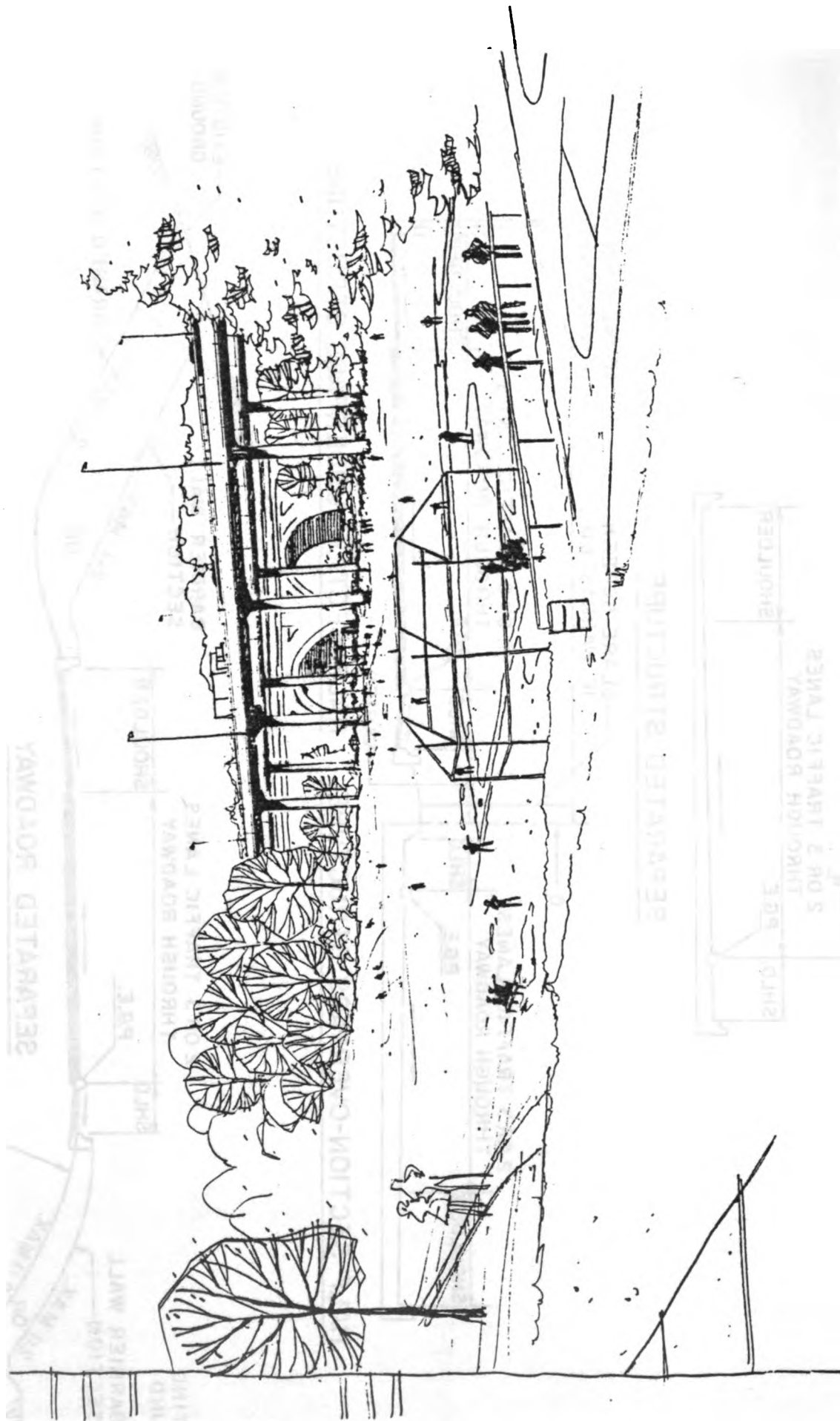


**SEPARATED ROADWAY**

**TYPICAL SECTIONS  
ALTERNATIVES 1,2,3&4**

**EXHIBIT  
II-3**

**DATE: JAN. 83**



ALTERNATIVE 1: LOOKING NORTH FROM THE GWYNNS FALLS RECREATION CENTER

Table II-2

## Alternatives Cost Comparison

Interstate Connector	Hilton Parkway Connector			
	No Connector	Alternative A	Alternative B	Alternative C
<u>ALTERNATIVE 1</u>				
Over Amtrak/Over Frederick Avenue	\$151,057,037	\$177,268,490	\$182,064,052	\$178,719,004
Over Amtrak/Under Frederick Avenue	150,311,088	170,545,003	175,323,029	171,977,981
Under Amtrak/Over Frederick Avenue	137,879,044	163,043,923	167,207,014	163,861,966
Under Amtrak/Under Frederick Avenue	133,890,297	154,988,942	159,152,035	155,806,987
<u>ALTERNATIVE 2</u>				
Over Amtrak/Over Frederick Avenue	172,232,184	197,204,776	202,000,333	198,655,290
Over Amtrak/Under Frederick Avenue	169,586,856	189,319,728	194,097,754	190,752,706
Under Amtrak/Over Frederick Avenue	154,662,006	178,018,762	182,181,853	178,836,805
Under Amtrak/Under Frederick Avenue	152,570,198	172,891,973	177,055,066	173,710,018
<u>ALTERNATIVE 3</u>				
	149,572,263	170,582,119	175,205,103	171,860,055
<u>ALTERNATIVE 4</u>				
Over Amtrak	154,849,629	164,681,842	172,301,130	168,956,082
Under Amtrak	154,493,226	168,685,915	176,305,203	172,960,155

NOTE: Costs are in 1982 Dollars.

## Alternative 2

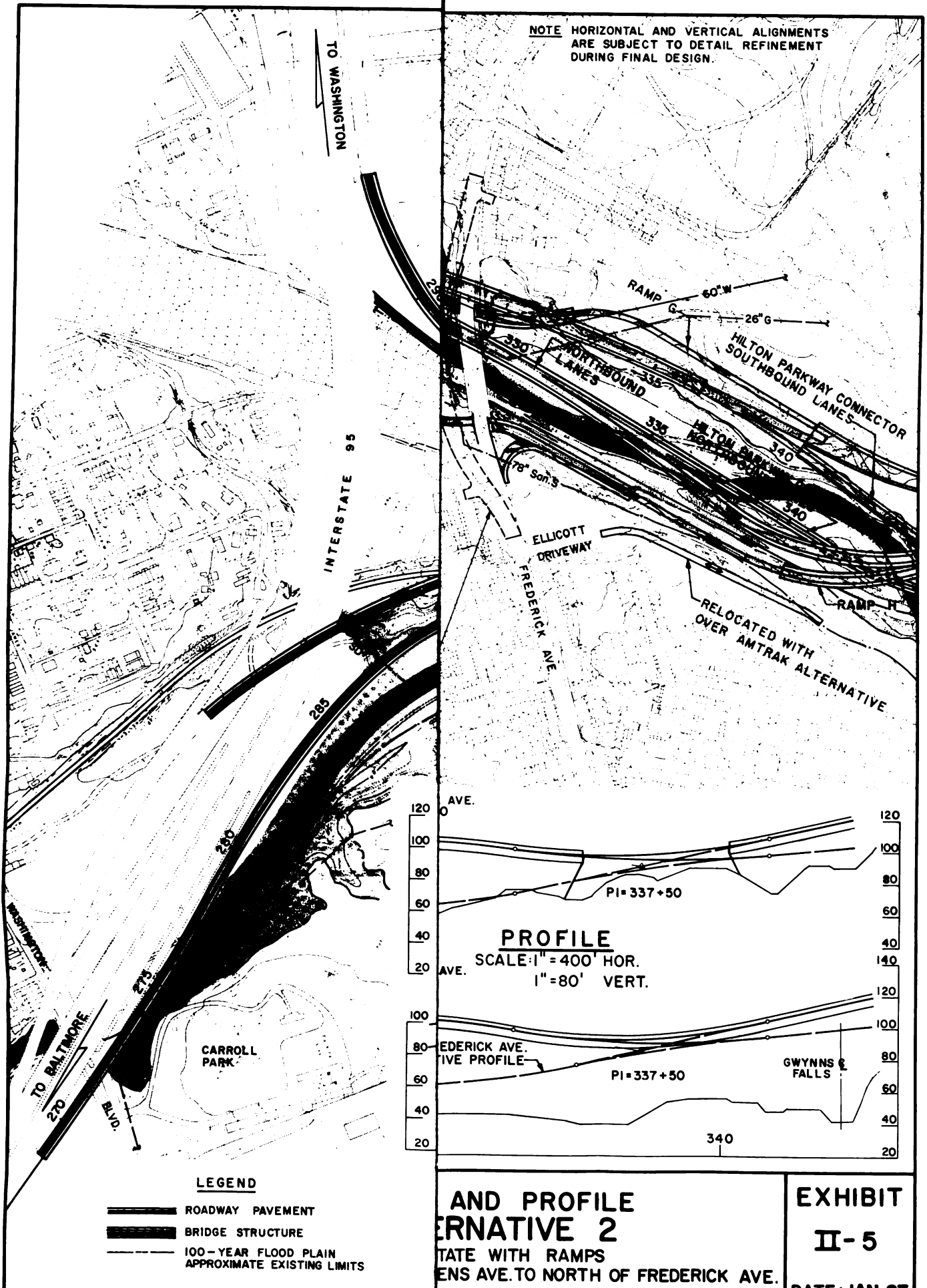
Alternative 2 would also provide an interstate-type facility, identical to Alternative 1 from its point of beginning at Interstate 170 to the second Conrail/Amtrak Corridor crossing at Baltimore Street (see Exhibits II-5 through II-12). South of this crossing, the roadways separate with the southbound roadway continuing along approximately the same alignment as in Alternative 1. The northbound roadway would cross the Gwynns Falls and proceed southerly down the center of the valley, traversing the Gwynns Falls again prior to the Frederick Avenue crossing. South of Frederick Avenue the roadways would be closer to one another, and would run parallel as they pass over Wilkens Avenue and proceed south to the I-95 interchange. Ramp movements at I-95 would be approximately identical to those described for Alternative 1.

Connections to Frederick Avenue and Wilkens Avenue would be provided with this alternative by a system of service roads connecting the two local streets. The northbound service road would be located to the east of the mainline and would intersect Frederick Avenue in the vicinity of the existing intersection of Frederick Avenue and Brunswick Street. The service road would continue across Frederick Avenue and would run directly west of and parallel to Ellicott Driveway, before reaching a tie-in point with the northbound roadway west of the existing Western Maryland Railroad crossing of the Gwynns Falls. The ramp intersections with Wilkens and Frederick Avenues would be signalized.

Access from the southbound roadway to Frederick Avenue and Wilkens Avenue originates opposite the Southwestern High School with a ramp exiting the southbound roadway to the right. Prior to Frederick Avenue, the service road would cross over or under the southbound roadway, depending upon the crossing option at Frederick Avenue, and continue between the two mainline roadways intersecting Frederick Avenue at-grade. The service roadway would then continue southerly between the mainline roadways also meeting Wilkens Avenue at-grade and tying back into the mainline prior to the I-95 interchange. It should be noted that the ramps connecting Wilkens and Frederick Avenues to south serving I-595 provide access only to and from north serving I-95; i.e., a motorist coming from the north on I-95 could exit to Wilkens Avenue via I-595, while a motorist traveling from the south on I-95 could not. Similarly, a motorist on Wilkens Avenue could use southbound I-595 to reach northbound I-95, but could not use southbound I-595 to reach southbound I-95. Access to the Wilkens and Frederick Avenue areas for northbound I-95 traffic would be via Caton Avenue. The return movement from Frederick and Wilkens Avenues to I-95 southbound would also be via Caton Avenue.

With Alternative 2, a cul-de-sac would be created on Brunswick Street at Frederick Avenue to allow construction of Ramp F. Residents of Brunswick Street would continue to have access to Wilkens Avenue and would be able to travel to Frederick Avenue via Lehman Street to Millington Avenue, or via the service drives associated with I-595.

NOTE HORIZONTAL AND VERTICAL ALIGNMENTS  
ARE SUBJECT TO DETAIL REFINEMENT  
DURING FINAL DESIGN.



**LEGEND**

- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

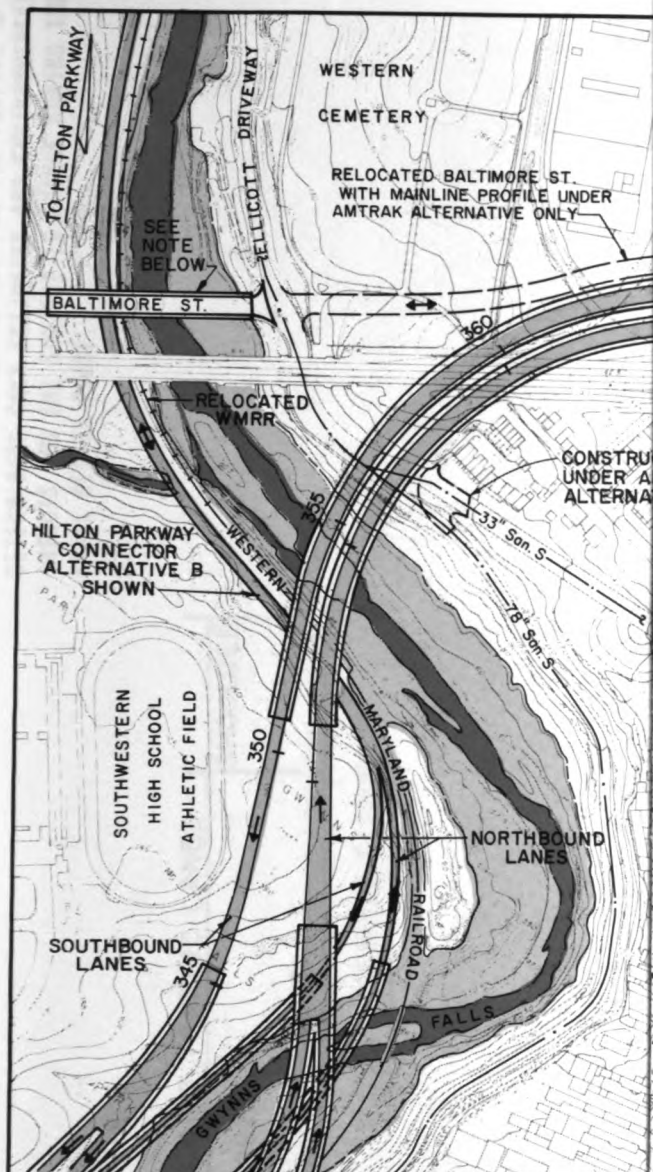
**AND PROFILE  
ALTERNATIVE 2**

STATE WITH RAMPS  
FEDERICK AVE. TO NORTH OF FREDERICK AVE.

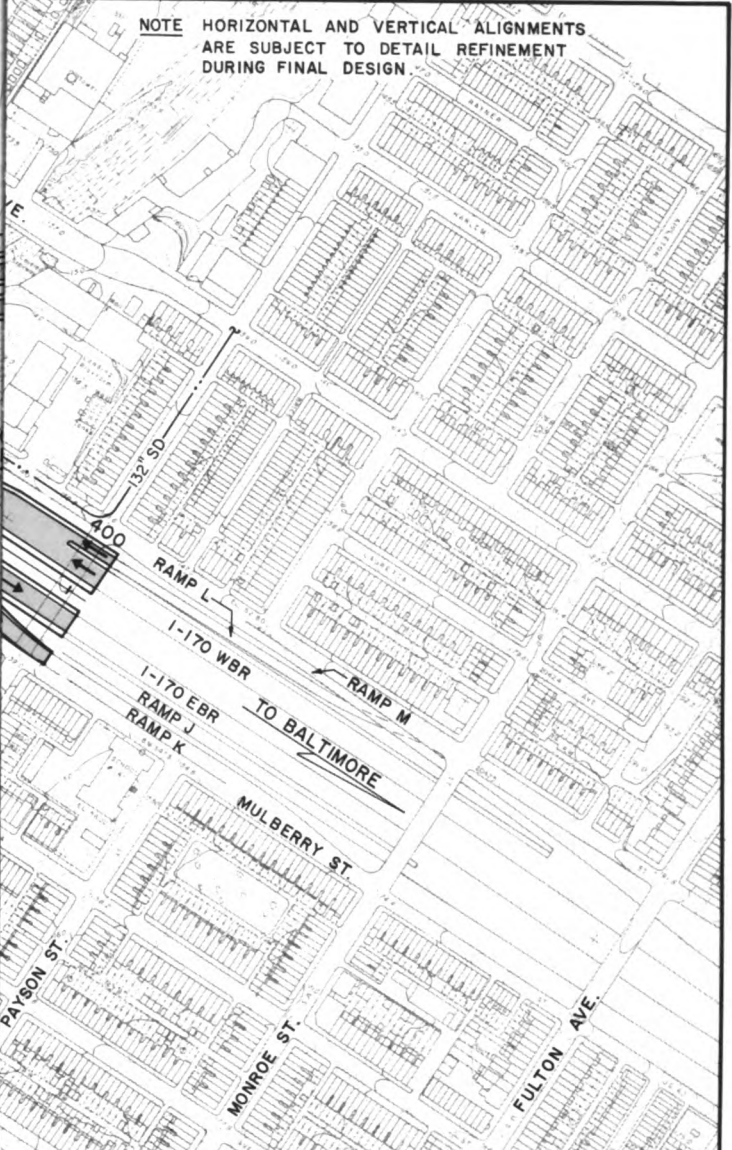
**EXHIBIT  
II-5**

DATE: JAN. 83



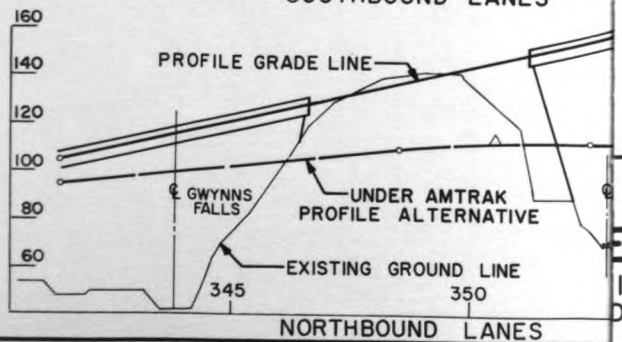
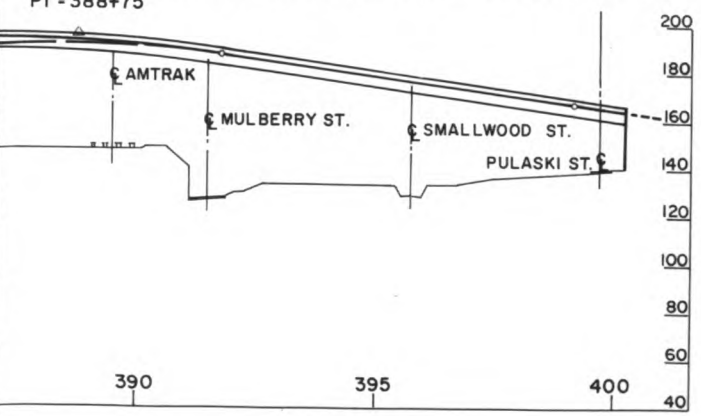
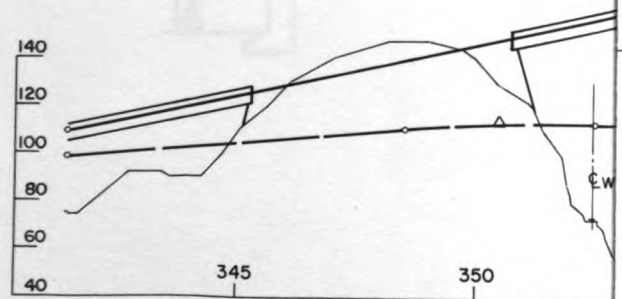


NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



NOTE: NEW BALTIMORE ST. BRIDGE REQUIRED ONLY WITH ALTERNATIVES B AND C HILTON PARKWAY CONNECTORS

PI = 388+75



- LEGEND
- ROADWAY PAVEMENT
  - BRIDGE STRUCTURE
  - 100-YEAR FLOOD PLAIN
  - APPROXIMATE EXISTING LIMITS

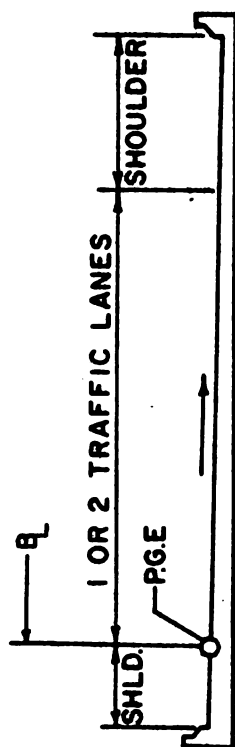
AND PROFILE  
 ALTERNATIVE 2  
 INTERSTATE  
 DERICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
 II-6  
 DATE: JAN. 83

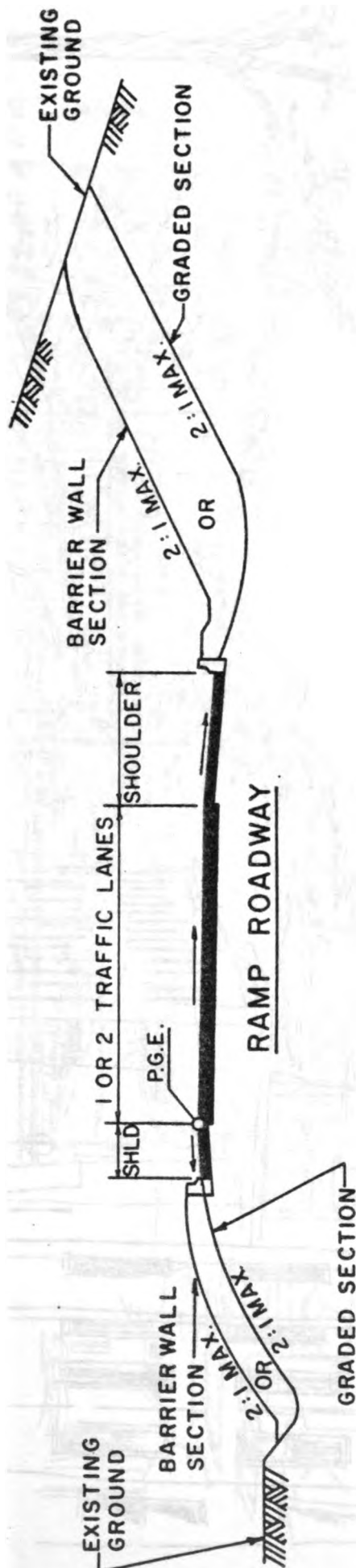




NOTE: THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.



## RAMP STRUCTURE

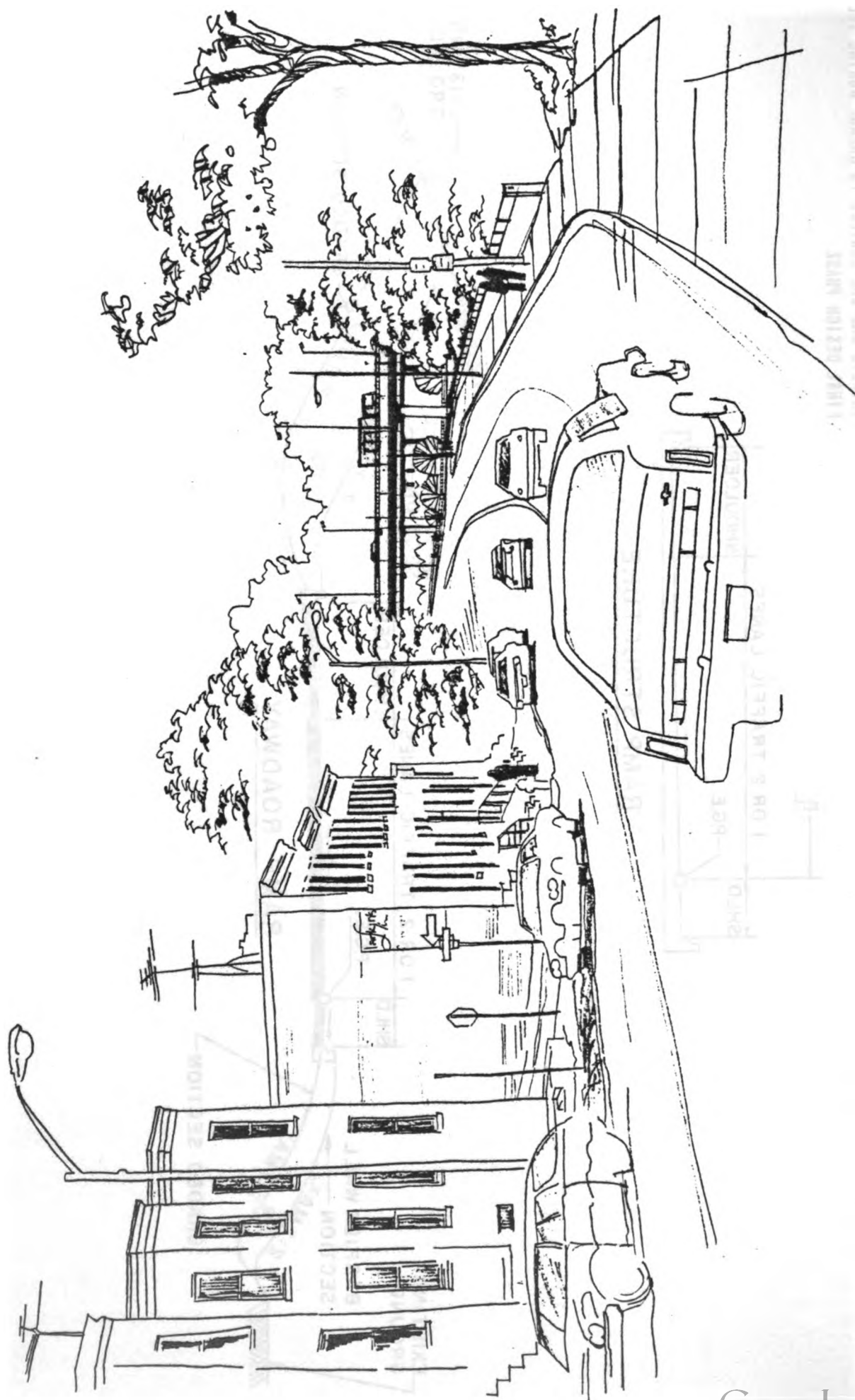


## TYPICAL SECTIONS

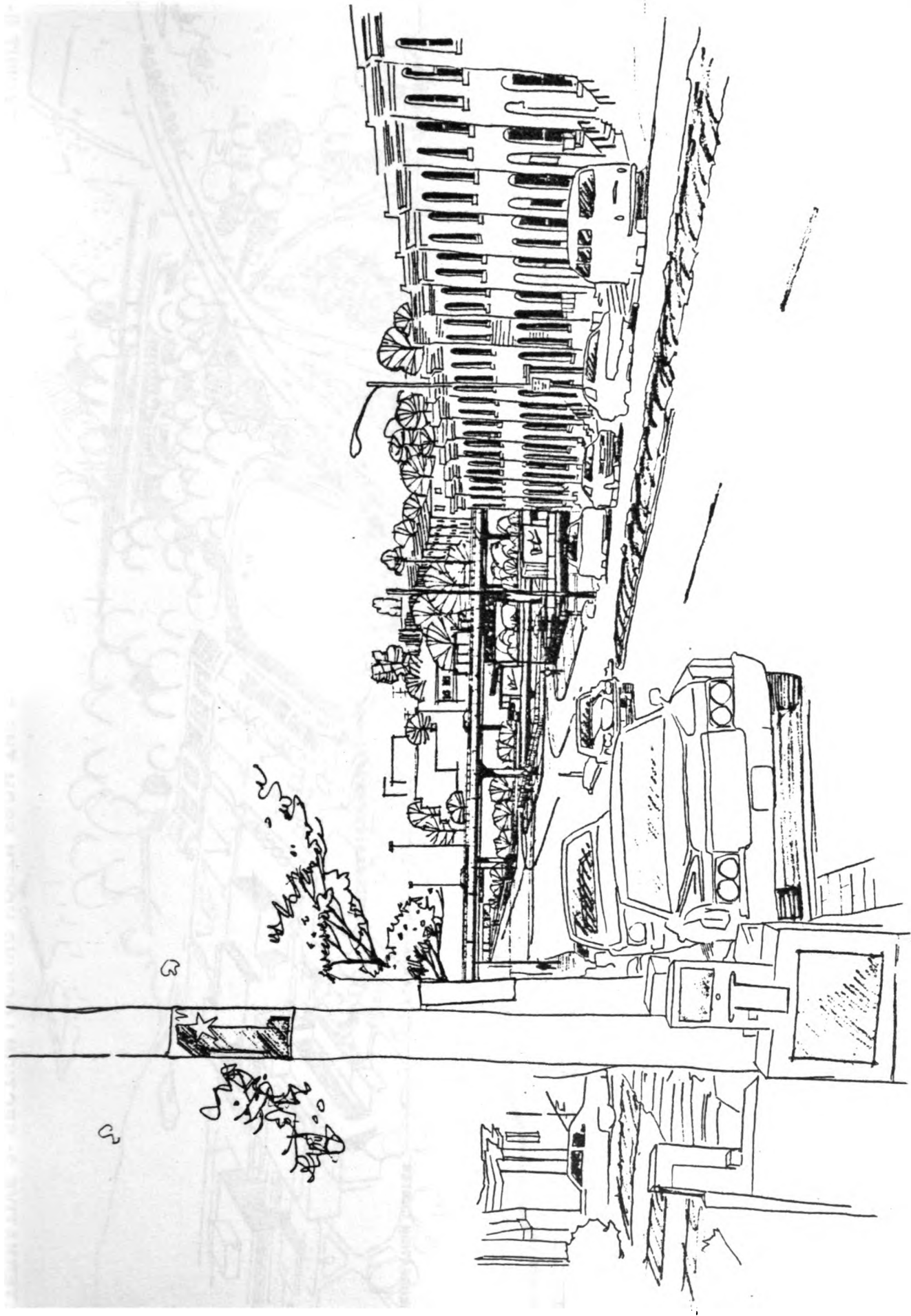
INTERCHANGE RAMPS - ALT'S. 2 & 4

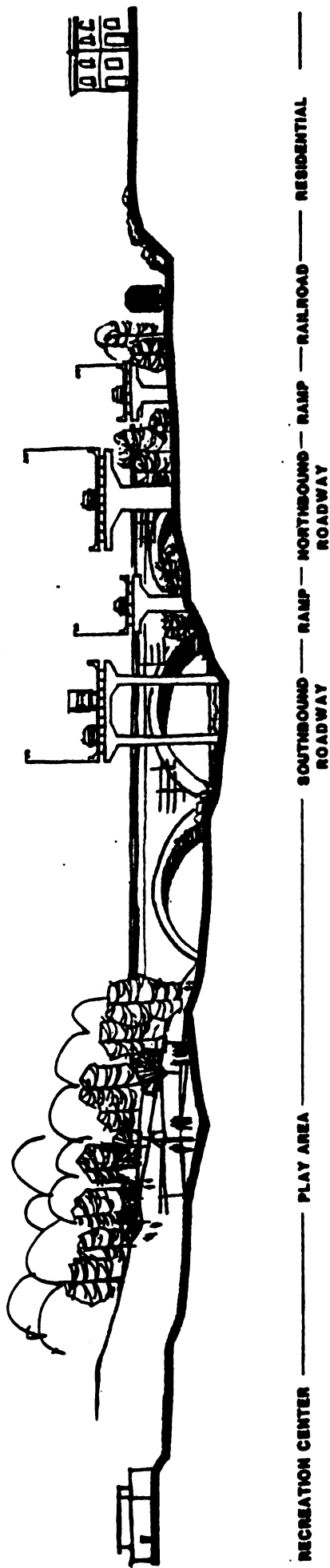
EXHIBIT  
II-7

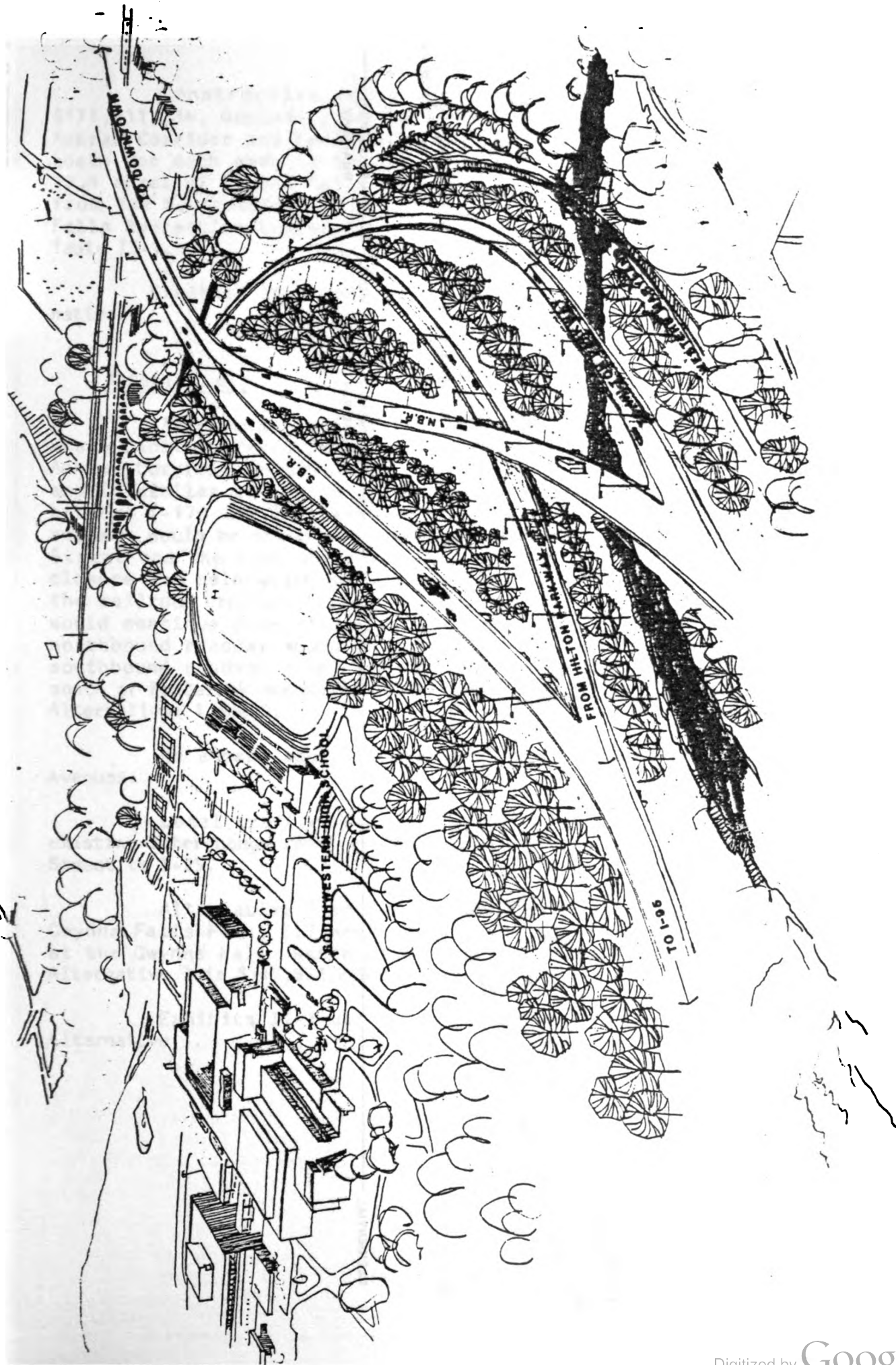
DATE: JAN. 83

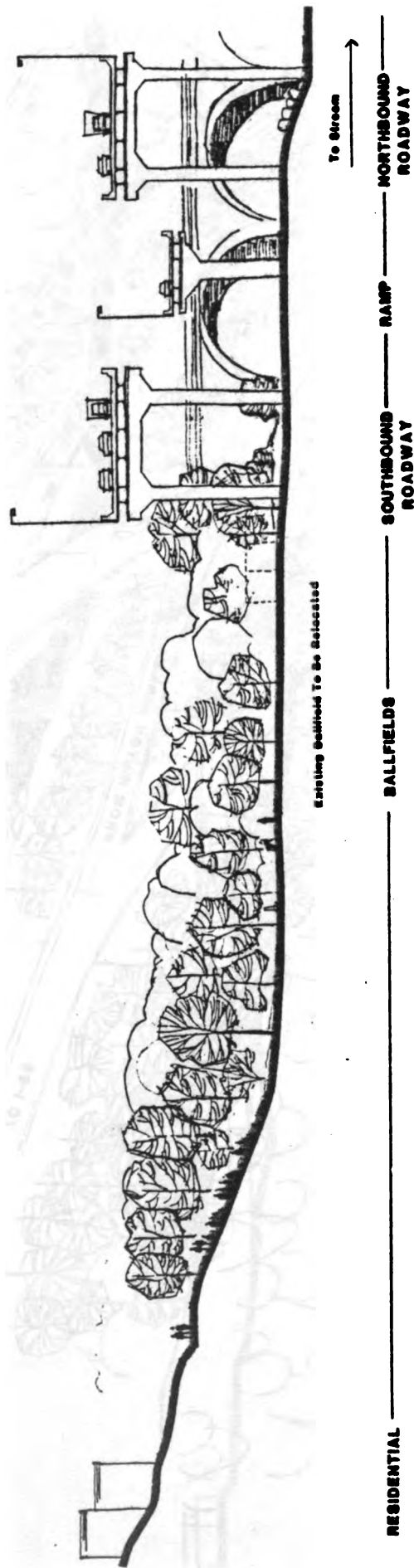


ALTERNATIVE 2: LOOKING EAST ON FREDERICK AVENUE









Construction costs would range between \$152,570,198 and \$171,711,234, depending on the crossing options selected at the Conrail/Amtrak Corridor and Frederick Avenue. Table II-2 presents the estimated costs for each combination of options. Alternative 2 would require 11.5-13.4 acres of Gwynns Falls Park property; 4.0-4.2 acres of right-of-way from the Southwestern High School; and 4.7-4.8 acres from the Gwynns Falls Recreation Center, depending upon the profile option as shown by Table II-1.

Exhibits II-3 and II-7 present typical sections for this Alternative.

### Alternative 3

Alternative 3 (see Exhibits II-13 through II-16) is an interstate facility featuring a double-decked configuration from the Conrail/Amtrak Corridor crossing at Baltimore Street to south of Frederick Avenue, and is similar to Alternative 1 in that it provides a direct connection between I-170 and I-95 with no planned local connections. The southbound roadway would be constructed over the Conrail/Amtrak Corridor at Baltimore Street and the northbound roadway under this crossing, requiring the closure and relocation of Baltimore Street as shown on Exhibit II-8. From the railroad crossing to south of Frederick Avenue, the southbound roadway would continue generally above the northbound roadway, on structure. The northbound roadway would be constructed under Frederick Avenue and the southbound roadway over. The highway would transition to a normal section south of Frederick Avenue, continuing to interchange with I-95, the same as Alternatives 1 and 2.

No access would be provided to or from Frederick and Wilkens Avenues.

Local traffic desiring to access I-95 would do so by way of existing interchange ramps at Caton Avenue, Washington Boulevard or Russell Street to I-95.

Alternative 3 would require 5.8 acres of right-of-way from the Gwynns Falls Park, 2.7 acres from Southwestern High School and 3.6 acres at the Gwynns Falls Recreation Center. Estimated construction cost for Alternative 3 is \$149,572,263 as shown in Table II-2.

Exhibits II-3 and II-15 show the typical sections developed for Alternative 3.



#### Alternative 4

This alternative is a boulevard-type facility with access provided to and from Frederick Avenue and Wilkens Avenue via at-grade intersections (see Exhibits II-17 through II-23). This facility consists of two lanes in each direction between existing I-170 and Southwestern High School, and three lanes in each direction throughout the remainder of the route except at intersections where five lanes per direction are provided to accommodate turning movements. From the connection at I-170 to the Conrail/Amtrak Corridor crossing at Baltimore Street the horizontal and vertical alignment is identical to Alternatives 1-3.

From the Conrail/Amtrak Corridor crossing to Frederick Avenue, the southbound roadway would be located on the western slope of the valley where after intersecting with Frederick Avenue, it would join the northbound roadway. The northbound roadway from the Conrail/Amtrak Corridor crossing south to Frederick Avenue would be located on the eastern slope of the valley intersecting Frederick Avenue just east of the point where Brunswick Street intersects Frederick Avenue. Below Frederick Avenue, the roadway would curve to the west to join the southbound roadway at Wilkens Avenue. South of Wilkens Avenue the two roadways continue parallel to interchange with I-95 in a manner similar to the other alternatives. Brunswick Street would be cul-de-sac'd at Frederick Avenue in the same manner as described for Alternative 2.

Right-of-way requirements for Alternative 4 would include 9.6 acres of property from Gwynns Falls Park, 4.2 acres of Southwestern High School land and 3.4 acres from the Gwynns Falls Recreation Center. Construction cost estimates as shown in Table II-2 are \$153,853,986 for the profile option under the Conrail/Amtrak Corridor and \$157,950,895 for the over option.

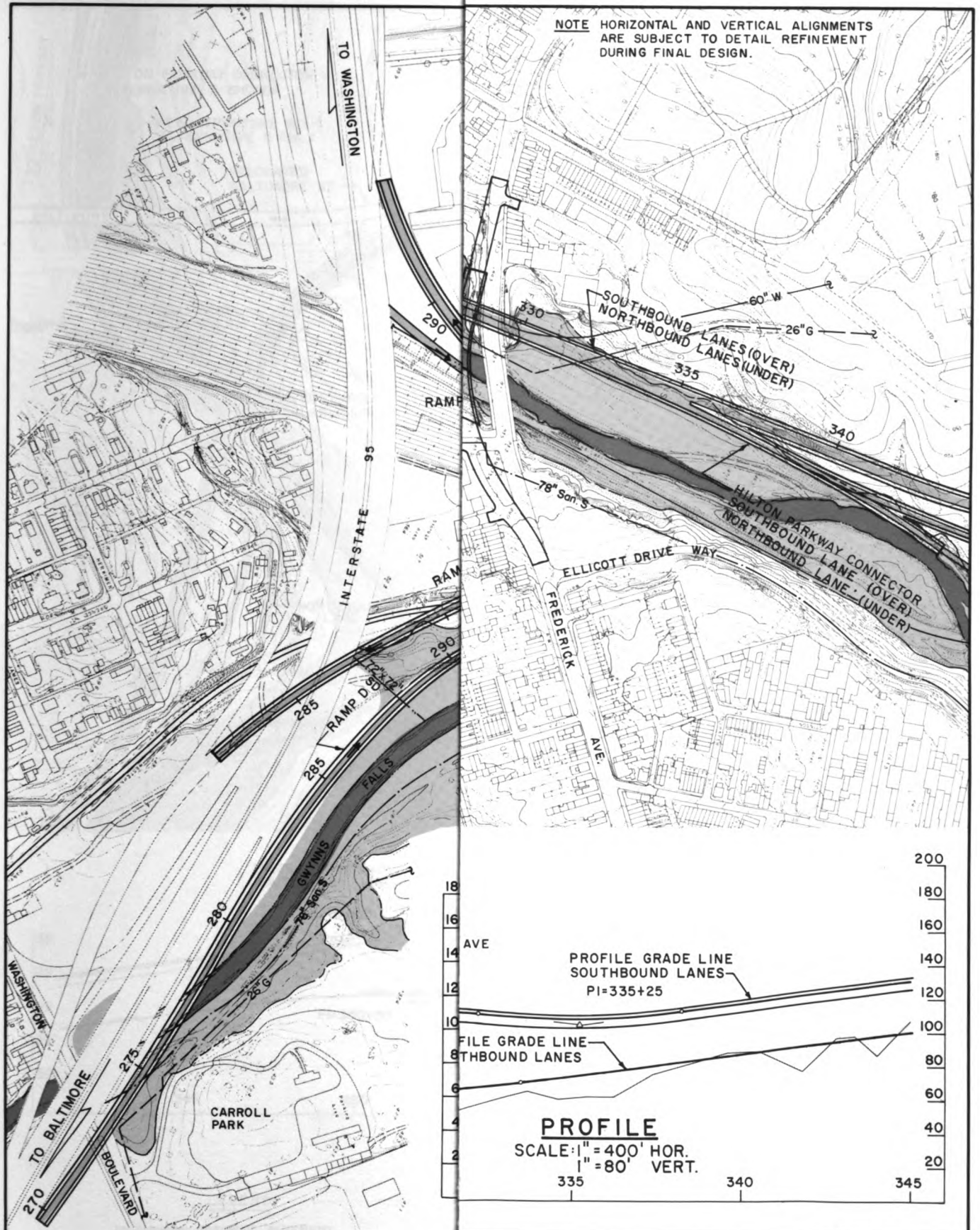
Exhibits II-3 and II-7 indicate the typical sections developed for Alternative 4.

#### Hilton Parkway/Edmondson Avenue Connection

Access to the proposed facility from the Hilton Parkway/Edmondson Avenue area would be provided at a point just south of the Conrail/Amtrak Corridor. This would consist of a two-lane, two-way roadway and access would be limited to I-595 only.

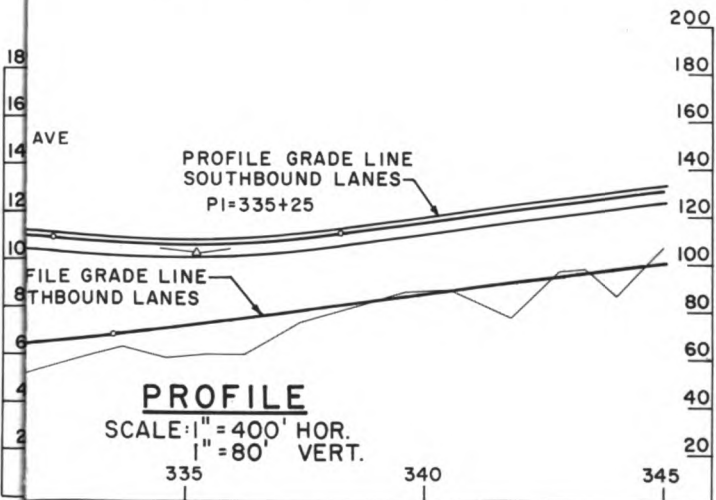
Access to and from existing I-170 to the Hilton Parkway/Edmondson Avenue area would remain as it is today by way of Edmondson Avenue.

A number of preliminary alternatives were developed and evaluated including alignments east and west of the Gwynns Falls which would tie in to either Hilton Parkway or Edmondson Avenue. A range of potential interchange configurations was studied. Of the various preliminary alternatives



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.

- LEGEND**
- ROADWAY PAVEMENT
  - BRIDGE STRUCTURE
  - 100-YEAR FLOOD PLAIN
  - APPROXIMATE EXISTING LIMITS

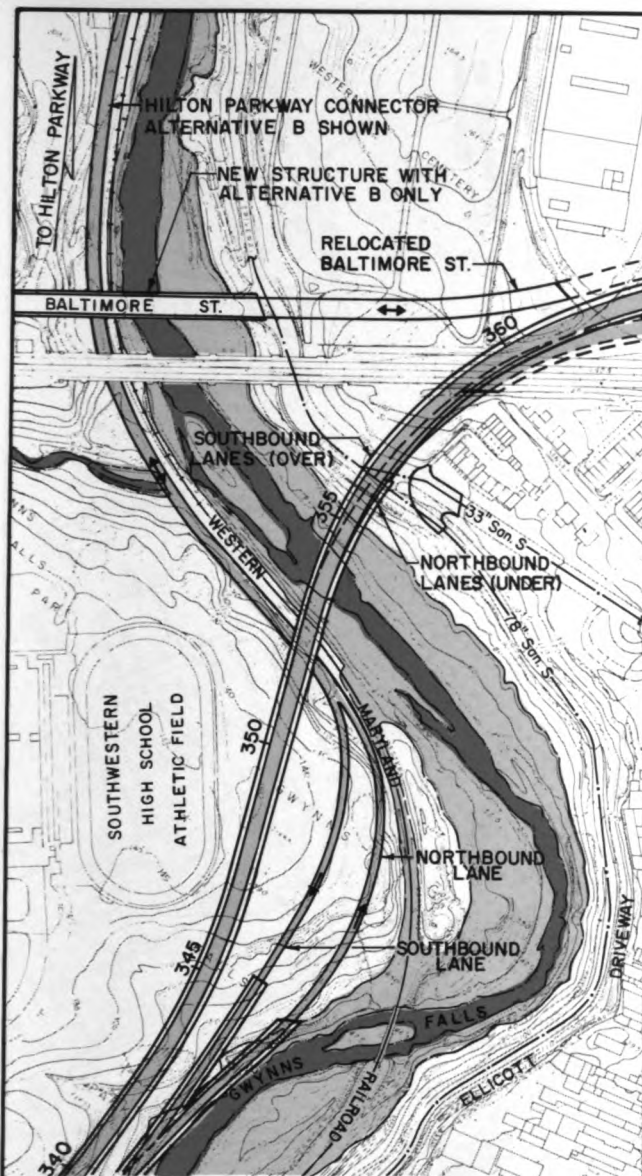


**AND PROFILE  
ERNATIVE 3**  
INTERSTATE WITHOUT RAMPS  
ENS AVE TO NORTH OF FREDERICK AVE

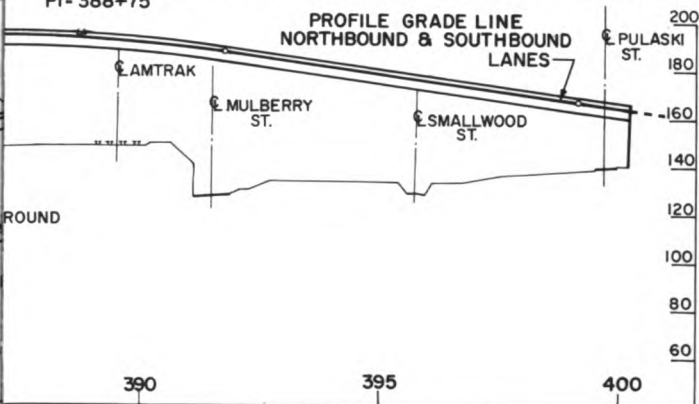
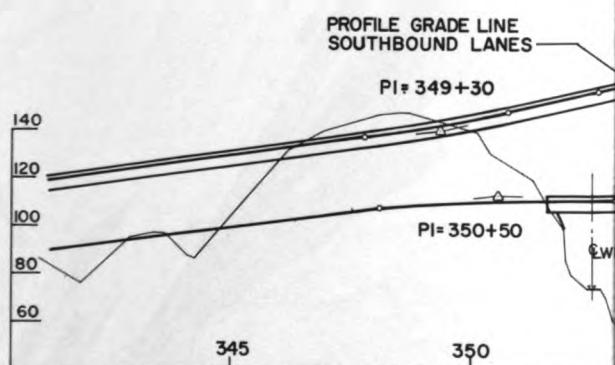
**EXHIBIT  
II-13**

DATE : JAN. 83





NOTE HORIZONTAL AND VERTICAL ALIGNMENTS  
ARE SUBJECT TO DETAIL REFINEMENT  
DURING FINAL DESIGN.



#### LEGEND

- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

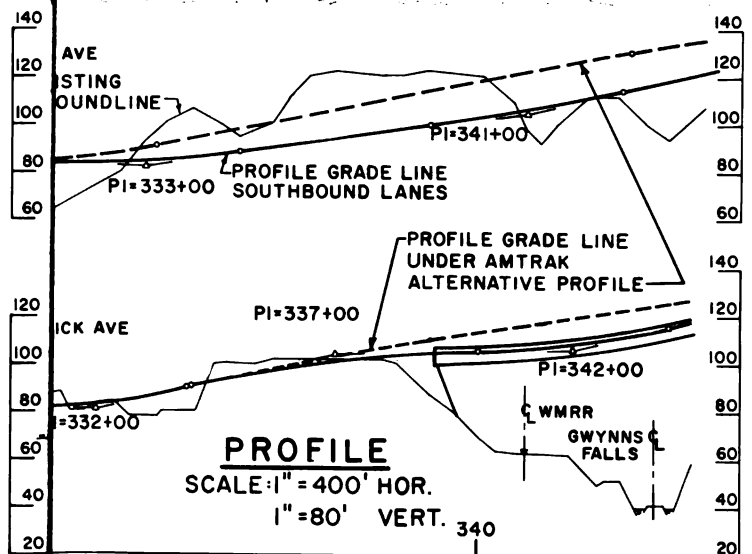
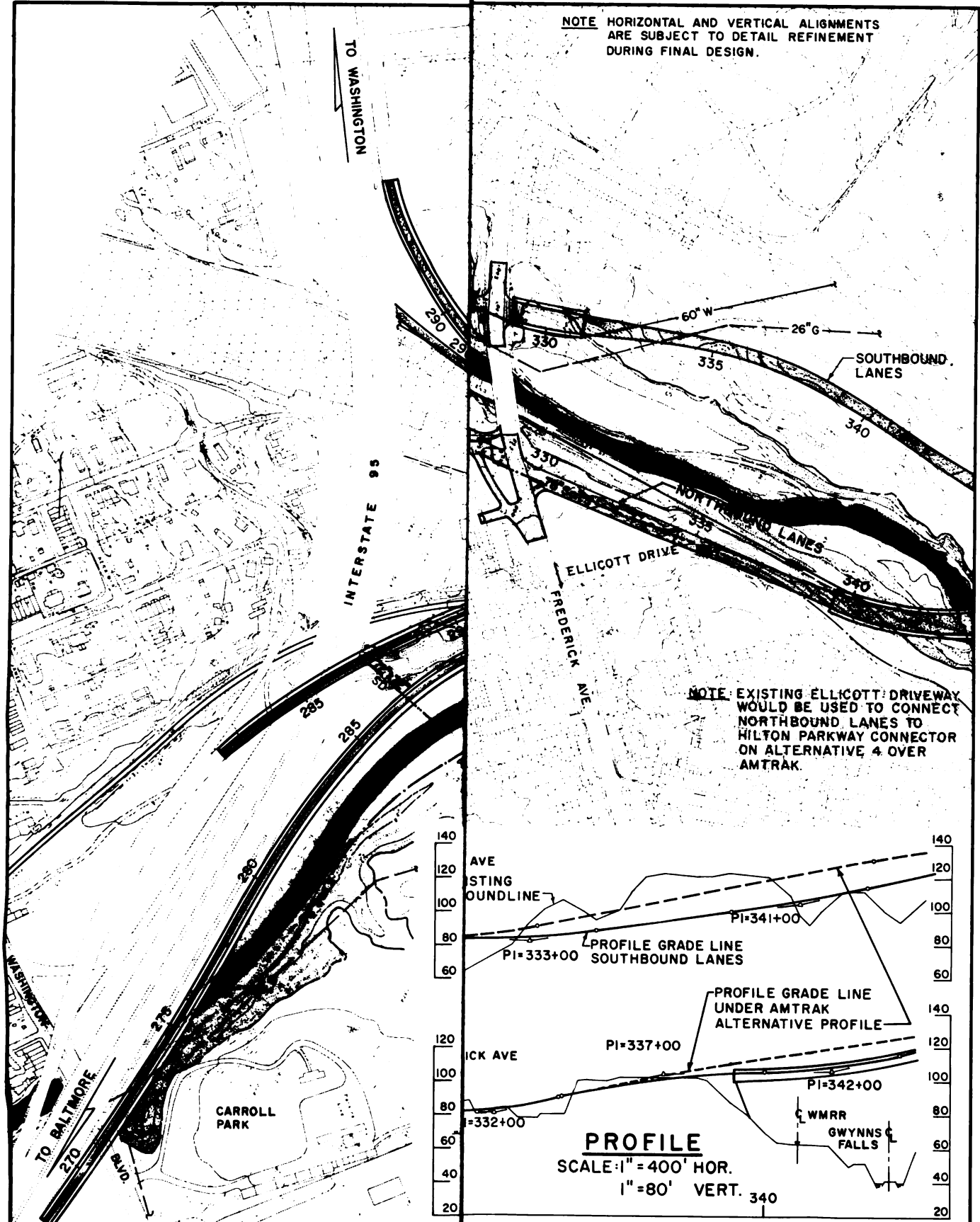
AND PROFILE  
ALTERNATIVE 3  
-DECKED INTERSTATE  
DERICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
II-14

DATE: JAN. 83



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



**LEGEND**

- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

**AND PROFILE  
ERNATIVE 4**

WITH INTERSECTIONS  
ENS AVE TO NORTH OF FREDERICK AVE

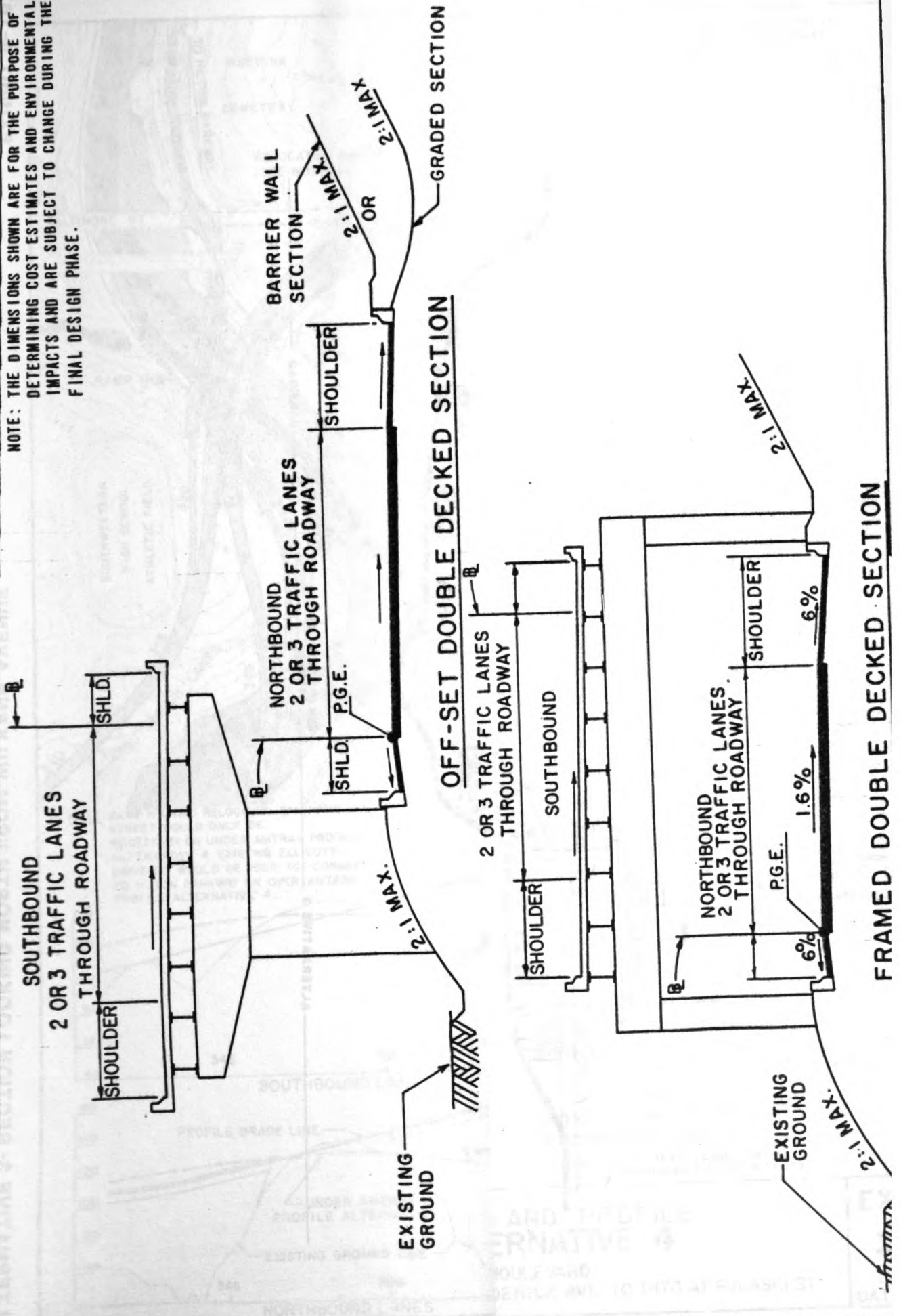
**EXHIBIT  
II-17**

**DATE: JAN. 83**

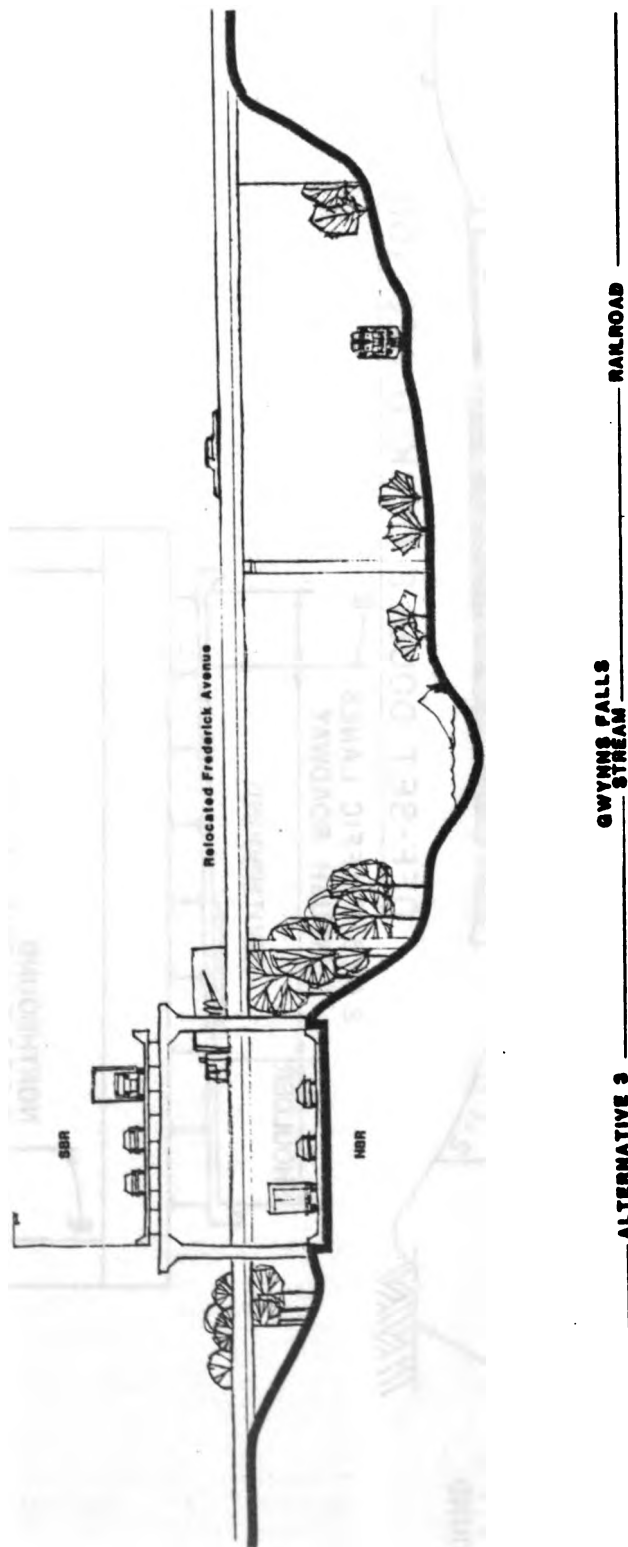


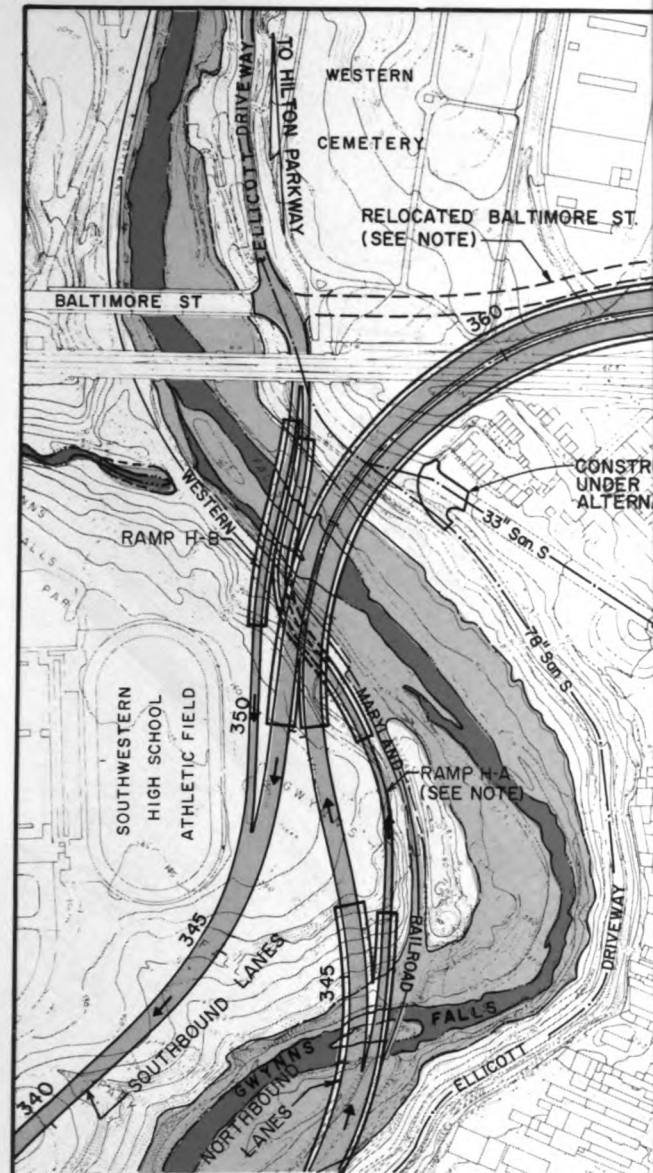


NOTE: THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

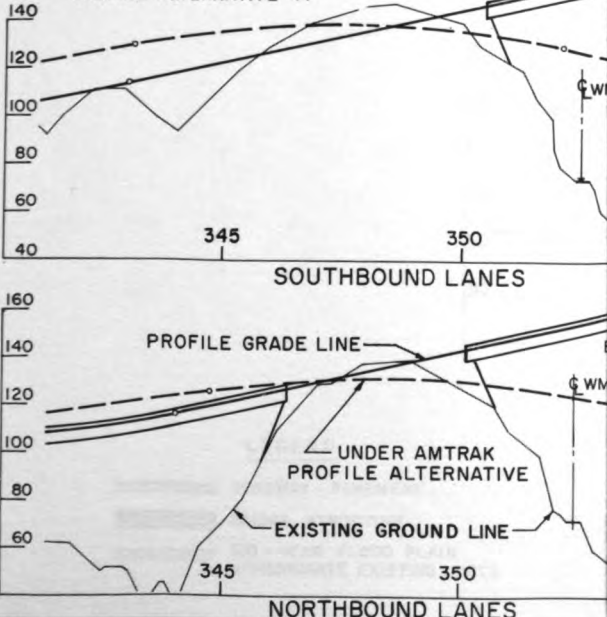




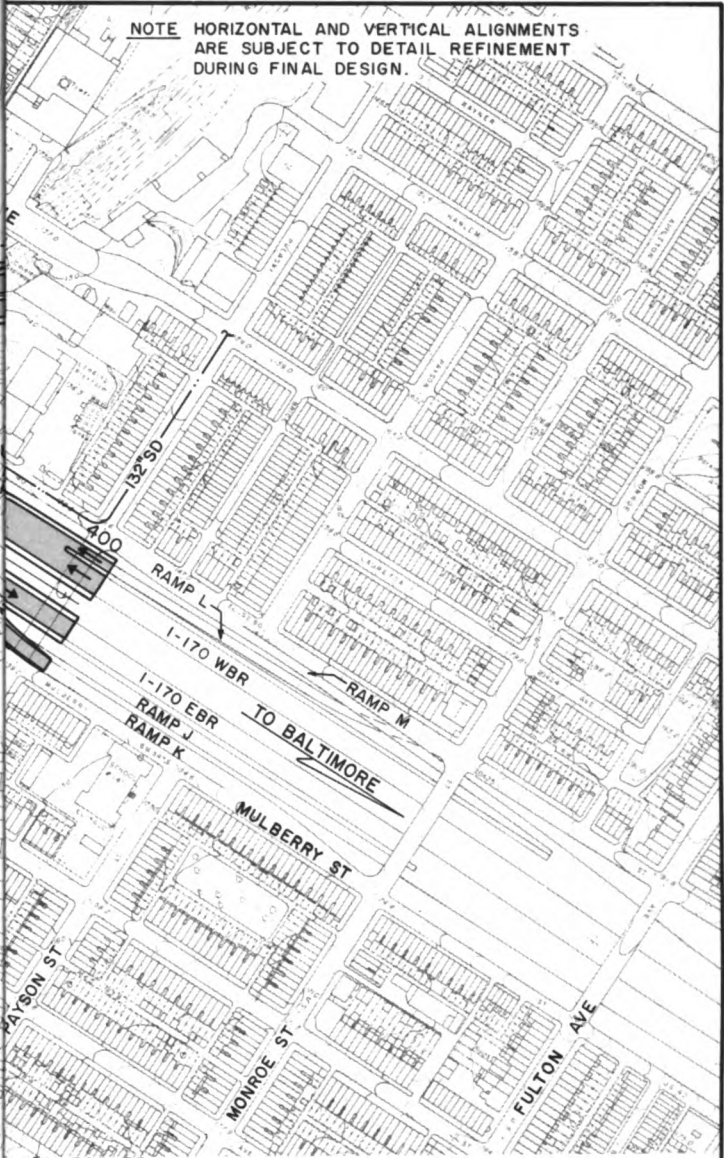




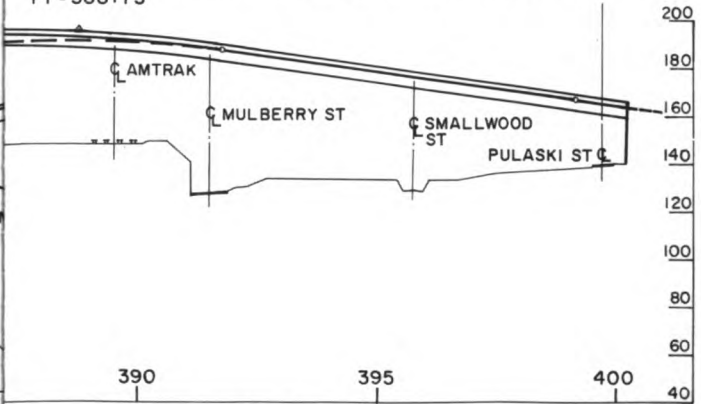
NOTE: RAMP H-A AND RELOCATED BALTIMORE STREET WOULD ONLY BE NECESSARY ON UNDER AMTRAK PROFILE ALTERNATIVE 4. EXISTING ELLCOTT DRIVEWAY WOULD BE USED TO CONNECT TO HILTON PARKWAY ON OVER AMTRAK PROFILE ALTERNATIVE 4.



NOTE: HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



PI = 388+75



LEGEND

- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

AND PROFILE ALTERNATIVE 4

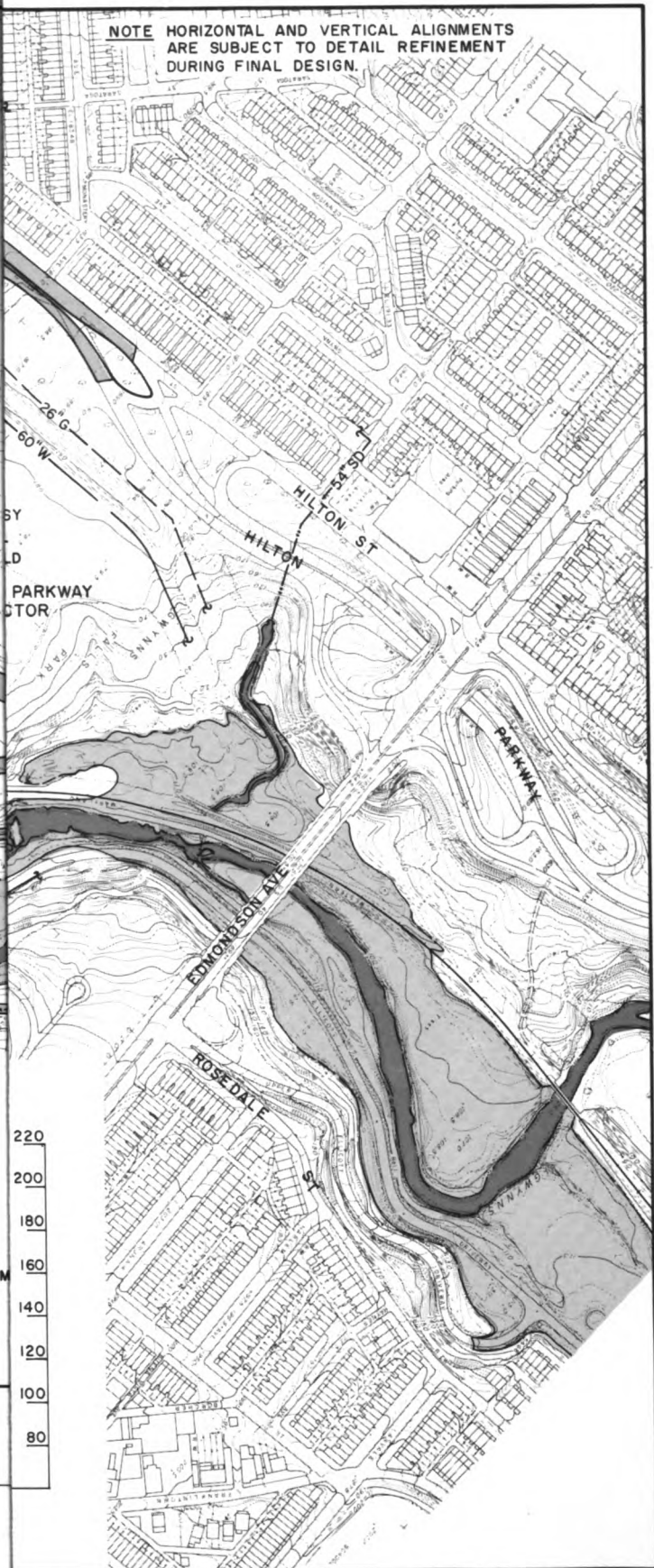
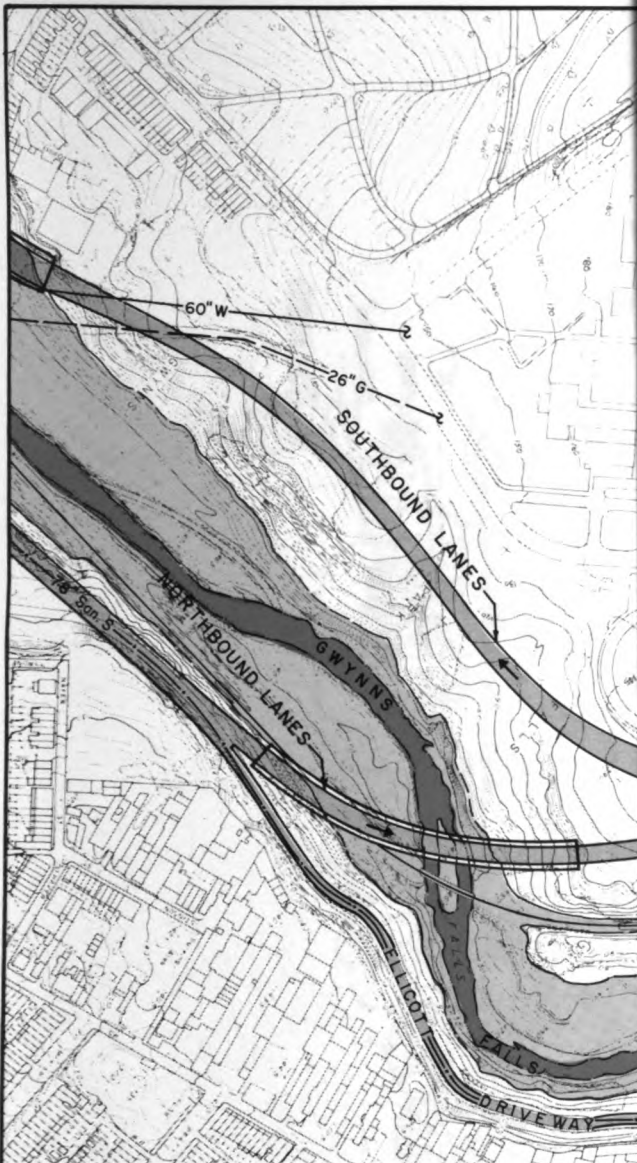
BOULEVARD  
DERICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
II-18

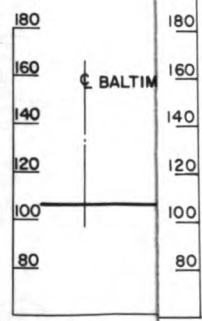
DATE: JAN. 83



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS  
ARE SUBJECT TO DETAIL REFINEMENT  
DURING FINAL DESIGN.



NOTE - ALTERNATIVE 4 PLAN OVER AMTRAK SHOWN  
SOUTH OF BALTIMORE STREET, BUT HILTON  
PARKWAY ALTERNATIVE A MAY BE USED WITH  
ALL INTERSTATE ALTERNATIVES ALSO.



**LEGEND**

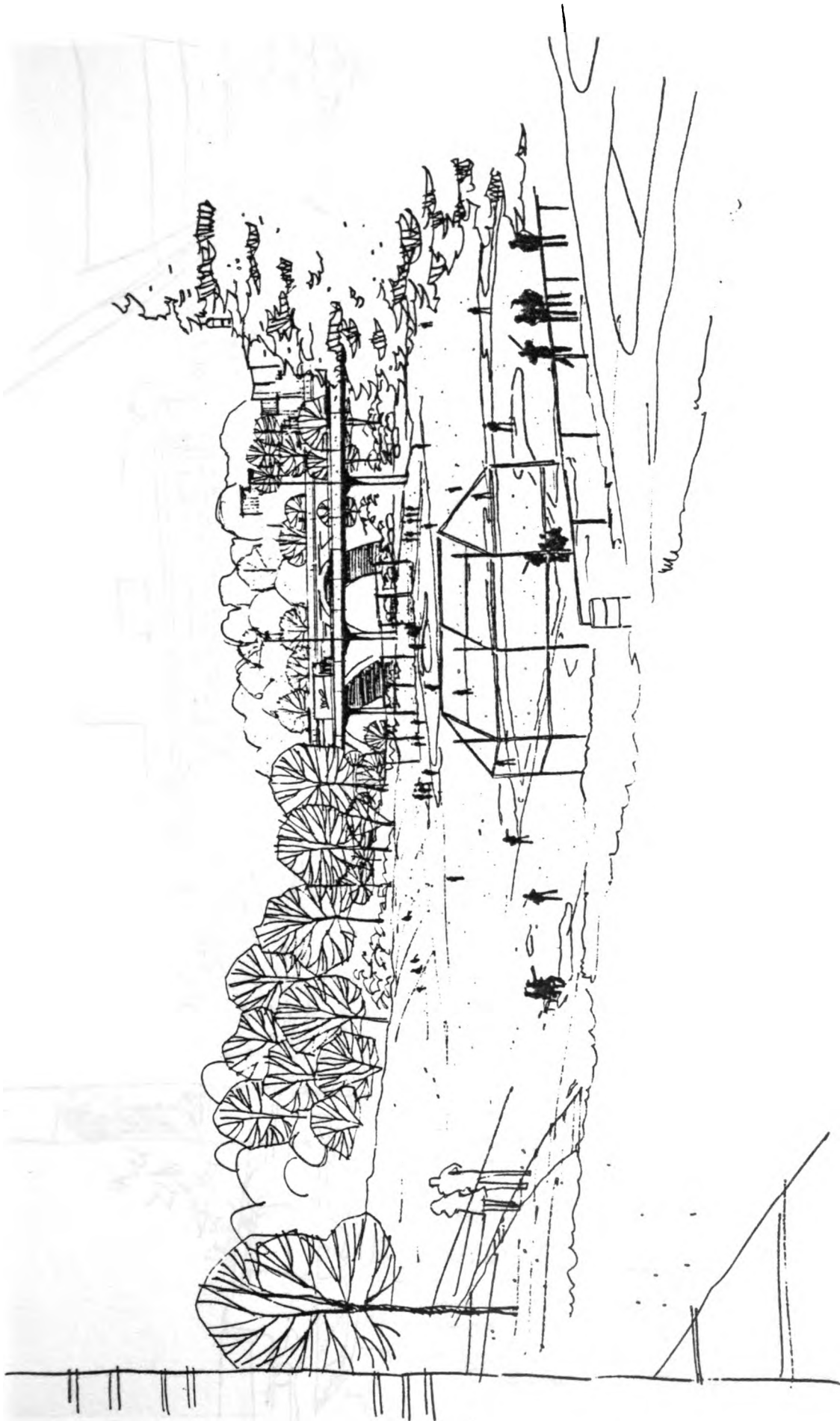
- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

**AND PROFILE**  
**ALTERNATIVE A**  
PARKWAY CONNECTOR  
CROSSING ELLCOTT DRIVEWAY

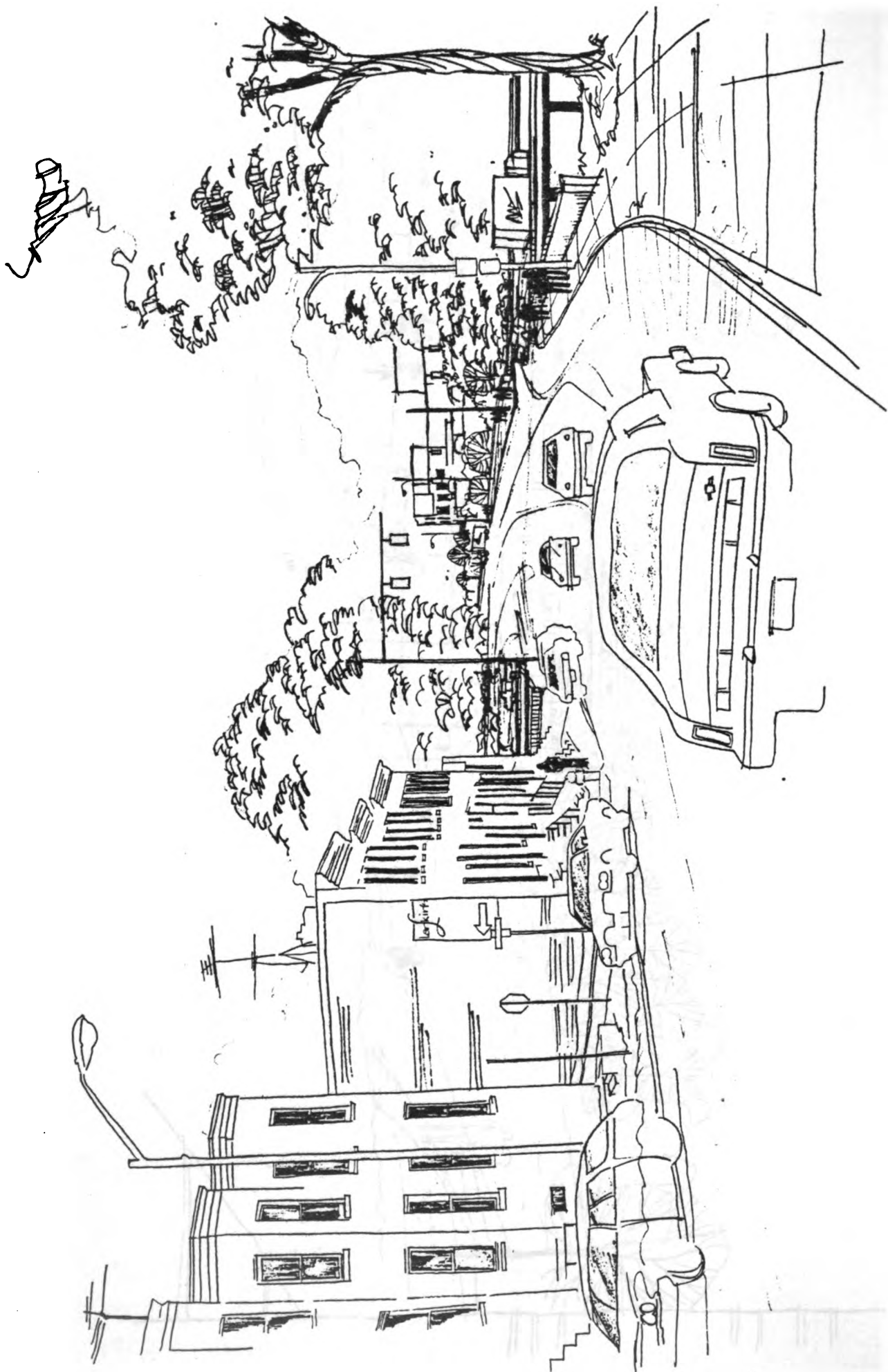
**EXHIBIT**  
**II-24**

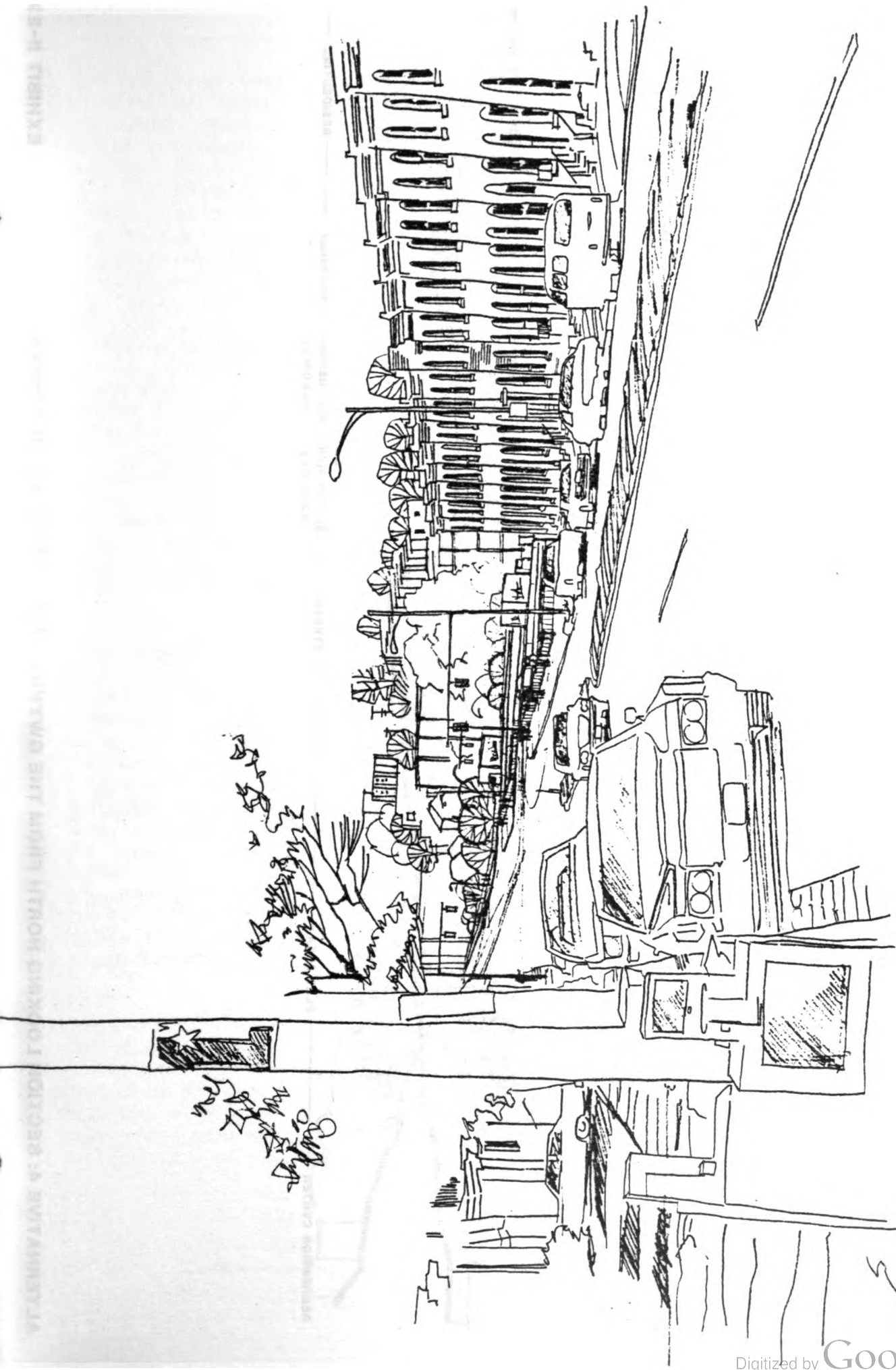
**DATE: JAN. 83**





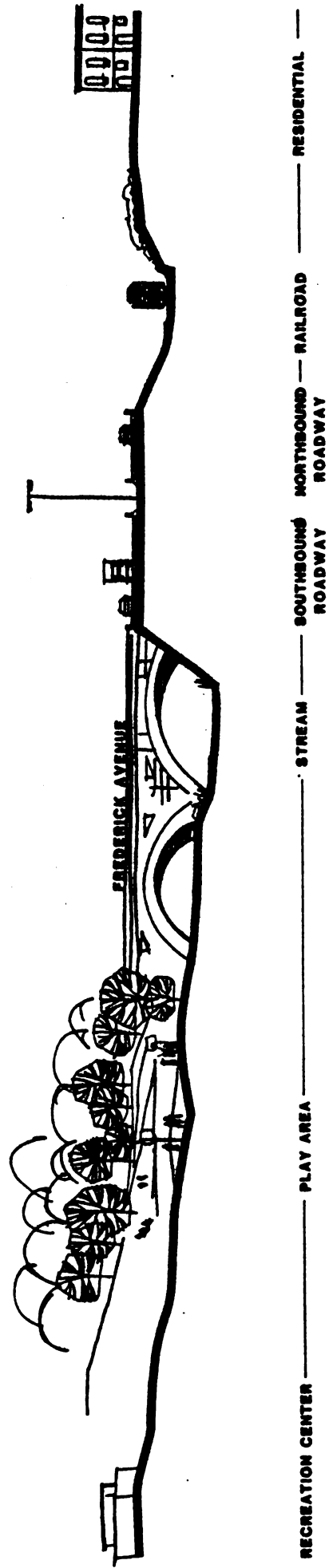


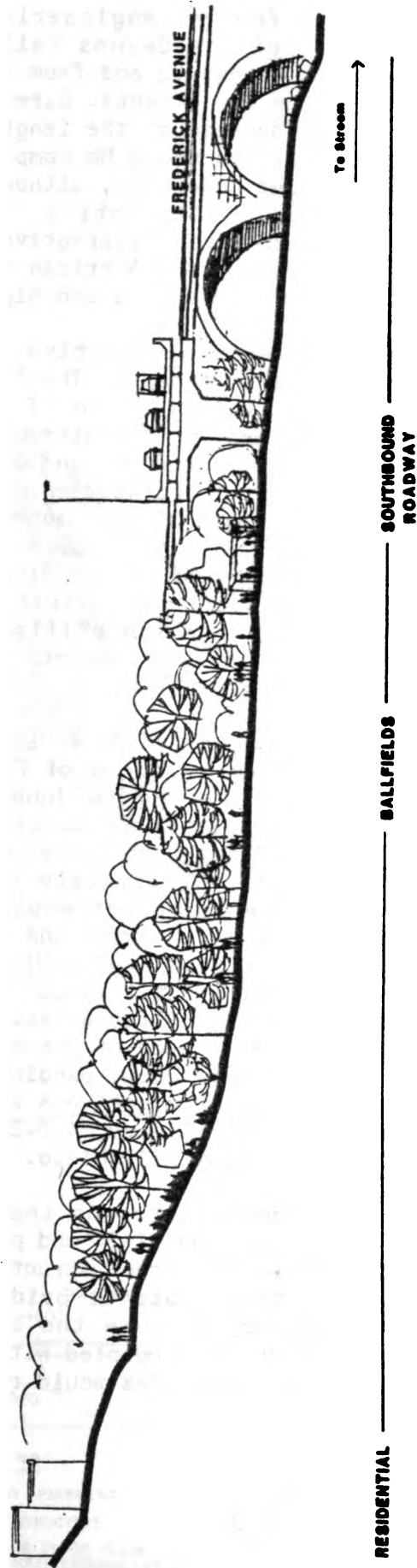




ALTERNATIVE 4: LOOKING WEST ON WILKENS AVENUE







**ALTERNATIVE 4: SECTION LOOKING NORTH FROM WILKENS AVENUE**

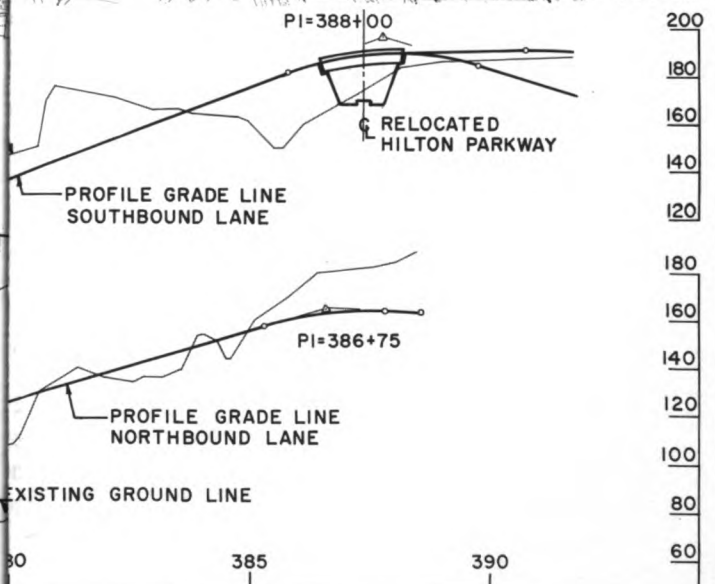
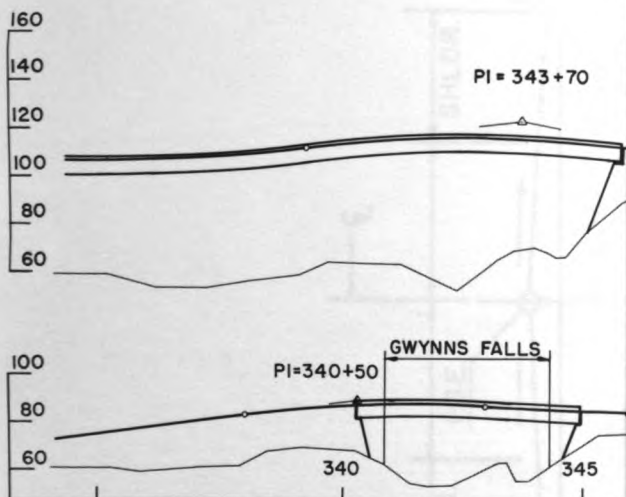
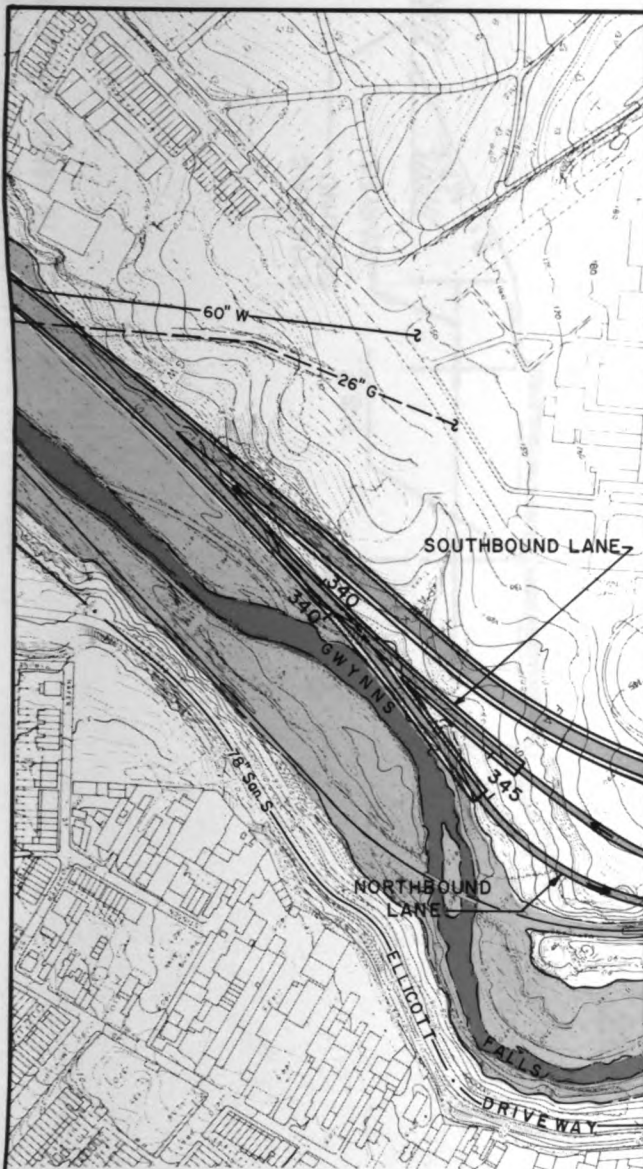
studied, three were selected for further engineering and environmental analysis, one each east and west of the Gwynns Falls. Each alternative would tie-in to Hilton Parkway with access to and from Edmondson Avenue via the existing interchange between the two streets. Direct connection is not being proposed to Edmondson Avenue because of the length and cost required to provide this access. The alternatives would be compatible with the four mainline alternatives for the proposed connector, although ramp connections and locations would differ with each alternative. The mainline roadway portions of the Hilton Parkway Connector Alternatives were developed to meet a 40 mph design speed as defined by the American Association of State Highway and Transportation Officials' (AASHTO) urban highway design policy.

It should be noted that each alternative shown for making a connection to Hilton Parkway has two components. The first, relates to the alignment within the Gwynns Falls Valley north of the Amtrak bridge. Alternative A places the roadway east of the stream, along the existing alignment of Ellicott Driveway. Alternatives B and C place the connector west of the Gwynns Falls, adjacent to the Western Maryland Railway. The second component relates to the alignment of the connector in the vicinity of Daisy Hill Recreation Center. Each alternative has a significantly different alignment in this area. The different alignments in these two areas are interchangeable; features of both Alternatives A and C could be combined, resulting in a connector which utilizes Ellicott Driveway (similar to that shown in Alternative A) and connects to Hilton Parkway in a manner similar to that shown in Alternative C.

Alternative A as shown on Exhibit II-24 would exit the northbound roadway onto existing Ellicott Driveway north of Frederick Avenue and cross beneath the Conrail/Amtrak Corridor and continue northerly utilizing the existing Ellicott Driveway alignment. Ellicott Driveway, presently closed to traffic, would be reconstructed to a curbed two-lane, two-way, 24-foot roadway section to a point approximately 1,900 feet north of Baltimore Street at which point the alignment would curve to the west, cross the Gwynns Falls on a new structure, skirt the northern boundary of the Genstar Quarry and connect to Hilton Street/Hilton Parkway with a T-type intersection. Please refer to Exhibit II-25 for further detail of the proposed typical cross section of this alternative. Because the manner in which Alternative A would connect to each of the mainline alternatives differs, construction costs would also vary, ranging from \$9,777,201 to \$26,211,452 as shown in Table II-2. Alternative A would require 3.4-4.7 acres of right-of-way from Gwynns Falls Park, 1.0-2.3 acres from Southwestern High School and 3.0 acres of Daisy Hill Field.

Alternative B would be constructed on the western side of the Gwynns Falls as shown on Exhibits II-26 and II-27 and pass beneath both the existing Conrail/Amtrak and Baltimore Street structures over the Gwynns Falls. Reconstruction of the Baltimore Street Bridge would be included in this alternative and is necessary because the archs of this and the Conrail/Amtrak structure do not align. This coupled with the skew angle the alignment would take under the two structures would result in a situation

NOTE HORIZONTAL AND VERTICAL ALIGNMENTS  
ARE SUBJECT TO DETAIL REFINEMENT  
DURING FINAL DESIGN.



# LEGEND

- ROADWAY PAVEMENT
- BRIDGE STRUCTURE
- 100-YEAR FLOOD PLAIN
- APPROXIMATE EXISTING LIMITS

## AND PROFILE ALTERNATIVE B

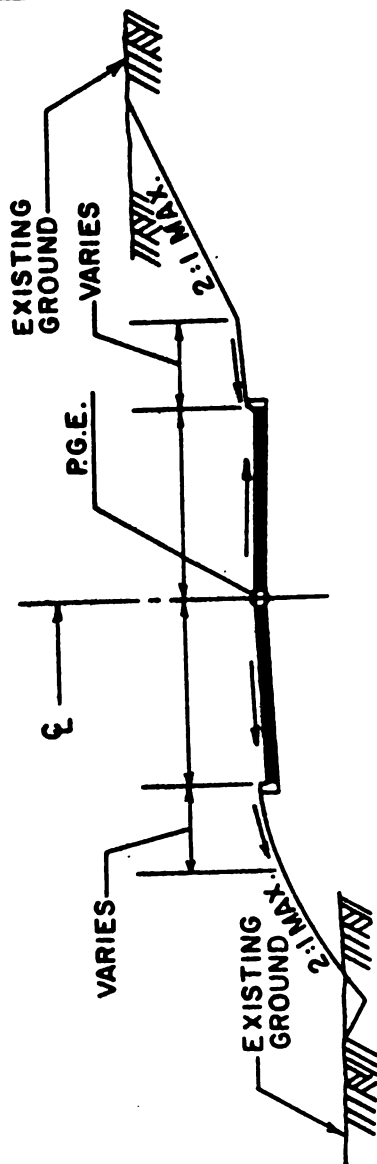
PARKWAY CONNECTOR  
S AND SOUTH OF DAISY HILL FIELD

EXHIBIT  
II-26

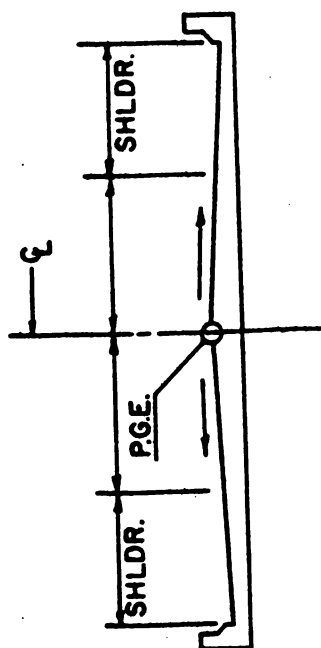
DATE JAN. 83



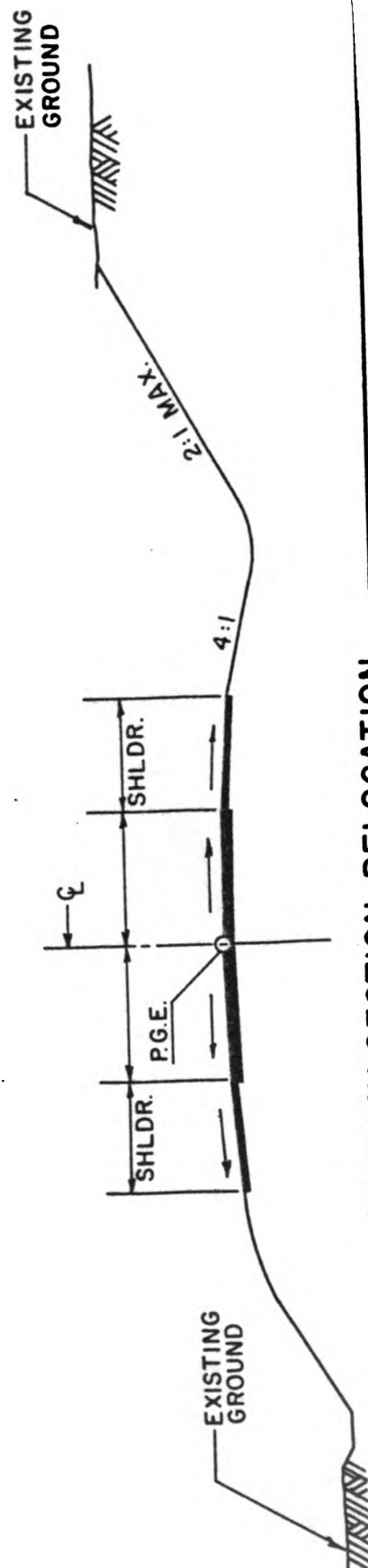
NOTE: THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.



ROADWAY SECTION-2 LANES/2 WAY  
USING EXISTING ELLICOTT DRIVEWAY



STRUCTURE SECTION-2 LANES/2 WAY

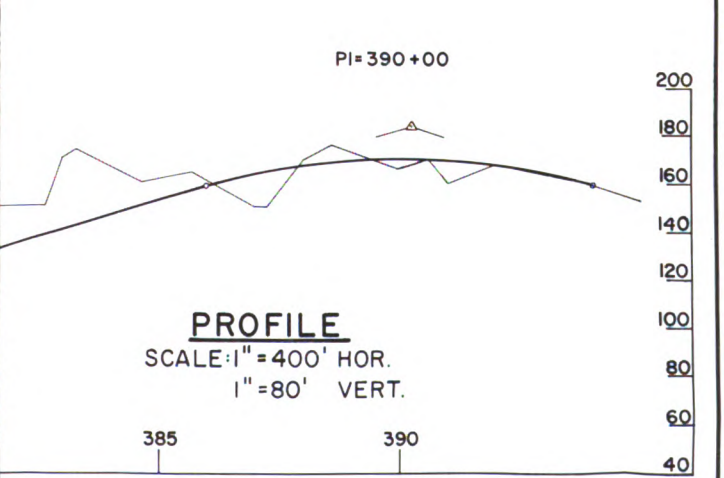
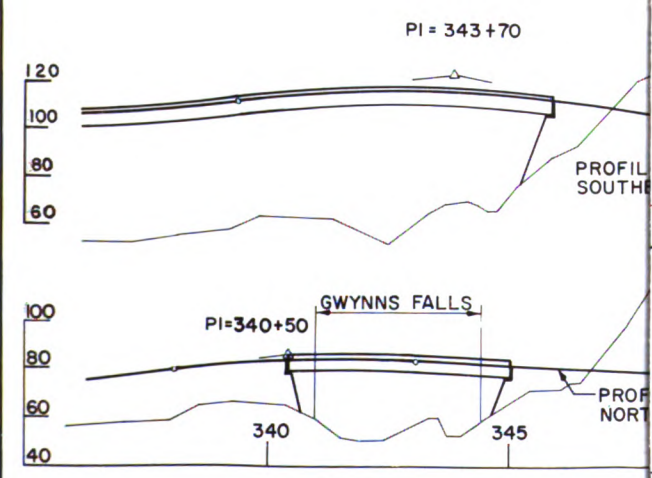
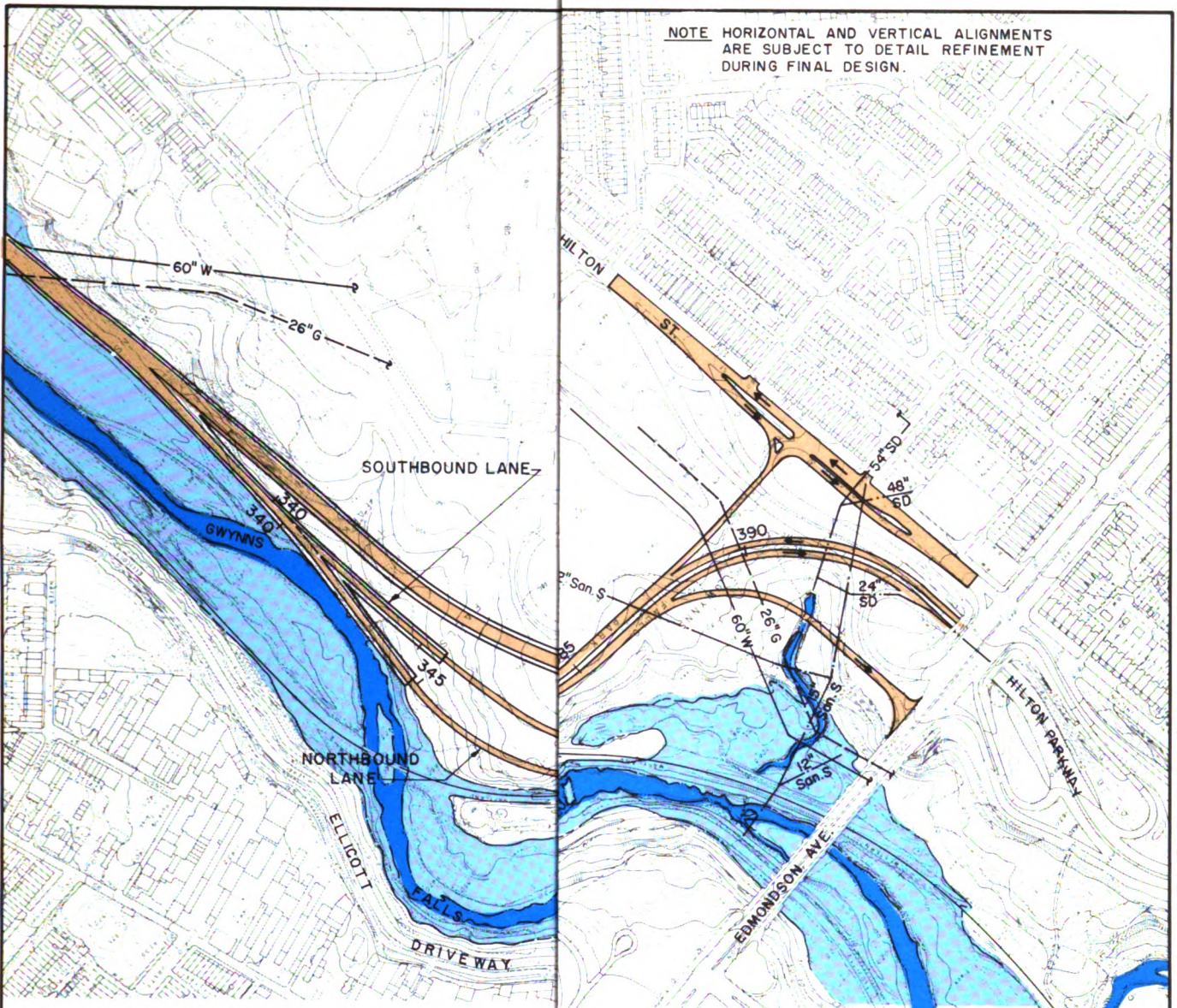


ROADWAY SECTION-RELOCATION





NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



**PROFILE**  
 SCALE: 1" = 400' HOR.  
 1" = 80' VERT.

- LEGEND**
- ROADWAY PAVEMENT
  - BRIDGE STRUCTURE
  - 100 - YEAR FLOOD PLAIN
  - APPROXIMATE EXISTING LIMITS

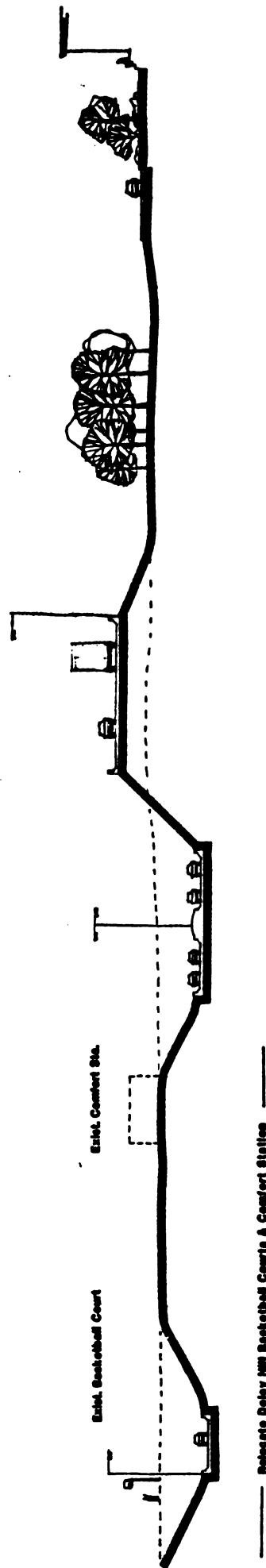
# AND PROFILE ALTERNATIVE C

PARKWAY CONNECTOR  
 S AND NORTH OF DAISY HILL FIELD

**EXHIBIT  
 II - 28**

DATE: JAN. 83





NORTHBOUND HILTON PARKWAY CONNECTOR ————— NORTHBOUND & SOUTHBOUND — SOUTHBOUND HILTON ————— HILTON STREET  
 RELOCATED HILTON PARKWAY PARKWAY CONNECTOR

requiring at a minimum, replacement of one existing arch span with a simple span. It is estimated that the cost of this together with potential construction problems due to the age of the structure could result in construction costs greater than those for a complete reconstruction of the Baltimore Street Bridge, therefore the construction cost reflects a complete reconstruction.

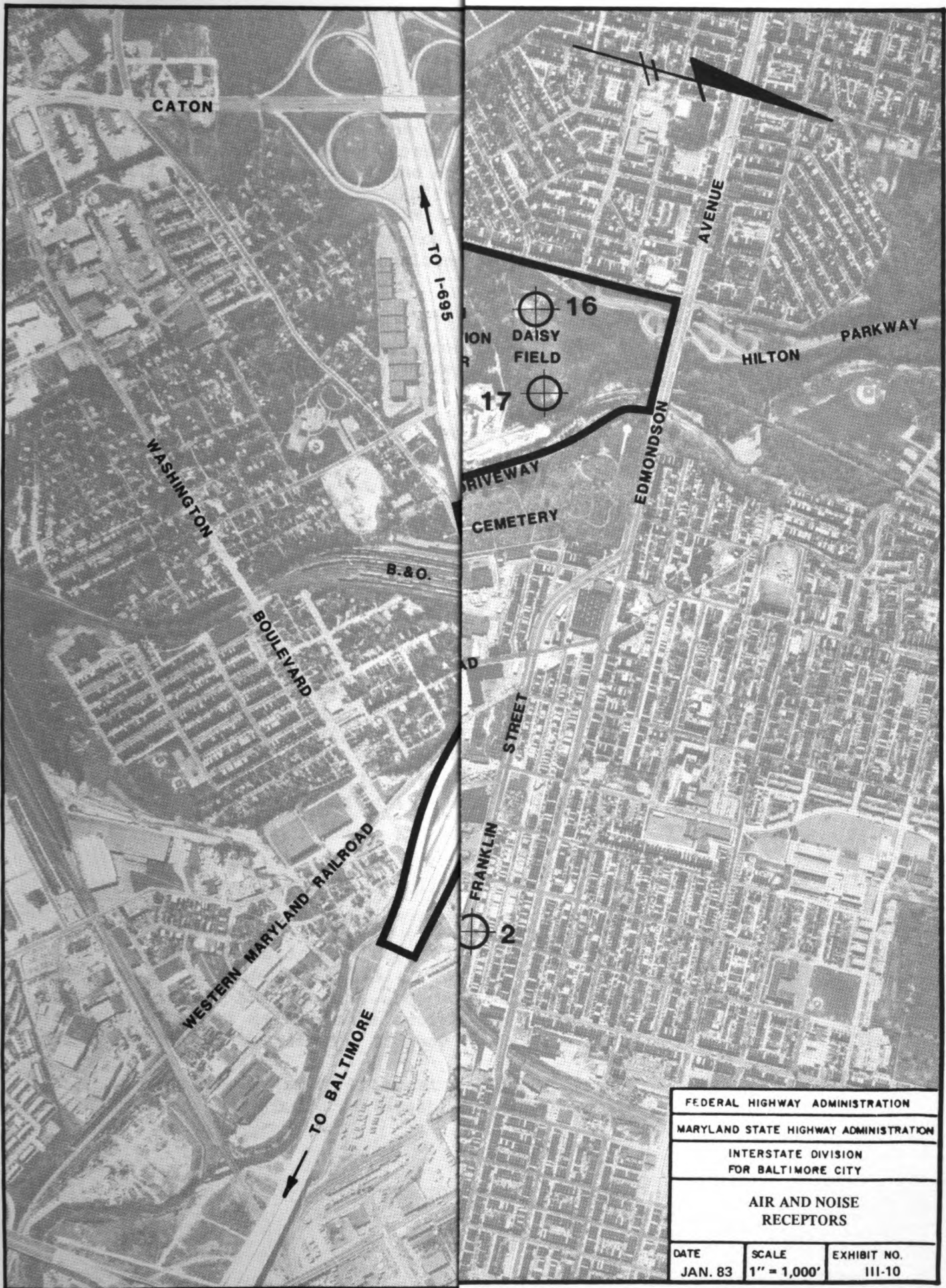
Once past Baltimore Street, the roadway would proceed northerly, west of the Western Maryland Railroad and on the Genstar Quarry property. Approximately 1,200 feet north of Baltimore Street the alignment would curve to the west with the roadway separating into two one-lane ramps which would terminate at an interchange with Hilton Parkway. The portion of the existing Hilton Parkway/Edmondson Avenue interchange south of Edmondson Avenue would be reconstructed to provide present AASHTO roadway curvature design criteria. Alternative B would consist of two lanes with shoulders. An estimated 1.0 to 2.2 acres of right-of-way from Gwynns Falls Park, 1.5-3.8 acres from Southwestern High School, and 7.5 acres from Daisy Hill Field, including the comfort station, and basketball court, would be required for the construction of Alternative B. Total estimated construction cost for Alternative B ranges from \$17,827,973 to \$30,892,015, depending on which mainline alternative it would connect to. Cost comparisons are shown in Table II-2.

The third alternative studied in detail, Alternative C, as shown by Exhibit II-28, is a variation of Alternative B, differing with respect to the horizontal alignment as it crosses Daisy Hill Field. Alternative C would avoid direct impact upon the basketball court and comfort station that would occur with Alternative B. This aspect of the alignment would also be adaptable to Alternative A.

The alignment would be almost totally out of the developed portion of Daisy Hill Field, located north of this area. Five to 6.3 acres of land from Gwynns Falls Park, 0.5 acre from Daisy Hill Field and 1.5-3.8 acres from Southwestern High School would be acquired with Alternative C. All other aspects of this alternative south of the quarry are identical to Alternative B. The estimated cost to construct Alternative C, as with the other Hilton/Edmondson Connector alternatives would vary, depending upon which mainline alternative it would join. These costs range from a low of \$14,597,925, with Alternative 4 under the Conrail/Amtrak Corridor, to a high of \$27,661,967 with Alternative 1 utilizing the profile option over both the Conrail/Amtrak Corridor and Frederick Avenue.

The two types of interchanges with Hilton Parkway shown, a simple T-type connection and a directional interchange, represent the wide range of possibilities that exist at the northern terminus. Variations of these two extremes and/or combinations of the two concepts may also be feasible and will be studied in detail during the project design phase. These two interchange concepts, for the purposes of this study, have been included because they also represent the full range of associated environmental impacts.





FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AIR AND NOISE RECEPTORS		
DATE	SCALE	EXHIBIT NO.
JAN. 83	1" = 1,000'	III-10



## TSM ALTERNATIVE

A TSM (Transportation System Management) Alternative can be defined as including those types of activities designed to maximize the utilization and efficiency of the existing traffic system without substantial new roadway construction. An investigation of the study area was made in an attempt to identify a TSM Alternative which could accomplish the objective of the study to provide the needed connector between I-170 and I-95. An alternative was not considered feasible for the following reasons:

- . All potential alternative routes would have to pass through existing neighborhoods, encouraging through traffic in established residential areas, resulting in increased congestion and associated vehicular pollutants.

- . Would require a reduction in available on-street parking which is essential in area neighborhoods.

## "NO-BUILD" ALTERNATIVE

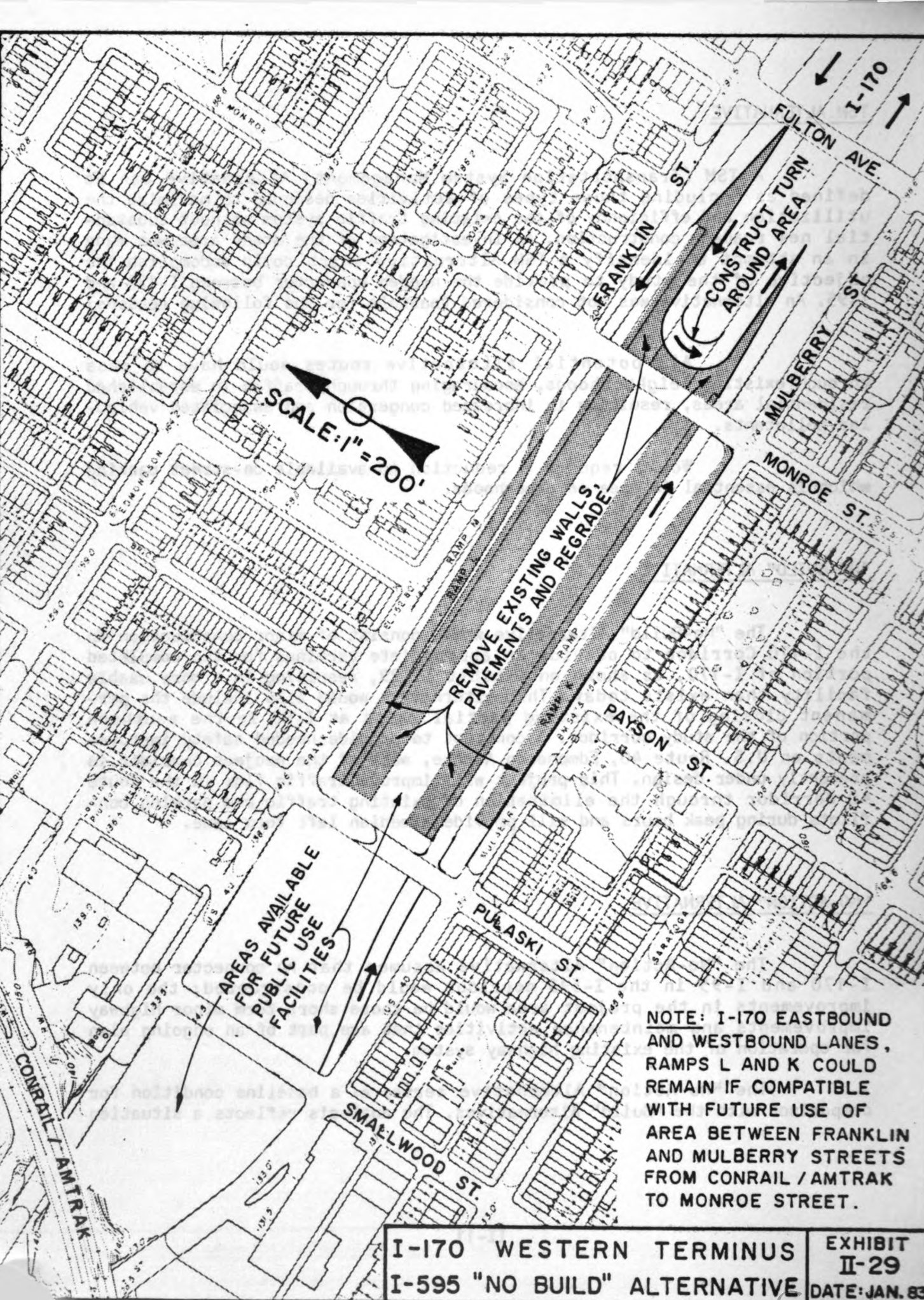
The "No-Build" Alternative would consist of minor construction in the I-170 Corridor to provide an appropriate terminus for the completed portion of I-170, as shown on Exhibit II-29, resulting in a more usable facility than exists today. This alternative would also include the permanent closing of the existing partial ramps at I-95 in the southern portion of the study corridor. A contract to provide needed safety improvements on U.S. Route 40, Edmondson Avenue, west of the project corridor is presently under design. This project will improve traffic flow in the Route 40 Corridor through the elimination of existing traffic and parking conflicts during peak hours and will provide a median left turn lane.

## "NO-ACTION" ALTERNATIVE

The "No-Action" Alternative assumes that no connector between I-170 and I-95 in the I-595 corridor would be constructed; the only improvements in the project area would be those short-term minor highway improvements and maintenance activities that are part of an ongoing plan for operation of the existing highway system.

The "No-Action" Alternative serves as a baseline condition for comparison with the "Build" Alternatives. The analysis reflects a situation





NOTE: I-170 EASTBOUND AND WESTBOUND LANES, RAMPS L AND K COULD REMAIN IF COMPATIBLE WITH FUTURE USE OF AREA BETWEEN FRANKLIN AND MULBERRY STREETS FROM CONRAIL / AMTRAK TO MONROE STREET.

where traffic volumes for future years are loaded on the existing roadway network. This alternative is evaluated for the existing plus currently committed highway network only.

There are several components of this alternative which provide slight increases in capacity within the study area. Examples include routine maintenance, roadway widening, and transit service and routing improvements. In Baltimore's Development Program, the Six-Year Construction Program identifies proposed reconstruction and rehabilitation improvements for several roadways and bridges in the study area.

Franklin Street and Mulberry Street are to be rehabilitated in 1987, from Pulaski Street to Wheeler Avenue, to correct surface deterioration. The reconstruction of Franklinton Road between Poplar Grove Street and Ellicott Driveway, a distance of ±1960 feet, is scheduled for 1984.

Improvements to three highway bridges over railroads along the project corridor are also included in the Six-Year Program. The Edmondson Avenue Bridge over the Conrail/Amtrak Railroad is to be rehabilitated to correct deteriorated sections of deck surface and superstructure in 1983 and 1984. Another bridge over the Conrail/Amtrak Railroad, at Hilton Street, is scheduled to be rehabilitated in 1983 and 1984, also to correct deteriorated sections of the deck's surface and superstructure. The deck and superstructure of the Wilkens Avenue Bridge are to be reconstructed in 1983.

However, this alternative would not fulfill the project's intended role in the planned transportation system for the region. Regional access to West Baltimore and the CBD from western Baltimore County and Howard County would continue to be impeded, as would improvements in intra-city traffic movements. Presently overloaded roadway conditions in West Baltimore would perpetuate and worsen, continuing to funnel non-local traffic, particularly commercial vehicles, through area neighborhoods, creating undesirable air quality and community noise impacts.

The net result of this alternative is that construction-related and short-term operational impacts associated with the proposed action would not occur.

#### ENGINEERING ITEMS REQUIRING FURTHER STUDY

The dimensions shown are for the purpose of determining cost estimates and environmental impacts only, and are subject to change during the final design phase.

. Left hand on-ramp to I-595 Southbound shown on Alternative Exhibits II-26 (Connector B) and II-28 (Connector C). (The ramp is schematic only.)

. Hydraulic analysis at Frederick Avenue (under profile option).

. Interchange with Frederick and Wikens Avenues, which may result in modifications to Hilton/Edmondson Connector.

. Design modifications at the Pulaski Street intersection.

. Interchange of Hilton Parkway/Edmondson Avenue Connector with Hilton Parkway.

. Cost estimates. (The current estimates were prepared by utilizing unit costs experienced on other projects and approximate quantities.)

All of the above engineering items require further study and are subject to revision during the project design phase.



## **Section III :**

---

## **Affected Environment**





### SECTION III: AFFECTED ENVIRONMENT

#### SOCIOECONOMIC CONDITIONS

The project corridor is situated within portions of three Regional Planning Districts of Baltimore City. Regional Planning Districts (RPD's) comprise several census tracts as delineated and grouped by the Regional Planning Council (RPC) according to their socioeconomic similarities. Due to the significant amount of analysis of these grouped census tracts that has been performed by the RPC, the RPD's form an excellent source of both social and economic data.

Most of the project corridor lies directly on the boundary between RPD's 115 and 116, while the southernmost end near I-95 falls within RPD 122 (see Exhibit III-1). The following discussions will focus on these three RPD's and will present a variety of historical and current data in order to assess the corridor's socioeconomic context.

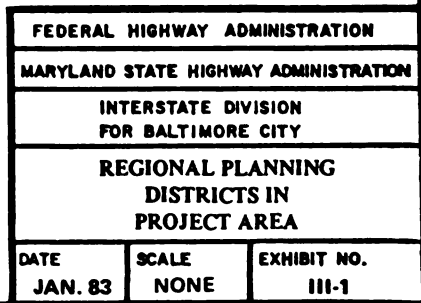
Census data included here were obtained from the 1980 Census of Population and Housing: Block Statistics-Baltimore, Md. SMSA prepared by the Bureau of the Census of the U.S. Department of Commerce. Employment and economic figures were taken from the RPC publication Economic Indicators: Baltimore City-1981-82.

#### Population Growth and Density

RPD 115 consists of the Irvington area and surrounding smaller neighborhoods west of the Gwynns Falls. The 1980 Census lists the total population of the tracts in this district at 23,935, which represents an 18.7 percent decrease from the 1970 Census. This decrease is somewhat higher than the 13.1 percent population decrease for all of Baltimore City during the same 10-year period (see Table III-1).

As only 473 (34.3 percent) of the 1,380 acres in RPD 115 are used for residential purposes, population density is high (50.6 people/acre). There is no potential for expansion of residential areas, as there are only five acres of undeveloped land in the District, all of which are zoned for industrial use.

RPD 116 is known as the Rosemont District and is slightly larger than RPD 115 (1,402 acres). Its 1980 population of 41,526 people (down 15.6 percent from 1970) occupy 799 acres of residential land, yielding a population density of 52 people/acre. This is the sixth most densely populated RPD in Baltimore City. There is currently a small amount of land (23 acres) available for residential expansion in this district.





**Table III-1**  
**Population Trends and Minority Group Distribution**

<u>RPD</u>	<u>1970 Total Population</u>	<u>1980 Total Population</u>	<u>Minority Group Distribution*</u>		
			<u>Black</u>	<u>Asian</u>	<u>Spanish</u>
115	29,450	23,935	19,954 (83.4%)	98 (0.4%)	143 (0.6%)
116	49,200	41,526	36,878 (88.9%)	108 (0.3%)	221 (0.6%)
122	19,650	16,825	2,059 (12.2%)	133 (0.8%)	149 (0.9%)
Baltimore City	905,800	786,775	431,151 (54.8%)	6,933 (0.8%)	7,641 (1.0%)

---

\* Percentage of 1980 total population shown in parentheses below each number.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Population and Housing Census, 1980, Volume 1. Block Statistics for the Baltimore SMSA. Report PHC80-1.

RPD 122 (Morrell Park) has the smallest and least dense population of any of the three RPD's in which the I-595 Corridor is situated. With a 1980 population of 16,825 people residing on 709 acres of land, its density of 23.7 people/acre is less than half of either RPD 115 or 116. In addition, it has 114 acres of undeveloped land available for residential use.

Employment and household income statistics for the study corridor RPD's are presented in Tables III-2 and III-3.

### Housing

RPD 115 has a 1980 total of 6,932 occupied housing units, 4,626 (66.7 percent) of which are "owner-occupied" housing, the remainder being "renter-occupied" (see Table III-4). The mean value of these owner-occupied units is \$24,800 (1980 dollars). It also has a total of 343 unoccupied units (4.7 percent of the total number of units).

RPD 116 clearly shows the effects of a densely populated, low-income area on owner occupancy rates and mean home values. Of the total of 12,709 occupied units in this RPD, barely half (6,511) are owner-occupied. In addition, the mean value of these homes is \$18,600, one of the lowest in the area.

On the other hand, RPD 122 reflects exactly the opposite trend in both categories. Almost 70 percent of its housing units (4,253 out of 6,091) are owner-occupied, while the mean house value is \$31,300, some 68 percent higher than the adjacent RPD 116.

### Age Distribution

RPD 115 has a 1980 total of 1,904 people over the age of 65 years. This total represents 8.0 percent of the population of RPD 115. Approximately 11.8 percent (4,911 people) in RPD 116 are over the age of 65 years. RPD 112 has the largest percentage of people over the age of 65 years in the study corridor, 13.9 percent (2,336 people).

Each of the three RPD's in which the project corridor lies has its own "signature" as to its overall socioeconomic context:

. RPD 115 has densely populated, predominantly Black neighborhoods, but is only around one-third (34 percent) residential with over half of its developed acreage currently zoned for open space and semi-public uses. Its available jobs have remained relatively steady for the past five years, while the residents earn slightly above-average household incomes and occupy below-average value dwelling units.

Table III-2

Employment in Study Area Regional Planning Districts  
(including military and multiple job-handling  
by full- and part-time employees)

<u>RPD</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
115	4,624	4,000	4,006	4,058	4,080	4,072
116	10,404	9,635	9,584	9,640	9,691	9,672
117	11,752	11,303	11,746	12,335	12,401	12,376
Baltimore City	459,914	446,908	450,345	459,050	461,491	460,581

---

SOURCE: Master Establishment File, prepared by the Regional Planning Council on the basis of data from the Maryland Department of Human Resources. December 1981.

Table III-3

Household Income in the Study Area Regional Planning Districts  
(Households as of April 1980)

RPD	Household Total <sup>a</sup>	Annual Household Income <sup>b</sup>							Median Income
		Under \$5,000	\$5,000- \$9,999	\$10,000- \$14,999	\$15,000- \$19,999	\$20,000- \$25,000	\$25,000 and Over		
115	6,900	856 (12.4%)	1,245 (18.0%)	1,450 (21.0%)	1,488 (21.6%)	1,186 (17.2%)	675 (9.8%)	14,650	
116	12,700	2,347 (18.5%)	2,811 (22.1%)	2,209 (17.4%)	1,963 (15.5%)	1,797 (14.1%)	1,573 (12.4%)	12,700	
122	6,100	669 (11.0%)	884 (14.5%)	1,357 (22.2%)	1,525 (25.0%)	1,272 (20.9%)	393 (6.4%)	15,460	
Baltimore City	281,400	56,500 (20.1%)	50,000 (17.8%)	40,200 (14.3%)	42,400 (15.1%)	38,000 (13.5%)	54,300 (19.3%)	14,250	

<sup>a</sup> Rounded from actual figures.<sup>b</sup> Percentage of household total indicated in parentheses below each number.

**Table III-4**  
**Housing in the Study Area Regional Planning Districts**

<u>RPD</u>	<u>Occupied Housing Units</u>	<u>Owner- Occupied</u>	<u>Renter- Occupied</u>	<u>Mean Value*</u>
115	6,932	4,626 (66.7%)	2,306 (33.3%)	\$24,800
116	12,709	6,511 (51.2%)	6,198 (48.8%)	\$18,600
122	6,091	4,253 (69.8%)	1,838 (30.2%)	\$31,300

---

\* 1980 dollars.

SOURCE: 1980 Block Statistics.

. RPD 116 is also a densely populated and predominantly Black district with 57 percent of its land under residential development. Its economic structure is somewhat depressed, as available jobs, median household income, and home values are all well below City-wide averages. Both population and employment in this area have declined significantly in the past decade.

. RPD 122 has one of the lowest population densities in Baltimore City. It is composed of predominantly White neighborhoods where both median household income and home values are above average. This district also has the highest employment and lowest population decrease of the three RPD's studied.

The inherent differences of the three districts, particularly RPD 122, do not lend themselves to a consolidated evaluation of the social and economic structure of the entire project area and must be considered individually during impact assessment.

#### EXISTING LAND USE

Land use varies throughout the project corridor from industrial at the southern end to park and open space at the northern end. Although the corridor lies within a highly developed industrial/residential area of Baltimore City, the Gwynns Falls Stream Valley and adjacent areas also includes significant recreation and institutional use. The mainline of the Western Maryland Railroad runs parallel to the Gwynns Falls through the project corridor. Land uses and outstanding features in the corridor are identified on Exhibits III-2 through III-8.

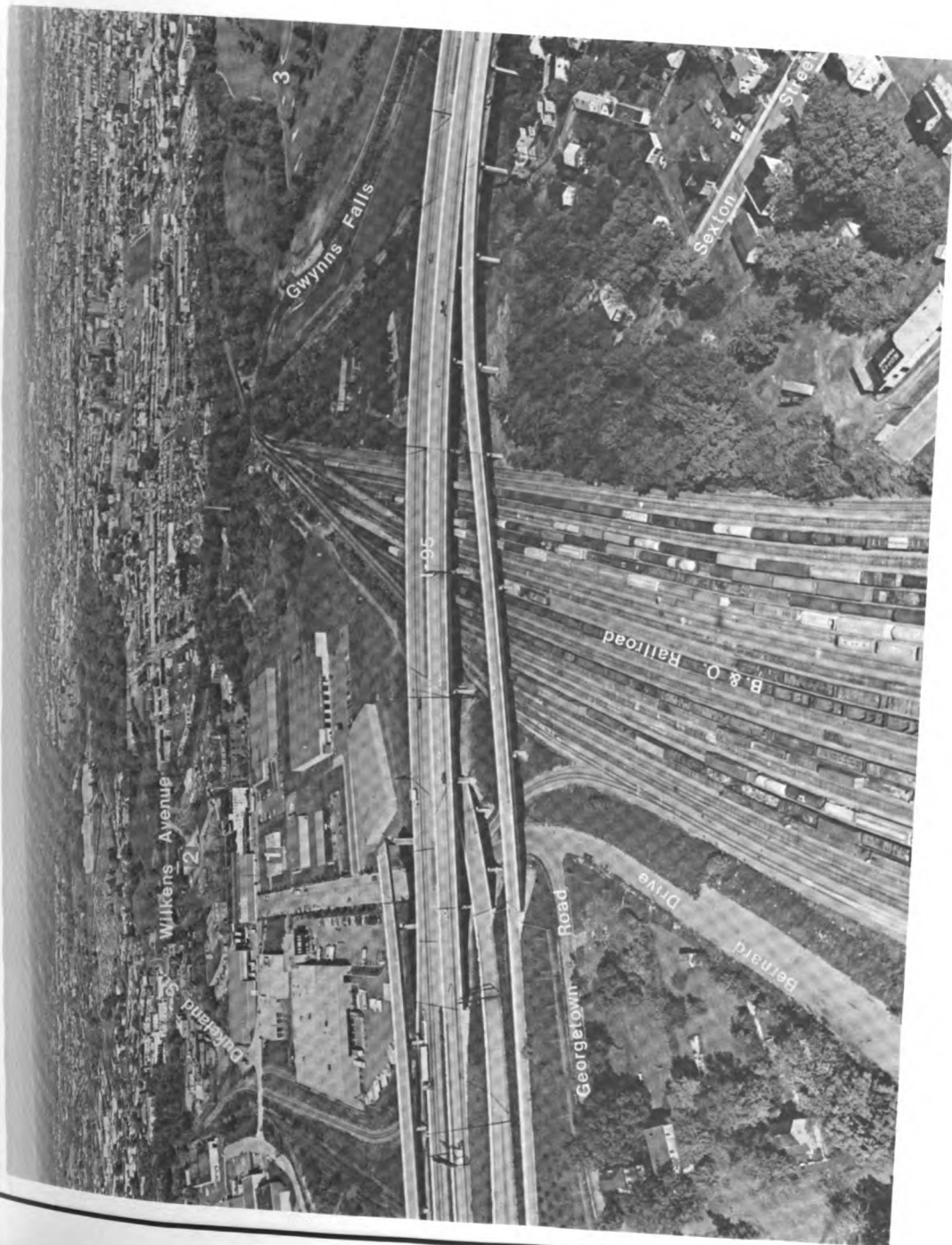
The proposed interchange with I-95 is surrounded by industrial development west of the B&O tracks. East of the B&O and south of I-95 development is primarily single family residential, while Carroll Park is located north of I-95 and east of the project corridor.

Immediately south of Wilkens Avenue the primary land use is industrial, with rowhouses lining Wilkens Avenue and Brunswick Street. North of Wilkens Avenue the study corridor becomes more residential in nature, with only scattered occurrences of industrial uses. The Gwynns Falls Recreation Center is located between Wilkens Avenue and Frederick Avenue along the west bank of the stream.

Proceeding north along the valley, Mount Olivet Cemetery and Southwestern High School are located on the plateau west of the stream, while mixed residential (rowhouses) and industrial development are predominant east of the stream. The Conrail/Amtrak line and Baltimore Street cross the study corridor immediately north of the high school.

# KEY

1. CROSSROADS INDUSTRIAL PARK
2. WILKENS AVENUE INDUSTRIAL PARK
3. CARROLL PARK



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - I-95 INTERCHANGE AREA		
DATE JAN. 83	SCALE NONE	EXHIBIT NO. III-2







# KEY

1. ATLANTIC VAN LINES
2. GABE CAMHY
3. HESS TRUCK REPAIR
4. PEERLESS CHEMICAL COMPANY
5. COUNTRY BAKER PIES
6. HENRY BROTHERS CONSTRUCTION COMPANY
7. HARRISON BOLT & NUT COMPANY
8. TRUCK WASHING OF AMERICA, INC.
9. RYDER TRUCK RENTAL
10. Gwynns Falls RECREATION CENTER
11. MOUNT OLIVET CEMETERY
12. SOUTHWESTERN HIGH SCHOOL
13. SOUTHWESTERN DISTRICT POLICE STATION

FEDERAL HIGHWAY ADMINISTRATION

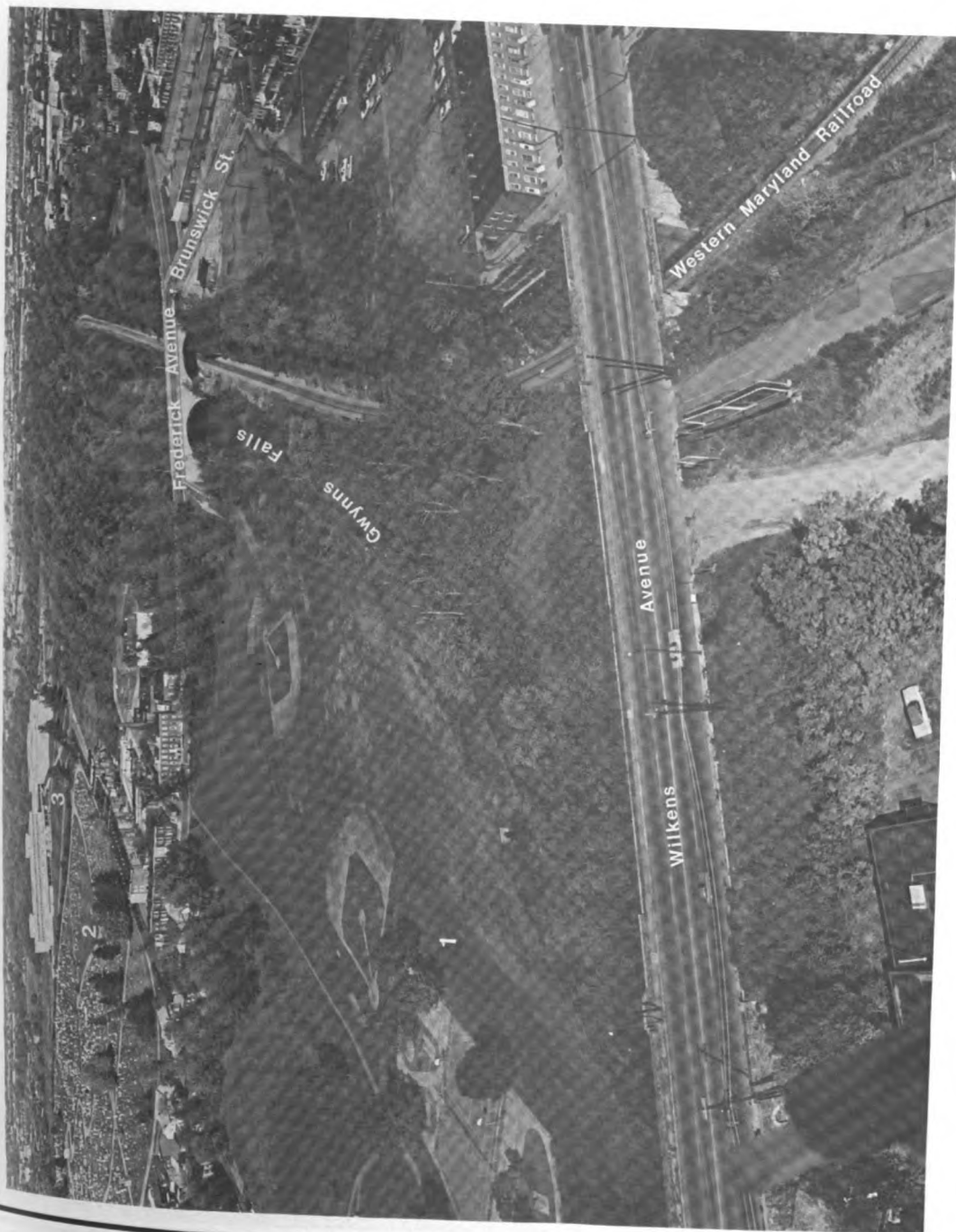
MARYLAND STATE HIGHWAY ADMINISTRATION

INTERSTATE DIVISION  
FOR BALTIMORE CITY

AERIAL VIEW - SOUTH  
OF WILKENS AVENUE

DATE	SCALE	EXHIBIT NO.
JAN. 83	NONE	III-3





# KEY

1. GWYNNS FALLS RECREATION CENTER
2. MOUNT OLIVET CEMETERY
3. SOUTHWESTERN HIGH SCHOOL

FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - WILKENS AVENUE TO FREDERICK AVENUE		
DATE JAN. 83	SCALE NONE	EXHIBIT NO. III-4



# KEY

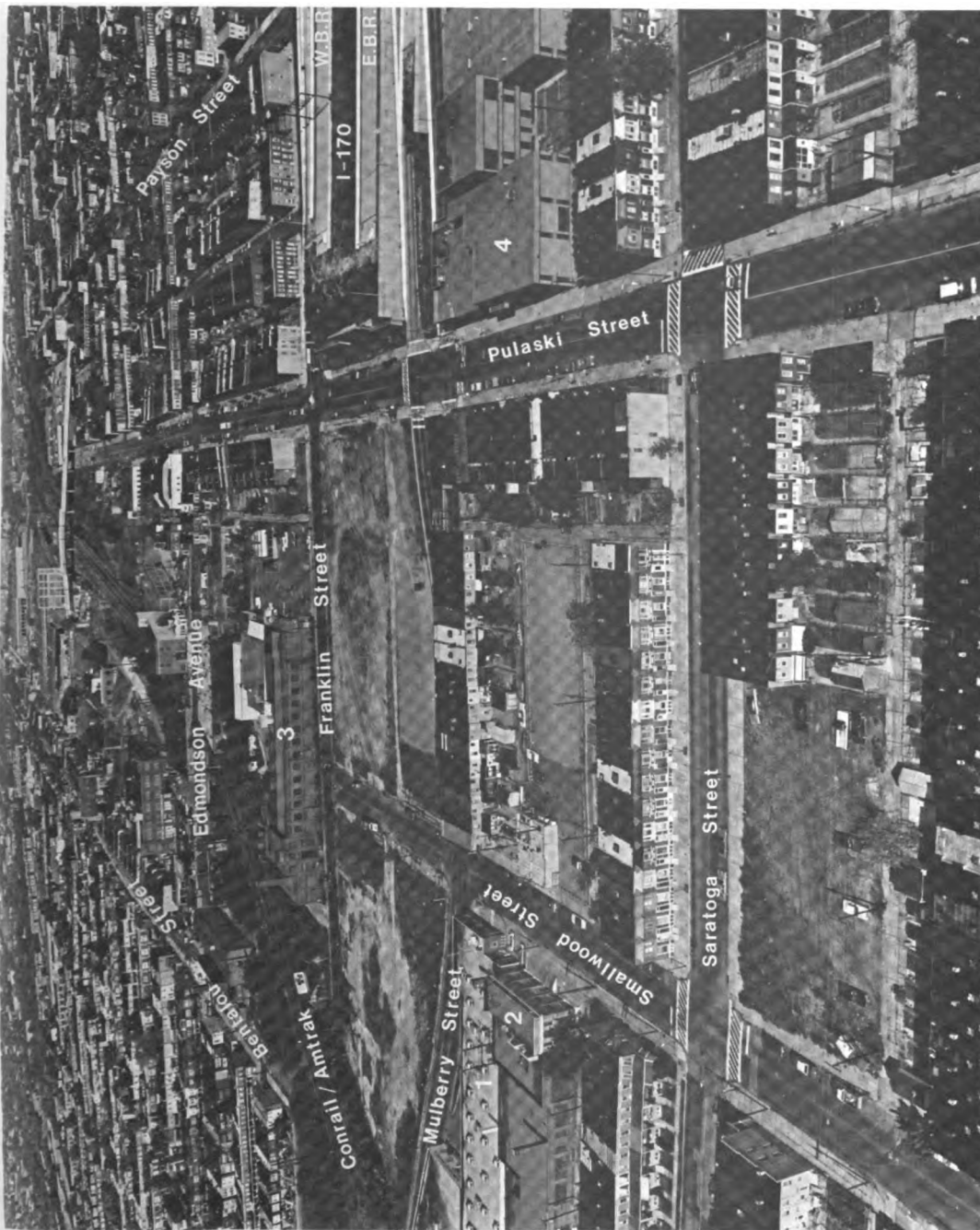
1. SOUTHWESTERN HIGH SCHOOL TRACK
2. HILTON RECREATION CENTER
3. GENSTAR QUARRY
4. WESTERN CEMETERY
5. DEPARTMENT OF HOUSING COMMUNITY DEVELOPMENT RAT ERADICATION PROGRAM



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - SOUTH OF CONRAIL/AMTRAK RAILROAD		
DATE JAN. 83	SCALE NONE	EXHIBIT NO. III-5







# KEY

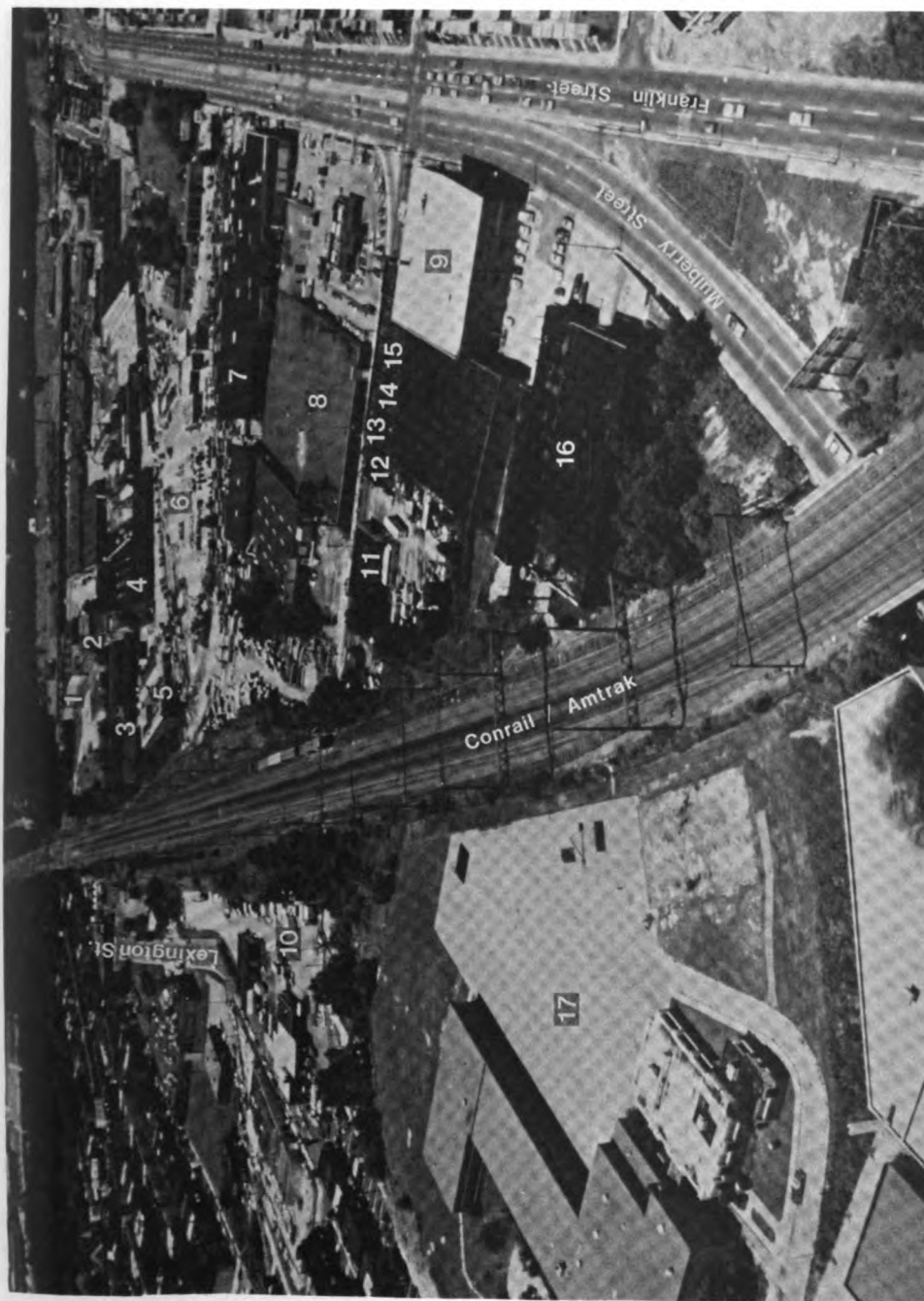
1. THE BALTIMORE LUGGAGE COMPANY
2. TROPIC ADE VIKING JUICES
3. ICE HOUSE
4. LOCKERMAN BUNDY ELEMENTARY SCHOOL

FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - BETWEEN CONRAIL/AMTRAK RAILROAD & FRANKLIN/MULBERRY CORRIDOR		
DATE	SCALE	EXHIBIT NO.
JAN. 83	NONE	III-6



# KEY

1. THOMAS BUCCHERI & SONS, INC.
2. MACY'S & TURNBAUGH, INC.
3. DEPARTMENT OF HOUSING COMMUNITY DEVELOPMENT RAT ERADICATION PROGRAM
4. HAVEN MANUFACTURING COMPANY
5. ANIMAL SHELTER
6. CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS
7. MARYLAND LUMBER COMPANY
8. ACME PAD COMPANY
9. ANDERSON & IRELAND
10. TRI-STATE VEHICLE LEASING
11. CHARTER BUS SERVICE
12. CORNED BEEF HOUSE
13. C&S UPHOLSTERY COMPANY
14. MURPHY & ASHCOM
15. TIME PRINTERS, INC.
16. BALTIMORE COTTON FELT COMPANY
17. BENTALOU RECREATION CENTER

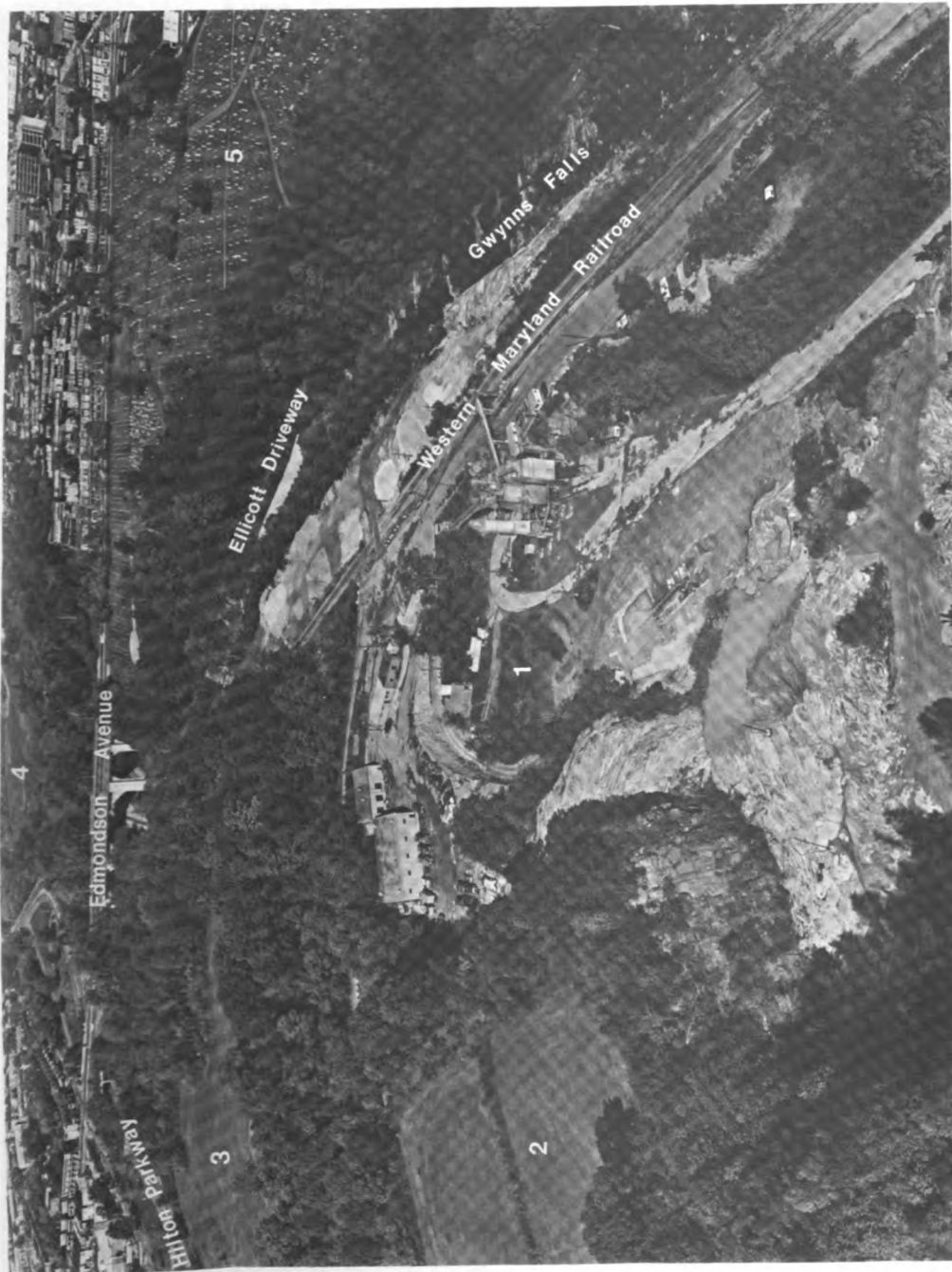


FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - WEST OF I-170 TERMINUS		
DATE JAN. 83	SCALE NONE	EXHIBIT NO. III-7



# KEY

1. GENSTAR QUARRY
2. HILTON RECREATION CENTER
3. DAISY HILL FIELD
4. BLOOMINGDALE OVAL
5. WESTERN CEMETERY



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AERIAL VIEW - HILTON PARKWAY CONNECTOR CORRIDOR		
DATE JAN. 83	SCALE NONE	EXHIBIT NO. III-8

The western portion of the study corridor north of the Conrail/Amtrak line (Hilton Parkway Connector) contains the Hilton Recreation Center and Daisy Hill Field (both are part of Leakin/Gwynns Falls Park) and the Genstar Quarry bordering the Western Maryland Railroad tracks. The Genstar Quarry is not actively mined and is being utilized as a concrete batch plant. East of the stream lies Western Cemetery. Development along Edmondson Avenue is primarily residential.

Branching to the east, the study corridor runs north of and parallel to the Conrail/Amtrak line to tie in with I-170. Land use north of the Conrail/Amtrak line is commercial/industrial and contains a lumber yard, the City Animal Shelter and an ice factory. South of the Conrail/Amtrak line along Baltimore Street is a residential area. Rowhouses line Franklin Street and Mulberry Street with scattered commercial establishments.

In summary, the proposed project lies within a corridor containing open space and recreational areas bordered by a highly developed residential/industrial area of the City.

#### VISUAL AND AESTHETIC RESOURCES

The visual and aesthetic quality of the project corridor varies considerably throughout its length. Substantial areas are largely industrial; buildings and their surrounding environment offer little that is unique or exceptionally attractive. Contrarily, large portions of the corridor, especially where steep slopes border the Gwynns Falls Stream, have remained largely undeveloped. These areas have notable visual quality. Additionally, areas of attractive residential, institutional, or recreational uses fall within the corridor.

The southern portion of the corridor, between I-95 and Wilkens Avenue, is predominantly industrial. Building conditions and types range from poor to average quality. Nevertheless, this area is not devoid of visual and aesthetic quality. The Carroll Park Golf Course and large open land on the west side of the Gwynns Falls near the golf course are quite attractive. The nearby Carrollton Viaduct which spans the Gwynns Falls is also of interest. Finally, despite the often unattractive quality of existing adjacent uses, the Gwynns Falls Stream, which undulates through the area passing rather steep bluffs, is in itself of visual significance.

Between Wilkens Avenue and the Conrail/Amtrak Corridor, the valley ranges from a broad floodplain (most evident at the Gwynns Falls Recreation Center) to steep vegetated slopes in the vicinity of the Southwestern High School. Visual quality in this area is notable and is attributable to several factors. First, large areas of the steep walled valley north of Frederick Avenue have remained in a natural state. The only

significant modification to the valley in this area resulted from the construction of the Western Maryland Railroad in the latter part of the 19th century. Significant vegetation abounds on both sides of the stream. Secondly, the varied topography allows for maximum visibility of the vegetation. In combination, the amount of vegetation and change in elevation stand in marked contrast to surrounding urbanized areas. Third, the undulation of the stream and adjacent valley break this part of the corridor into distinct sub-areas, creating multiple and changing vistas.

Particularly attractive areas worth mentioning in this regard are the course of Ellicott Driveway, the stream near the Western Maryland Railway bridge, and the alignment of the railroad as it crosses the Gwynns Falls, cuts through the hillside west of the stream, and passes adjacent to the stream south of the Conrail/Amtrak bridge.

From the Conrail/Amtrak bridge north to Edmondson Avenue, the stream valley retains a natural and unurbanized quality. The only exception to this is the quarry west of the stream north of Baltimore Street. Only the Conrail/Amtrak, Baltimore Street, and Edmondson Avenue bridges give evidence to the stream valley of the presence of the surrounding city. Above and adjacent to the stream valley itself are relatively broad plateaus occupied by recreation uses on the west and a cemetery on the east. Of particular interest visually is the Daisy Hill Field, which lies between the valley and the generally well-maintained homes along Hilton Street.

Visually dominant throughout the corridor is the Gwynns Falls Stream. While neither pristine in its quality nor unmarred by evidence of urbanization, the visual quality of the stream and its immediate environment is significant.

As is typical of small rivers traversing the Fall Line, the stream varies considerably in both vertical and horizontal planes. Repeatedly, small rapids are followed by slower moving pools. At several points the width of the stream is constricted by exposed rock faces; at other locations the stream flattens and spreads over a broader plain. Relatively long and straight courses are broken by tight and dramatic bends around hills, the most notable of which are located east of the Southwestern High School and north of Wilmarco Avenue.

The industrialized area adjacent to the Conrail/Amtrak Corridor presents little visual significance. Buildings are generally of unnotable architectural quality and storage areas are interspersed throughout.



## EXISTING TRAFFIC FACILITIES

West Baltimore is a large residential section of Baltimore interspersed with pockets of industry and neighborhood shopping areas. Interstate 95, which skirts the southern edge, and Interstate 83, which forms the northeastern boundary, provide convenient access to these fringe areas of West Baltimore. Interstate 170 provides some time-savings to motorists on U.S. 40. The vast majority of West Baltimore, however, has no convenient freeway access.

The major transportation facilities in West Baltimore consist of a series of surface highways radiating from downtown Baltimore to the suburban areas, and two major crosstown routes (with a third under construction).

### Radial Routes

There are numerous radial streets and highways in Baltimore ranging from two-lane park roads to six-lane divided boulevards and freeways. Most of these facilities carry one or more bus lines. Table III-5 and Exhibit III-9 show these facilities.

### Western Corridor (Downtown to West Baltimore)

The roads in the area which would be affected most by the proposed project are Frederick, Wilkens and Edmondson Avenues. Baltimore Street and Washington Boulevard are also in the vicinity, but they carry primarily local traffic and would be relatively unaffected by the construction of the proposed project.

### Wilkens Avenue

Wilkens Avenue is divided into two sections by the Lower Gwynns Falls Valley. The roadway ranges from a four-lane divided facility with parking in that portion east of the project corridor, to a six-lane undivided roadway to the west. Portions of the western section may be restriped for fewer but wider lanes which are currently nine-feet wide. The eastern portion of the street is a dense residential community with rowhouses lining the street, and industrial areas lying just south of the neighborhood. The western portion of the street is a commercial/institutional area containing a shopping center, St. Agnes Hospital and auxiliary medical facilities, and several schools.

Table III-5

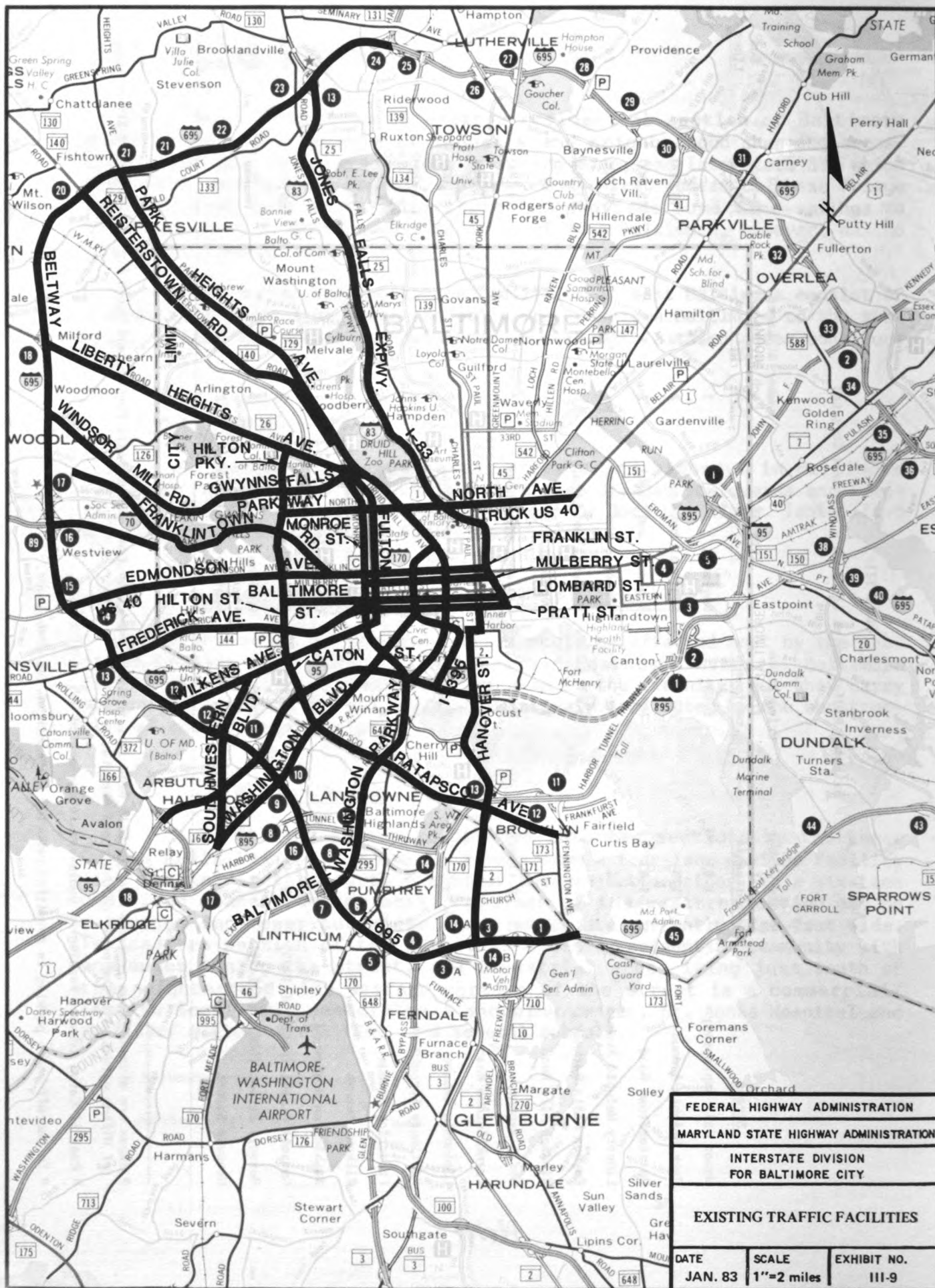
## Existing Radial Routes (Inbound - Outbound Streets)

Street	Route Number If Applicable	Orientation from Downtown	Type of Traffic	Number of Lanes Each Direction		ADT 24-Hour Traffic	Bus Lines
				Peak	Off-Peak		
Jones Fall Expressway	I-83	N/NW	Regional	3	3	-	
Park Heights Avenue	129	NW	Regional and Local	2	2	18,000	5
Relisterstown Road	140	NW	Regional and Local	2	1	15,000	7
Liberty Heights Avenue	26	NW	Regional and Local	2-3	1-2	31,000	28
Gwynns Falls Parkway	-	W	Regional and Local	2	2 <sup>c</sup>	23,000	22,51
Windsor Mill Road	-	W	Regional	1	1	- <sup>a</sup>	
North Avenue	U.S. 40 (Truck)	W	Regional and Local	2	2	14,000	13,19
Franklintown Road	-	W	Local	1	1	3,000	
Edmondson Avenue	U.S. 40	W	Regional and Local	3	3 <sup>c</sup>	48,000	12,23
Baltimore Street <sup>a</sup>	-	W	Local	1	1	6,000	20
Frederick Avenue	144	W	Regional and Local	2	1-2	16,000	2
Wilkens Avenue	U.S. 1	SW	Regional and Local	2	2-3	21,000	3
Washington Boulevard	(b)	SW	Local	1	1	13,000	11
Russell Street (North of I-95)	3	SW/S	Regional	3	3	64,000	17,28
Russell Street (South of I-95)	3	SW/S	Regional	3	3	40,000	17,28
Hanover Street	2	S	Regional and Local	2	1-2		14,16 63,64

<sup>a</sup> These are discontinuous routes - Windsor Mill Road is a westward extension from Gwynns Falls Parkway and North Avenue. Baltimore Street west of Hilton merges with the other neighborhood streets.

<sup>b</sup> West of Caton Avenue, Washington Boulevard is designated U.S. 1 Alternate.

<sup>c</sup> In the off-peak, parking is permitted reducing the width of the curb lanes.



Lombard and Pratt Streets are the major routes connecting both Wilkens and Frederick Avenues to downtown. These streets pass through dense residential communities including the Union Square Historic District. A dense commercial area is centered at the intersection of Pratt and Monroe Streets.

### Frederick Avenue

Frederick Avenue is parallel to Wilkens Avenue and serves the same regions. Frederick Avenue is also primarily residential in character, but it does penetrate two neighborhood shopping areas, and its eastward extension, Pratt Street, penetrates a third at Monroe Street. West of Hilton Street lies the Irvington commercial district, and a second, larger district lies farther east anchored by Westside Shopping Center.

At Hilton Street, an extremely complicated intersection exists. Due to the inadequate width of the intersection, no left turns are allowed from either street. Turns are made via two connector roadways, the northernmost block of Caton Avenue in the southeast quadrant of the intersection, and Fredhilton Pass in the northwest quadrant. Through traffic on either major street must traverse three signals, and left-turning traffic must traverse four signals, resulting in considerable delays.

### Edmondson Avenue

Edmondson Avenue (U.S. Route 40) is the most heavily travelled road in West Baltimore, carrying 48,000 vehicles per day. It is a major regional traffic facility with three travel lanes in each direction flanked by parking and separated by a median. Edmondson Avenue is residential in nature for much of its length. The Edmondson Village shopping area is located west of Athol Avenue.

Edmondson Avenue presents several problems:

- . Major traffic impacts to the residences along the roadway;
- . Many sideswipe accidents as motorists try to negotiate the 16-foot right lane which must be shared with parked cars; and
- . Rear end and sideswipe accidents as motorists avoid left-turning vehicles that must stop in the through lanes.

A project is currently underway which will realign the median to provide for left-turn lanes. This should reduce accidents in this corridor which has the City's highest accident rate today. The negative effect

of this project will be the reduction to two lanes in all but the peak periods. This will result in a reduction in the off-peak capacity and a subsequent deterioration in level of service.

Motorists on U.S. 40 heading downtown have the opportunity to use I-170, a six-lane freeway which begins just west of Monroe Street and terminates downtown, a distance of just under 1-1/2 miles. This facility is underutilized because it has not been connected to any highway other than U.S. 40, an at-grade surface highway.

#### Other Radial Routes

There are other east-west streets in West Baltimore, but they would be less affected by the proposed project. They are shown on Table III-5 and on Exhibit III-8.

#### Southern Corridor

The major access routes in this corridor are I-95/I-395, Russell Street/Baltimore-Washington Parkway, Maryland Route 3, and Hanover Street. Washington Boulevard is in this corridor as well, but would be essentially unaffected since it carries primarily local traffic.

South Baltimore is served by Hanover Street (Route 2). The Anne Arundel County suburbs are connected to downtown by Maryland Routes 2 and 3. Communities southwest of Baltimore such as Elkridge and Jessup are served both by Route 3 and I-95. Presently traffic on I-95 must use Russell Street to reach downtown Baltimore, but that will change in late 1982 with the opening of I-395. This new freeway connector will link I-95 with the Inner Harbor area of downtown Baltimore and provide relief to Russell Street.

A common element in all of these routes is that they deposit traffic in the southern part of the CBD and this traffic must follow surface streets to continue their trips. The first available east-west route is the one-way pair of Pratt and Lombard Streets. Taken as a single route, it is the most heavily used non-freeway in the City, carrying over 70,000 vehicles per day in both directions. At the intersections where Routes 2 and 3 intersect Pratt and Lombard Streets, the turning volumes exceed 12,000 vehicles per day in each direction.

Clearly Pratt and Lombard Streets cannot handle additional traffic. If I-395 is to reach its full potential of providing access to downtown from I-95 northbound, I-95 southbound via the Fort McHenry Tunnel (now under construction), and from Hanover Street, a way to remove some vehicles from Pratt and Lombard Streets must be found. The Martin Luther King, Jr. Boulevard will help achieve this by creating a downtown bypass,

but it will be at-grade with intersections at each cross street. Traffic on Martin Luther King, Jr. Boulevard will still compete with the cross traffic for greentime at the traffic signals. The proposed project would be a more effective bypass because it would have no signals unless a Boulevard Alternative were selected, which would require only two signals.

### Crosstown Routes in West Baltimore

There are three major crosstown routes in West Baltimore (i.e., not heading toward downtown), Hilton Street/Caton Avenue/Patapsco Avenue, the one-way pair of Fulton Avenue and Monroe Street, and the Martin Luther King, Jr. Boulevard.

#### Patapsco/Caton/Hilton

Patapsco Avenue, the major crosstown street in South Baltimore, is a six-lane divided highway which extends from the Baltimore Harbor at Curtis Bay to Southwest Baltimore, where it becomes Caton Avenue. Caton Avenue curves northward, wrapping around the city, and narrows to 44 feet in width (four lanes) near Wilkens Avenue. The facility continues north, terminating at Frederick Avenue, where the through traffic continues onto Hilton Street. Hilton Street, the narrowest link in the Patapsco/Caton/Hilton route, quickly narrows and penetrates a residential area very different from the commercial and industrial areas along Patapsco and Caton Avenues. This section experiences considerable congestion due to its substandard lane width and the need to provide on-street parking during the off-peak periods.

Near Edmondson Avenue (U.S. Route 40), the traffic moves onto Hilton Parkway, a four-lane roadway which has a grade-separated interchange with Edmondson Avenue. It continues northward through Gwynns Falls Park to Northwest Baltimore. At North Avenue, the roadway narrows to 36 feet in width, but widening is planned. The Hilton Street section between Caton Avenue and Edmondson Avenue is a bottleneck section which has the following effects:

- . The limited capacity of the section impairs the effectiveness of the entire route;
- . Motorists on this section endure considerable delay, particularly at the Frederick Avenue intersection; and
- . The traffic has a negative impact on the residential community along this section.

### Fulton/Monroe

The other existing crosstown route is composed of the one-way pairs of Fulton Avenue and Monroe Street. Monroe Street originates in the Westport area of Southwest Baltimore and has connections to Russell Street. The roadway extends northwest through this heavily industrialized area, curving northward south of Wilkens Avenue. The northbound traffic is directed onto Fulton Avenue via Wilkens, and Monroe Street becomes one-way southbound. This one-way paired arrangement continues through several densely populated residential communities in West Baltimore, terminating in the Mondawmin area and connecting to the various major streets which converge there. Two intersections along Monroe Street are particularly stressed due to large turning movements and narrow lanes. At the intersection with Washington Boulevard, 9-foot lanes, a large number of buses and trucks, and high turning volumes combine to create congestion. At the Wilkens Avenue intersection, high northbound turning volumes turning from two lanes (all northbound traffic must turn right onto Wilkens and go to Fulton Avenue to continue northward) and high southbound turning volumes create congestion in the intersection. The southbound right turn is a single-lane turn and is heavy for two reasons:

- . It is part of a major commuter route which utilizes Lombard Street, Monroe Street and Wilkens Avenue; and
- . It is part of southbound U.S. Route 1.

### Martin Luther King, Jr. Boulevard

The Martin Luther King, Jr. Boulevard, recently completed and opened to traffic, provides an at-grade bypass of the CBD on its west side. It will provide some traffic reduction on several north-south streets in the CBD and also on Fulton Avenue and Monroe Streets. Because of the capacity limitations at its northern end, the amount of traffic which could be diverted from Fulton or Monroe to the Martin Luther King, Jr. Boulevard will probably be modest.

## COMMUNITY NOISE ENVIRONMENT

### Introduction

The level of noise (unwanted sound) to which people are exposed can effect their quality of life. The extent to which an individual is affected by noise sources outside of his normal environment is controlled by several factors, including:



- . The duration and frequency of the sound;
- . The distance between the source of the sound and the receptor;
- . Intervening barriers or structures; and
- . The ambient noise environment.

Community noise exposure is typically measured on a cumulative basis over a finite period of time. For the purpose of this study,  $L_{eq}$  (hour) was chosen as a descriptor for the cumulative value. This metric is briefly explained below:

Equivalent Sound Level (hour) or  $L_{eq}$  (hr) - the equivalent steady-state sound level which in an hour would contain the same acoustic energy as the time-varying sound level during the same hour.

The unit of measure for the  $L_{eq}$  (hr) metric is the decibel (dB) commonly referred to as dBA because A-weighted is used. The A-weighted decibel scale (dBA) is generally accepted as the most representative scale for evaluating human exposure to noise.

#### Standards for Noise Evaluation

The Federal Highway Administration (FHWA) has established noise abatement criteria of acceptable noise levels for areas adjacent to federally funded projects such as I-595. These criteria were published in Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 3 (FHPM 7-7-3) dated August 1982 (see Table III-6).

As illustrated in this table, noise abatement criteria were established for various activities of land uses which represent the upper limit of acceptable traffic noise level conditions. A noise impact occurs when the project-induced traffic noise level exceeds the noise abatement criteria established by FHWA, or when a substantial increase in the existing noise level occurs. However, exceptions to this rule do in fact occur when the proposed project does not substantially increase existing noise levels which already exceed the noise abatement criteria.

Table III-6

## Noise Abatement Criteria/Activity Relationships

Activity Category	Noise Abatement Criteria (dBA) Leq(hr)	Description of Activity Category
A	57 (Exterior)	Tracts of land where 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. Such areas could include amphitheaters, particular parks or portions of parks, open spaces or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, and parks which are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties or activities not included in Categories A and B above.
D	Unlimited	For requirements on undeveloped lands see paragraphs 11a and 11c of FHPM 7-7-3.
E*	52 (Interior)	Residences, motels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

---

\* For application of interior noise abatement criteria see FHPM 7-7, 8c, d, and e.

### Existing Noise Levels

Ambient or existing noise in an area is typically made up of a combination of sounds generated from many sources. Generally, these sounds are constant in nature and are representative of the average human and/or mechanical activity in and close to the area. Unusual sounds such as a fire siren or vehicles with inadequate mufflers will occasionally produce a short-term increase in the area noise level. Both the average and short-term noise levels are important in describing the noise environment.

Existing or ambient noise levels which describe the environment are normally monitored with an instrument known as a "sound level meter." Seventeen sites were monitored in the project area. The monitoring locations are shown in Exhibit III-10, and the monitoring results are illustrated in Table III-7.

The project area is characteristic of FHWA's Land Use Activity Category B. The FHWA has established an hourly  $L_{eq}$  (noise abatement criteria) of 67 for this particular land usage. Existing noise levels in the project area range from a low of 50 dBA at the Southwestern High School track to a high of 75 dBA  $L_{eq}$  on the corner of Wilkens Avenue and Brunswick Road. In all, six of the 17 receptor sites currently exceed the FHWA noise abatement criteria of 67 dBA  $L_{eq}$ .

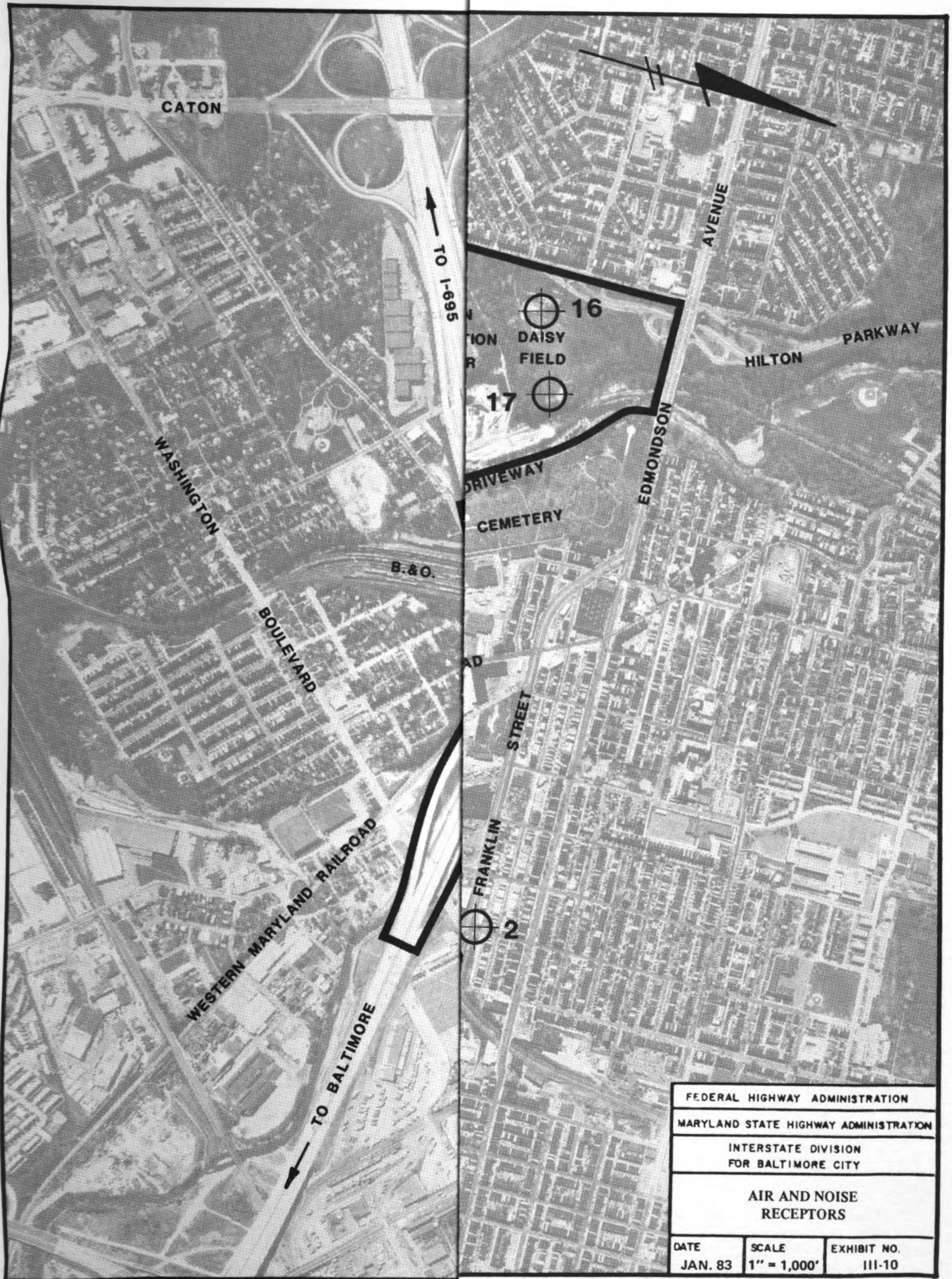
### AMBIENT AIR QUALITY

Existing background levels of carbon monoxide (CO) were determined from available air quality monitoring data. Within the City of Baltimore, the Maryland Department of Health and Mental Hygiene operates 13 air quality monitoring stations, in a range of locations and settings. Of these stations, the monitoring site located at 200 Read Street was determined to be the most representative of the base year background in the vicinity of the project.

The station at 200 Read Street can be said to be characteristic of an urban "hot spot," due to the fact that it is located adjacent to the existing I-83 as well as in an area of heavy, slow-moving arterial traffic, continually subject to traffic acceleration, deceleration and queuing at nearby intersections. Observations of CO taken during the 1981 year at the Read Street Station are presented on Table III-8. These 1981 values were used as background levels for the analysis of future year concentrations in the vicinity of the project.

Table III-7  
Existing Noise Levels  
in Project Corridor

<u>Site Number</u>	<u>Location</u>	<u>Time of Day</u>	<u>Monitored Value Leq (hr)</u>
1	Southeast Corner of Mulberry and Smallwood	9:00 a.m.	71
2	Northwest Corner Franklin and Wheeler	10:00 a.m.	70
3	Bentalou Recreation Area	11:00 a.m.	66
4	Kinsey Street at Amtrak Right-of-Way	11:30 a.m.	52
5	Rear Houses Franklinton and Ellicott	1:00 p.m.	53
6	Northeast Corner Frederick and Ellicott	2:00 p.m.	69
7	Rear of Houses Southeast Corner Frederick and East Lynn	2:00 p.m.	60
8	Building Line at #800 Frederick Avenue	2:30 p.m.	71
9	Rear Houses Fonthill Avenue	3:00 p.m.	54
10	Southwestern High School Running Track	3:30 p.m.	50
11	Southwestern High School (Front Steps)	3:30 p.m.	54
12	Northwest Corner Wilkens and Brunswick	3:15 p.m.	75
13	Building Line North Side of Wilkens at Gwynns Falls	3:30 p.m.	74
14	Gwynns Falls Recreation Center (GFRC)	10:30 a.m.	56
15	Playfield at GFRC	11:15 a.m.	55
16	Hilton Recreation Area	9:00 a.m.	65
17	Hilton Recreation Area	9:30 a.m.	56



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
AIR AND NOISE RECEPTORS		
DATE	SCALE	EXHIBIT NO.
JAN. 83	1" = 1,000'	III-10



Table III-8

CO Concentrations at 200 Road Street Station  
1981

	Number of Observations	Arithmetic Mean	One-Hour Average*			Eight-Hour Average*			Number of Days with Eight-Hour Average Greater Than 10
			Maximum	Second Highest	Number Greater Than 40	Maximum	Second Highest	Number Greater Than 10	
<u>1981</u>									
First Quarter	1,279	1	15	12	0	9	8	0	0
Second Quarter	1,386	1	11	9	0	6	5	0	0
Third Quarter	1,127	1	8	7	0	4	4	0	0
Fourth Quarter	0								
Total	3,792	1	15	12	0	9	8	0	0

\* mg/m<sup>3</sup>



## TOPOGRAPHY, GEOLOGY AND SOILS

The City of Baltimore lies within two physiographic provinces of the Atlantic Slope, namely the Coastal Plain and the Piedmont Provinces. The Coastal Plain extends in an easterly direction to the continental shelf and is bounded on the west by the Piedmont Plateau. It is characterized by low hills, shallow valleys, and flat plains. Soft, unconsolidated, easily eroded sediments comprise the upper soil deposits of this formation. In contrast to this gentle terrain, the higher elevated Piedmont Province is rugged and founded on hard crystalline rock which dips downward to the southeast. This is the base upon which the Coastal Plain soils have been deposited. The Coastal Plain formations overlie the rocks of the Piedmont with a gentle inclination towards the southeast, so that in the extreme southeastern part of Baltimore County near Sparrows Point, the base of the Coastal Plain is more than 600 feet below sea level.

A large part of the City south of North Avenue is covered by Cretaceous and Pleistocene gravel, sand, and clay. Under this lies the hard rock basement which appears in the valleys of the Jones Falls and Gwynns Falls where the streams have removed the unconsolidated cover and cut into the hard rock below. In that part of the channel where the streams have cut down into the basement rock, they flow over falls and rapids. Where the channels are cut in the Coastal Plain deposits they flow along a shallow gradient.

Three formations comprising the Cretaceous period in the Baltimore area are (in the order of their formation): the coarsely sedimented Patuxent, the Arundel clay, and the coarsely sedimented Patapsco. After a prolonged period of erosion, sediments of gravel and clay were deposited during the Pleistocene epoch.

The initial study of the soil and geological condition along the study corridor consisted of a general library research of the area. A preliminary field reconnaissance was then performed to provide an inventory of the overall geological features and to locate structures whose foundation conditions had been determined by subsurface investigations. Public agencies were contacted to obtain specific foundation information on structures in the study corridor proximity.

Available I-95 mainline borings between the B&O Railroad Yard and the Western Maryland Railroad tracks indicate an average rock elevation of  $\pm 25$  feet and an average overburden thickness of  $\pm 29$  feet. In the vicinity of Washington Boulevard and I-95 the rock elevation ranges from -7 feet to +15 feet, and averages  $\pm 1$  foot. The overburden averages  $\pm 27$  feet.

A cross section through the Wilkens Avenue structure over Gwynns Falls indicates the lowest rock elevation in the stream to be  $\pm 20$  feet,

based upon an available rock contour map. Test pits excavated prior to the construction of the original Wilkens Avenue Bridge indicated "rotten" rock at elevations varying from 32.5 to 34 feet. The rock line rises to the west at a  $\pm 3$  percent grade attaining elevation  $\pm 40$  approximately 500 feet west of the stream centerline. To the east, the rock line rises at  $\pm 4$  percent attaining elevation 50+ approximately 500 feet west of the centerline.

At the Conrail/Amtrak structure over Gwynns Falls, the lowest rock elevation in the stream bed is  $\pm 50$  feet. At this location, the rock line rises at a one to five percent slope to the west until it attains elevation 90+ approximately 1,000 feet west of the stream centerline. To the east the rock line rises steeply at an average gradient of 11 percent attaining an elevation of 120+ in the vicinity of Franklinton Road.

Based upon extrapolation of the borings for I-170, the project corridor traverses  $\pm 5$  to  $\pm 12$  feet of miscellaneous fill materials underlain by sand or silt strata averaging  $\pm 17$  feet in thickness as it approaches I-170. Below these strata, there is 11.  $\pm 5$  to  $\pm 15$  feet of decomposed Baltimore Gneiss, encountered at average elevation  $\pm 124$ . The decomposed Gneiss is underlain by hard Baltimore Gneiss at an average elevation  $\pm 112$ . A "swell" factor of 20 percent has been assigned to this hard rock stratum. The water table elevation in the vicinity of I-170 ranges from  $\pm 130$  to  $\pm 142$  feet and averages  $\pm 135$  feet.

The portion of the study corridor connecting to Hilton Parkway traverses exposed crystalline rock within the stream bed. Near Edmondson Avenue, the rock elevation in the stream bed is  $\pm 95$  to  $\pm 100$  feet. The rock line gradually rises at a 2.5 percent slope to the west until it attains elevation  $\pm 180$  approximately 1,800 feet west of the stream centerline. To the east, the rock line rises at a positive gradient of  $\pm 8.5$  percent, attaining an elevation of  $\pm 160$  feet approximately 400 feet east of the stream centerline.

### WATER QUALITY

Land use within a watershed has a very significant impact on water quality. Generally there is a direct relationship between the density of development, the percentage of impervious area and the pollution loadings; that is, the more development, the higher levels of pollutants in the stream. The headwaters of Gwynns Falls are located near Reisterstown in Baltimore County, and the stream empties into the Middle Branch of the Patapsco River. Nearly 70 percent of the Gwynns Falls is located within Baltimore County. The land use in this portion is primarily residential and light industrial and includes Interstate 795 which is presently under construction from the Baltimore Beltway to Painters Mill. The drainage area

within the City of Baltimore is almost completely developed, with nearly 60 percent of it being residential development, 10 percent commercial and industrial, and 12 percent parkland, golf courses and cemeteries. Nearly 45,300 feet of stream along the Gwynns Falls and its tributaries within Baltimore City are bordered by parklands. The vast majority of this is the Leakin/Gwynns Falls Park which surrounds the Gwynns Falls and its Dead Run tributary from the city line to Wilkens Avenue. The land use outside this portion of the park is residential, ranging from single family medium-sized lots in the north to dense rowhouse development in the south. South of Wilkens Avenue the only park area is Carroll Park, just north of Washington Boulevard. The remainder of the stream in this area is surrounded by older industrial and commercial uses, junkyards and vacant property.

Stream flow is regularly measured by the U.S. Geological Survey at several locations along Gwynns Falls. Average flows range from 35 cfs south of the Gwynns Falls confluence with Dead Run to nearly 60 cfs at the stream's mouth.

A considerable amount of water quality and water resources data has been collected at sampling stations throughout the Gwynns Falls. Existing water quality data on Gwynns Falls Stream was gathered during this environmental study and combined into Technical Report No. 2, which is available for review at the offices of the Interstate Division for Baltimore City (IDBC).

Water quality in the Gwynns Falls varies from very good outside the City limits to very poor near its mouth. Within the project area, there has been a marked improvement in water quality since the completion of the five million gallon per day sewage overflow system at Baltimore Street in 1979. Average dissolved oxygen levels in the study area were found to be sufficient to support aquatic life. Biochemical oxygen demand (BOD) levels in the Gwynns Falls have been high in the past, but appear to be greatly reduced in recent years. Fecal coliform levels in the study area are high, but also show very significant decreases over past years. Sampling data from the project area indicate high levels of suspended solids, dissolved solids and turbidity.

Water quality data on nutrient levels in the Gwynns Falls generally indicate high levels of ammonia, organic nitrogen, nitrate, orthophosphate, total phosphate and chloride concentrations. There is limited data regarding the sulfate levels in the Gwynns Falls watershed, however, the data available does not show a problem with the parameter.

The Citywide Stream Quality Study included benthic sampling in Gwynns Falls at Baltimore Street and Maidens Choice Run near South Duke-land Street, and indicated fair to poor conditions for aquatic life.

In general, water quality within the project area has improved in recent years, but high bacterial and nutrient levels are still a problem. Stream life is recovering slowly, but is still severely limited by water quality conditions.

## ECOLOGY

The project corridor includes a narrow, steep-sided stream valley with wooded slopes, surrounded by an urban residential and commercial area. Parks border the stream throughout much of its length. The great majority of Leakin/Gwynns Falls Park north of the study corridor remains in a natural state, with steep ridges and ravines. This extensive area, with its contiguous parcels of open space, creates a natural environmental area for wildlife and recreational use.

A complete ecological assessment of the Lower Gwynns Falls Valley was prepared for this environmental study. This report, Technical Report No. 2, Ecology and Water Quality, is available for review at the offices of IDBC and is summarized in this section.

### Vegetation

South of Wilkens Avenue, the corridor is primarily used for light industrial activities, with a few trees and gabions along the stream. Vegetation in the study corridor between Wilkens Avenue and Frederick Avenue consists of the mowed grass and playing fields of the Gwynns Falls Recreation Center, with shrubs, willows, grasses and wildflowers lining the stream and railroad tracks.

The ridge along the west side of the Gwynns Falls between Frederick Avenue and Baltimore Street is almost 90 feet above the valley floor. This is the largest contiguous forested area in the study area and consists of stable climax vegetation of the oak/hickory/tulip poplar association. The majority of the oak are black oaks, with very large tulip poplars, black cherries, princess trees and sycamores also present in this region. Along the edge bordering the Southwestern High School track are many locusts and some maples. On the east side of the Gwynns Falls between Frederick Avenue and Baltimore Street are large tulip poplars, sycamore, locust, maple, sumacs, and many wildflowers bordering Ellicott Driveway. There are a number of scenic rock outcroppings in the area surrounding the railroad crossing below Ellicott Driveway, and vegetation includes wild cherry, locust, mockorange, box elder, sumac, silver maples, ash, and a number of shrubs and vines including spice bush, raspberries, honeysuckle and wild grape.

The northeastern portion of the project corridor which follows the Conrail/Amtrak line to tie in with I-170 is very densely developed land with no significant ecological value.

Vegetation in the Hilton Parkway Connector portion of the study corridor is similar to that found in the southern portion of the study corridor. The upper elevations between Hilton Parkway and Gwynns Falls are covered with large black and red oaks and tulip poplars, while large princess trees, locust and wildflowers are found adjacent to the railroad track.

There are no known rare, threatened or endangered species of vegetation in the project area. According to the Maryland Department of Natural Resources, the closest known rare species is located near Gwynn Oak Park, approximately four miles from the proposed project.

### Wildlife

Several species of native mammalian fauna are known to exist in the project area. These species include: raccoons, opossum, grey squirrel, eastern chipmunk, cotton-tailed rabbits, moles, shrews, and at least four species of rodents. The species in the study area are not unusual, but do provide food for a number of hawks and owls which were observed in the area. A number of stray domestic animals such as dogs and cats, as well rats and mice common to urban areas, have also been found in the vicinity.

A large variety of reptiles and amphibians representative of an urban open-space corridor have been reported in the Gwynns Falls area.

Twenty-eight species of birds, including an owl, two species of hawk, woodpeckers and numerous species of songbirds have been recorded in the Gwynns Falls area and are listed in Technical Report No. 2. The more common permanent bird species which would be expected in the study area include blackbirds, bobwhites, cardinals, chick-a-dee, crow, mourning dove, house finches, gold finches, several species of hawks, bluejays, kingfishers, mocking birds, several species of owls, nuthatches, robins, several species of sparrows, starlings, titmice, turkey vultures, and several species of woodpeckers and wrens. A listing of the permanent, winter, summer and transient bird species which could be expected to occur in the Baltimore region has been assembled by the Maryland Ornithological Society and is also included in the aforementioned Technical Report.

Because of the extensive and contiguous nature of the park land in the Gwynns Falls Valley, the diversified mature forested area and open spaces combined with fresh water, it can be expected that most of the species listed as being present in the Baltimore region would occur within the Lower Gwynns Falls Park boundaries. There are no threatened or endangered wildlife species known to exist in the project area.

## WETLANDS

There were nontidal or tidal wetlands as defined by Executive Order 11990 in the study corridor between Wilkens Avenue and Edmondson Avenue. There are some low-lying areas within the floodplain between Baltimore Street and Frederick Avenue, however, which may be inundated on occasions during flooding conditions.

## FLOODPLAINS

The Gwynns Falls watershed is one of the major areas of the Baltimore metropolitan area with headwaters near Reisterstown in Baltimore County and its mouth in the upper portion of the Middle Branch of the Patapsco River. The drainage basin has a total area of approximately 66 square miles.

As part of this environmental study, the extent of the flood discharges which must be conveyed through the Gwynns Falls Valley was determined. The Soil Conservation Service methodology was used as the basis for the hydrologic analysis. The 50- and 100-year frequency storm events based on future development of the watershed and the highest allowable antecedent moisture conditions were analyzed for input into the hydraulic evaluation of floodplain encroachment.

The hydrologic investigation, based on a combination of a (TR-20) computer model and (TR-55) manual computations, was used to develop an estimate of flood discharges in Gwynns Falls. Rainfall intensity-duration/recurrence interval data was used as the basic input. Runoff hydrographs were developed and combined using a procedure published by the U.S. Soil Conservation Service.

The Corps of Engineers' HEC-2 computer model, the basic modeling technique used for flood insurance-type floodplain studies, was used in this study. Aerial contour mapping was used as the basis for determining existing ground elevations, and field surveys combined with construction plans of existing bridges were used as the basis for determining existing bridge waterway openings.

The 100-year frequency flood levels were determined for existing and future conditions for the various alternative alignments. The flood levels for existing conditions are shown on the alternative exhibits in Section II. The Baltimore Department of Planning, Housing and Community Development provided floodplain maps and studies. The existing floodplain boundaries include part of Carroll Park, the portion of the industrial area south of Wilkens Avenue between the Western Maryland Railroad tracks and the stream, and the majority of the Gwynns Falls Recreation Center (does not include the Recreation Center building).

## HISTORICAL RESOURCES

A survey of historic resources in the Gwynns Falls Valley was conducted to determine potential impacts of the proposed project. The area examined included the project corridor and adjacent communities and sites. Technical Report No. 1, available at the Interstate Division for Baltimore City, presents the results of the historical and archaeological studies conducted for this report.

There are several sites or areas in the study area that appear to be eligible for listing in the National Register of Historic Places. The location and significance of these sites are summarized in this section and are shown on Exhibit III-11. The complete report, Historic Resources Survey: Interstate Connector Between I-95 and I-170 in the Gwynns Falls Valley, is available for review in the offices of the Interstate Division of Baltimore City.

- . Carrollton Viaduct - The Carrollton Viaduct, constructed in 1829, carries the B&O Railroad across Gwynns Falls. The granite bridge is 297 feet long, 26.5 feet wide, 62 feet high and has an 80-foot archway. It is the oldest railroad bridge in use in the United States and has been declared a National Historic Engineering Landmark.

- . 2600 Block of Wilkens Avenue - The south side of the 2600 block of Wilkens Avenue contains a 54-rowhouse grouping. This is the largest unbroken group of rowhouses in Baltimore, and perhaps in the country, and may be eligible for listing in the National Register.

- . Old Frederick Road/Fonthill Avenue - This area is representative of an early suburban village in Baltimore, and retains a quaint nineteenth century character despite the twentieth century suburban character directly to the south and to the west. The eligible area is shown on Exhibit III-11.

- . Old Mill Hill - Mill Hill is historically significant as a small West Baltimore village that relates to the mills built along the Gwynns Falls in the early nineteenth century. The architecture of Mill Hill is significant for its variety and the representation of an early industrially related village. There are a few intrusions, primarily early twentieth century rowhouses, in the Old Mill Hill eligible area.

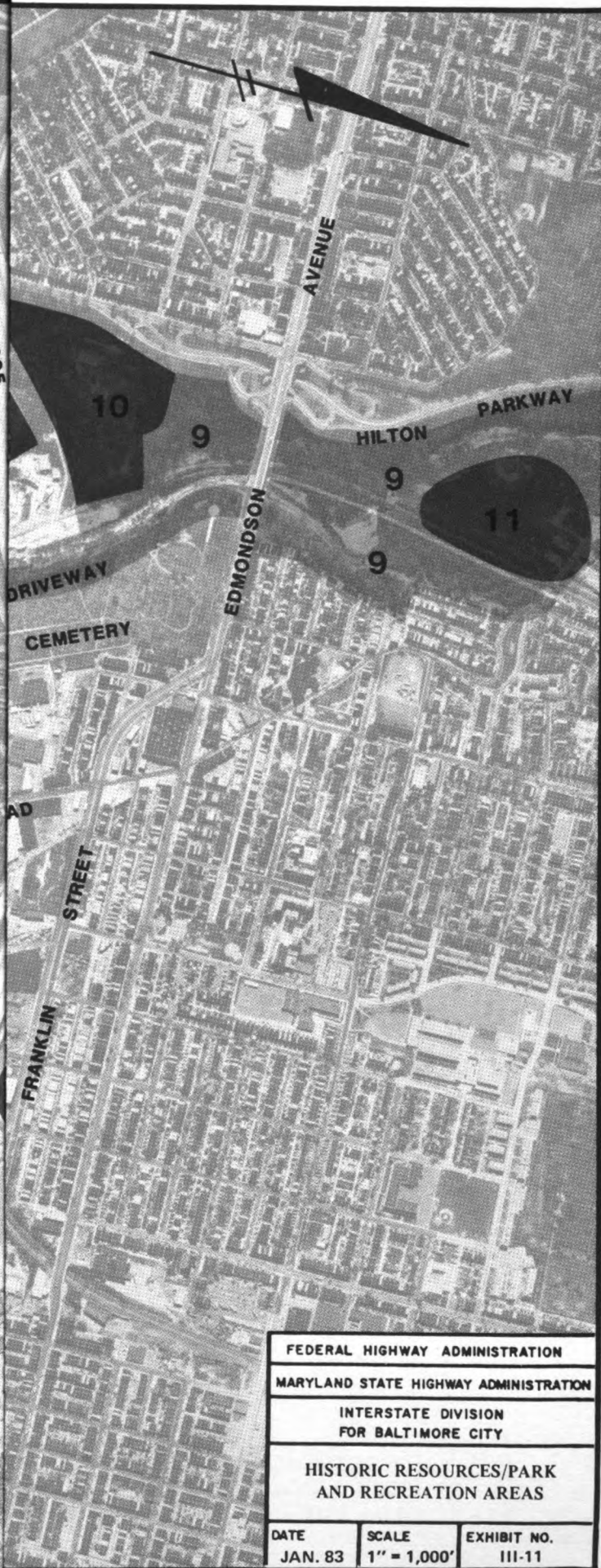
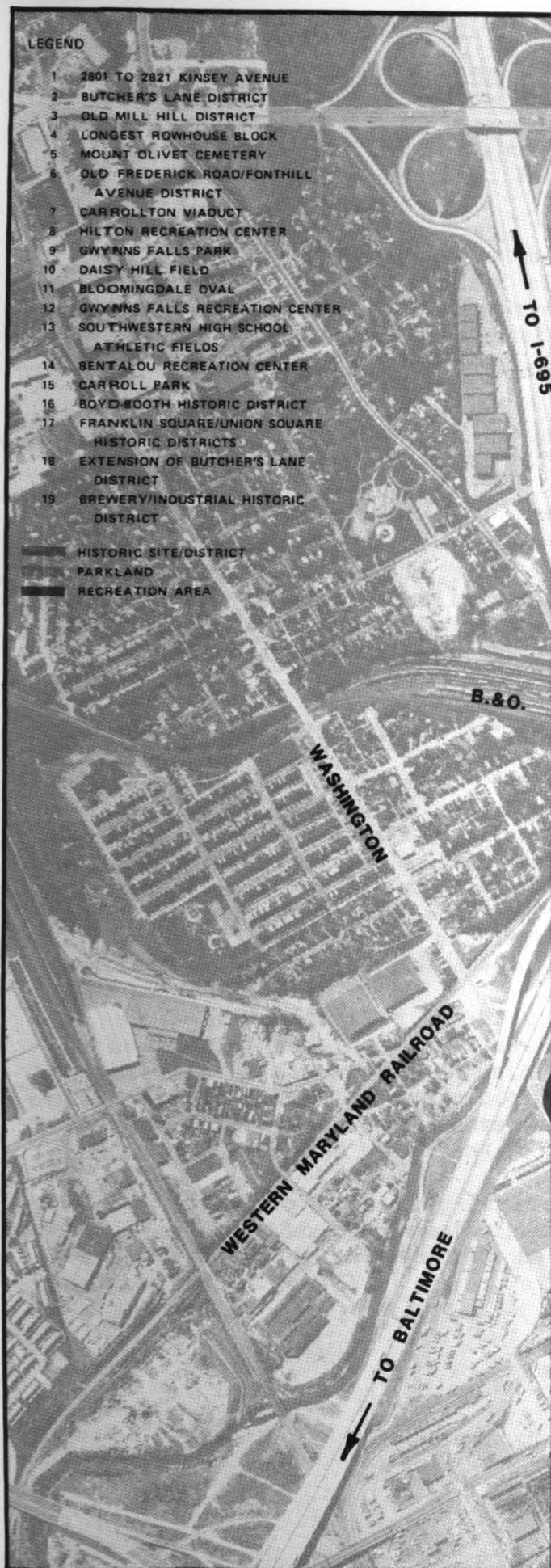
- . Mount Olivet Cemetery - This cemetery dates from 1849 and is the burial place of the pioneers of the Methodist Church in the United States. Despite the general exclusion of most cemeteries on the National Register, Mount Olivet Cemetery is considered to be of exceptional importance considering its relation to the history of the Methodist Episcopal Church. The entire cemetery appears to be eligible for listing in the National Register.



LEGEND

- 1 2801 TO 2821 KINSEY AVENUE
- 2 BUTCHER'S LANE DISTRICT
- 3 OLD MILL HILL DISTRICT
- 4 LONGEST ROWHOUSE BLOCK
- 5 MOUNT OLIVET CEMETERY
- 6 OLD FREDERICK ROAD/FONTHILL AVENUE DISTRICT
- 7 CARROLLTON VIADUCT
- 8 HILTON RECREATION CENTER
- 9 GWYNNS FALLS PARK
- 10 DAISY HILL FIELD
- 11 BLOOMINGDALE OVAL
- 12 GWYNNS FALLS RECREATION CENTER
- 13 SOUTHWESTERN HIGH SCHOOL ATHLETIC FIELDS
- 14 BENTALOU RECREATION CENTER
- 15 CARROLL PARK
- 16 BOYD EDOOTH HISTORIC DISTRICT
- 17 FRANKLIN SQUARE/UNION SQUARE HISTORIC DISTRICTS
- 18 EXTENSION OF BUTCHER'S LANE DISTRICT
- 19 BREWERY/INDUSTRIAL HISTORIC DISTRICT

 HISTORIC SITE/DISTRICT  
 PARKLAND  
 RECREATION AREA



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
HISTORIC RESOURCES/PARK AND RECREATION AREAS		
DATE	SCALE	EXHIBIT NO.
JAN. 83	1" = 1,000'	III-11



. Butcher's Lane - The Butcher's Lane area is located between Franklinton Road and the top of the Gwynns Falls Valley generally between Baltimore Street and Maemple Street. This area appears significant as an early enclave of butcher's homes and slaughterhouses dating from the mid- to late nineteenth century. There are few intrusions in the eligible area.

. Kinsey Avenue - Some of the earlier houses (circa 1850) on Kinsey Avenue are significant since they are representative of the earliest type of housing in the Gwynns Falls Valley. The buildings from 2801 to 2821 Kinsey Avenue have local significance and are considered to be eligible for listing in the National Register.

### ARCHAEOLOGICAL RESOURCES

The majority of the project corridor consists of highly urbanized areas, landscaped parkland, steep slopes, and frequently inundated flood-plains. As a result, situations where archaeological sites are likely to have been present and preserved are limited. Two archaeological sites and one sensitive area were recorded during the archaeological survey of the project area.

Three Mill site is located on the east side of the Gwynns Falls along the north side of Frederick Avenue, west of and including Ellicott Driveway. At this location the Ellicott family built three merchant mills around 1795 that operated through the nineteenth century. An earlier mill may have existed at this site prior to the Ellicott's purchase. During the early twentieth century, a large wool mill dominated the site; however, no standing structures are present today. Portions of the mill yard exist, though no structural remains were found. Construction of the Western Maryland Railroad and the straightening of Frederick Avenue in the early twentieth century may have damaged portions of the site.

Three Mill site has historic importance through its ties with the commercial and industrial development of Baltimore. Archaeological indications of a possible industrial mill yard also exist. This merchant mill site is potentially eligible for the National Register from evidence researched in historic documents; however, further investigation would be necessary to determine the extent and condition of this site.

The two remaining areas, the Gwin site and the Mount Clare Mill site, considered archaeologically sensitive, are both located outside the study corridor and would not be affected by the proposed project (see Technical Report No. 1).

## PARK AND RECREATION AREAS

### Existing Facilities

There are several parks and recreational areas located in or adjacent to the study corridor as shown on Exhibit III-11. The Gwynns Falls Stream is a source of recreation for the surrounding communities whose residents use the stream for swimming and fishing. In addition to the recreational uses associated with the stream, there is Carroll Park, Cardinal Gibbons/Archbishop Keough High Schools, Gwynns Falls Recreation Center, Southwestern High School, Hilton Recreation Center, Daisy Hill Field and Bloomingdale Oval.

Carroll Park is a 167-acre park located along the eastern side of Gwynns Falls Stream just north of Washington Boulevard and I-95. The portion of Carroll Park adjacent to the stream is a nine-hole public golf course. Other park facilities include: the Mount Clare Mansion (National Register historic site); a football field; a soccer field; softball fields; baseball fields; tennis, basketball and volleyball courts; and a playground. The large facilities (golf course, softball and baseball fields) are heavily used by people from all over the City; while the smaller facilities (playground, basketball courts) are primarily used by local residents.

Cardinal Gibbons/Archbishop Keough High Schools are located in the northwest quadrant of the I-95/Caton Avenue interchange, extending north to Wilkens Avenue. Cardinal Gibbons is an all-male Catholic high school and Archbishop Keough an all-female Catholic high school. Neighborhood and private groups use the private high schools' recreational facilities (baseball field, running track, football fields, soccer fields, tennis courts, gymnasium, cross country running course and outdoor pool) to a limited degree. Archbishop Keough conducts a girls' camp which uses the school's facilities during the summer months.

Gwynns Falls Recreation Center is bounded by the Gwynns Falls Stream, Frederick Avenue, Wilkens Avenue, Fonthill Avenue and Harley Avenue. This approximately 16-acre facility is extremely flat with a steep rise near Frederick Avenue. Little League baseball teams use both fields from early April through the end of July (approximately 200 people/day). The Southwestern High School junior varsity baseball team also uses the two baseball fields in addition to informal use in neighborhood "pick-up" games. The playground and basketball court are heavily used during the summer months (approximately 150 children per day).

Southwestern High School was built in 1972 on 56 acres on a plateau overlooking the Lower Gwynns Falls Valley. The high school's recreational facilities include a running track, a football field with a stadium, a baseball field, a softball field, tennis courts, a soccer field,

a cross-country running course, an indoor pool and gymnasium. The baseball field is not used during the summer, but the softball field is used as the home field of at least one team. The Gwynns Falls Recreation Center uses the indoor pool and gym two to three nights per week during the winter. In addition to the formal outdoor recreation facilities, the school site also includes considerable wooded acreage on the west side of the Gwynns Falls Stream. This portion of the property is not significant as a public recreational facility.

The Hilton Recreation Center is a local neighborhood park containing a general recreation building, a basketball court, three softball diamonds and an open multipurpose field. The site, approximately eight acres in size, is situated north of Baltimore Street and west of the Hilton Quarry. This recreation center is heavily used by the local residents.

Leakin Park and Gwynns Falls Park are essentially one large city-owned park of approximately 718 acres and are the dominant open space land use in West Baltimore. The great majority of Leakin/Gwynns Falls Park remains in a natural state. The major portion of the park begins near the western City limit, and spreads out to the east. The park surrounds the Dead Run Stream Valley from Franklinton Road to the stream's confluence with Gwynns Falls Stream. From this point the park continues southeast to Hilton Parkway, where it becomes a narrow bank along Gwynns Falls Stream. Two recreation areas of Leakin/Gwynns Falls Park, Daisy Hill Field and Bloomingdale Oval, are located in the vicinity of the project.

- . Daisy Hill Field, a well-maintained 10-acre area to the north of the Hilton Recreation Center and separated from it by a wooded ravine and the access road to the Genstar Quarry, is situated on a plateau and includes a softball field and a basketball court.

- . Bloomingdale Oval is located north of Edmondson Avenue and west of the Western Maryland Railroad line in the stream valley floor. Facilities at this 15-acre recreation area include a baseball diamond, softball fields and a basketball court.

The Bentalou Recreation Center is a 3.4-acre site between the Bentalou Elementary School (P.S. 150) and the Conrail/Amtrak Corridor. Facilities include a large (7,500 square feet), well-maintained multipurpose building and a combination playground/basketball court area which is entirely macadam. Equipment in the playground area (swings, slides, jungle gyms) is in extremely poor condition.

The Center is used year-round by the nearby densely populated residential communities.





## **Section IV :**

---

# **Environmental Consequences**





## SECTION IV: ENVIRONMENTAL CONSEQUENCES

### SOCIOECONOMIC EFFECTS

Socioeconomic impacts of the proposed project can be evaluated in terms of community cohesion, travel patterns and access, municipal services and effects on social groups.

#### Community Cohesion

There are three neighborhood communities in the project area, Irvington, Rosemont, and Morrell Park. The current population trends, average income, and other social and economic characteristics of these communities were described in Section III of this report.

The proposed project would not divide any of the communities in or adjacent to the study corridor. The mainline of the proposed project generally follows the Gwynns Falls Stream and the Western Maryland Railroad line which form the boundary between the Rosemont and Irvington communities.

The project alignments would pass through the Irvington community as they approach I-170, however, the alignments follow the Conrail/Amtrak Corridor through a primarily industrial area and would not disrupt the residential community.

Morrell Park, the community at the southern end of the project area, would not be divided by the proposed project. The portion of the community that would be affected by the proposed project is the industrial area associated with the B&O Railroad.

The proposed project would not isolate any ethnic groups or separate residential areas from community facilities within the study area. Value of commercial and industrial properties may rise in some areas adjacent to the project, especially the Wilkens Avenue and Frederick Avenue areas if Alternative 2 or 4 is selected (these alternatives provide access to Wilkens Avenue and Frederick Avenue). Improved access would enhance the desirability and development potential of these areas.

#### Travel Patterns and Access

The project is not expected to produce significant adverse changes in current vehicular or pedestrian travel patterns and accessibility.

Alternatives 2 and 4 would cul-de-sac Brunswick Street south of Frederick Avenue but alternate routes would be provided for local access to Frederick Avenue. Access to Wilmarco Avenue, located north of the proposed I-95 interchange, would be maintained.

Pedestrian access across the Gwynns Falls Valley at Wilkens and Frederick Avenues would be affected in varying manners. Alternatives 1 and 3 would not alter existing conditions, except for any temporary sidewalks associated with construction. Alternative 2 would create new signalized intersections with these streets where ramps would connect to them. Alternative 4 would create two major signalized intersections where the boulevard traversed these streets. Pedestrian access across any new intersections would be provided and controlled by standard traffic control devices.

The proposed project would have beneficial impacts on the surrounding communities by reducing traffic volumes on Wilkens Avenue, Frederick Avenue and local streets, and improving accessibility. A major benefit anticipated with this project would be the removal of disruptive truck traffic from local streets.

The construction of the proposed project would also enhance access to the CBD and aid in the revitalization of the downtown area. The "No-Action" Alternative would not improve access to and circulation within the City, and would not reduce traffic volumes on the minor arterials and neighborhood streets in West Baltimore.

#### Municipal Services

The proposed project will maintain, and in some cases improve, the provision of municipal services within areas. Police and fire protection services can be improved by the provision of a more efficient transportation system. There are no anticipated adverse impacts to local businesses or churches as a result of this project.

#### Effects on Social Groups

There are no anticipated adverse impacts to such social groups as minorities, the elderly, handicapped, etc., as a result of construction of this project.

The construction of the proposed project will improve the region's economy by creating employment opportunities and generating income. Construction expenditures for the proposed project are estimated to range from \$134,000,000 to \$202,000,000, depending on the alternative chosen.

## LAND USE IMPACTS

Land uses in the project area include industrial, commercial, recreational, institutional and residential uses. The majority of the land that would be directly impacted by the proposed project is currently being used for industrial purposes and open space areas.

The proposed interchange with I-95 and the roadway alignment north to Frederick Avenue would impact the Crossroads Industrial Center and the Wilkens Avenue Industrial Park. Industrial property located on both sides of Wilmarco Avenue would be required for the project. (This land is already City-owned, and largely vacant.) None of the recently developed properties in the Crossroads Industrial Park would be taken. Industries located in the Wilkens Avenue Industrial Park (bounded by Wilkens Avenue, the Gwynns Falls and the Western Maryland Railroad) would be displaced.

Between Wilkens Avenue and the Conrail/Amtrak Corridor at Baltimore Street, the alignments follow the Gwynns Falls Stream and the Western Maryland Railroad tracks, and may traverse a portion of the Gwynns Falls Recreation Center and the wooded area bordering the stream. The alternatives would not remove any property that is actively used by Southwestern High School but would cross the wooded bluff between the field track and the stream, which is school property and currently serves as open space in the corridor.

As the proposed project travels north of and parallel to the Conrail/Amtrak Corridor to I-170, a strip of the commercial/industrial area north of the railroad line would be used for the project corridor.

Hilton Parkway Connector Alternative A follows Ellicott Driveway which runs between the Gwynns Falls Stream and Western Cemetery north of Baltimore Street. The northern edge of the Genstar Quarry, currently being used as a concrete batch plant, would be impacted as this alternative turns west towards Hilton Parkway. Hilton Parkway Connector Alternative B is located west of the stream, and would pass directly through the quarry. Both Connector Alternatives would travel through the wooded open space area separating the Hilton Recreation Center and Daisy Hill Field to tie into Hilton Parkway.

The proposed project would be a fully access controlled facility and would limit new areas for development to the interchanges. The potential for induced development would be the greatest with Alternatives 2 and 4 which provide access to Wilkens Avenue and Frederick Avenue. Land uses at Wilkens Avenue and the proposed alignment include industrial, park/open space (Lower Gwynns Falls Recreation Center), and residential. The primary land use surrounding the proposed interchange or intersection at Frederick Avenue is park/open space with residential and industrial uses east of Brunswick Street. Induced development would be prohibited in the park/open

space areas, but may influence development in the residential and industrial areas surrounding the interchange or intersection. The residential areas are not expected to experience great impacts since they are currently interspersed with industrial and commercial development. The industrial areas in the study area would benefit from the proposed project.

The terminus of the proposed project (any alternatives) at I-95 would have no impact on the area with respect to induced development since the interchange would be fully directional and no local access would be provided.

The proposed connection with I-170 would occur in the Franklin/Mulberry Corridor. This corridor is very heavily developed, and has little potential for new development.

There would be no potential for induced development at Hilton Parkway since the land surrounding the proposed interchange is either committed parkland or densely developed residential land.

#### VISUAL AND AESTHETIC EFFECTS

The visual impact on each of the areas discussed in Section III varies with the proposed alternative and the existing aesthetic quality of that area.

Within the largely industrial district lying north of I-95, west of the Western Maryland Railroad, and south of the bend in the Gwynns Falls Stream near Wilmarco Avenue, all alternatives have basically the same alignment and design. Ramps leading to or from north serving I-95 would be built as elevated structures from I-95 to a point some several hundred feet south of Wilmarco Avenue. The ramp connecting I-595 southbound to I-95 northbound would pass over I-95, placing it relatively high throughout this area. The ramp connecting I-95 northbound to I-595 northbound would be at ground level throughout this area, running between the westernmost tracks of the B&O Railroad Yard and the Cross Roads Industrial Park. The ramp connecting I-595 southbound to I-95 southbound would contrarily, be elevated some 25 feet to 60 feet above ground level.

Given the relatively "open" character of this area, with its considerable vegetation interspersed between rail facilities, the addition of the highway would not be incompatible with the existing environment. The only area from which a large number of persons would see the highway would be Carroll Park Golf Course. The proximity and scale of the highway could detract from the visual quality of the west portion of the Carroll Park. Provided that the right-of-way of the highway were landscaped, this "impact" could be reduced to an acceptable level.



Construction of any of the alternatives would significantly alter the visual environment in the area south of Wilkens Avenue. Alternative 4, with its at-grade intersection of Wilkens Avenue, would be less conspicuous than the other alternatives; Alternative 2, with its highway structure passing over Wilkens Avenue and ramps connecting to Wilkens Avenue would present the greatest visual impact.

Whether the construction of any of the highway alternatives would detract from, or improve the aesthetic quality of the area south of Wilkens Avenue is a matter of opinion. If the industrial uses which presently occupy the floor of the valley are replaced with both a highway and landscaping, as is currently proposed, the result might be viewed as an improvement.

Views east and west along both Wilkens Avenue and Frederick Avenue would be substantially modified by the alternatives under consideration. Alternative 4, with its at-grade intersection at both locations and bifurcated alignment at Frederick Avenue, would alter the views to the least extent. Alternatives 1 and 3, which pass over both streets, would be quite visible. Alternative 2, which passes over these streets and provides ramp connections to them, would present the most dramatic change to views along the streets.

In the area between Wilkens and Frederick Avenues, all alternatives would dramatically alter the visual environment. Under Alternative 4, the southbound roadway would pass over the east portion of the Gwynns Falls Recreation Center at an elevation approximately 40 feet above that of the existing ground. The northbound roadway, which generally follows existing ground levels along the east side of the valley, would be relatively inconspicuous. Generally, this alternative would be the least "intrusive" of those considered, despite its presence within the recreation center environment. On the other hand, Alternatives 2 and 3, which have various roadways at differing elevations, would cause the most significant visual impact. Alternative 2, with its mainline running approximately 60 feet above the valley floor, and service drives running 40 feet above existing ground, would be quite visible from anywhere within the recreation center. Alternative 3, which transitions from two adjacent roadways to a double-decked configuration in this area, would dominate the existing landscape. Alternative 1, which has both roadways in an elevated alignment within the center of the valley, would be more conspicuous than Alternative 4, but slightly less complex and imposing in appearance than Alternatives 2 and 3.

Despite these differences in scale and complexity of visual appearance, which suggest that one alternative might be less or more conspicuous than others, it is all but impossible to state that any of the alternatives would complement or enhance the existing visual quality of the valley in the vicinity of the Gwynns Falls Recreation Center.

The portion of the valley between Frederick Avenue and Baltimore Street has steep slopes with dense vegetation. Bifurcation of the roadways through this area with Alternative 1 would diminish the overall impact by allowing some of the native vegetation between the northbound and southbound lanes to remain. However, the roadway would be located close to the stream, altering the stream's visual quality. Furthermore, as both roadways would be elevated throughout this area, their presence would clearly alter the relatively natural and undisturbed quality of the existing visual environment. Alternative 2 would require the removal of a larger amount of the existing vegetation in the valley for the roadways and the ramp system connecting to Wilkens and Frederick Avenues. Alternative 3 would have a narrower cross section and would preserve more of the existing vegetation, retaining its screening function and scenic qualities. This double decker alternative would also place the roadway farther from the stream, and separate it with a vegetative buffer, reducing the impact to the visual character of the stream. However, while the double decking of the roadways would require a narrower taking, the complicated structural system of piers and beams which would support the southbound roadway above the northbound roadway, would be clearly visible along the valley. It is likely that this alternative, despite its narrower width when compared to other alternatives, would in fact be more visually "intrusive" than the other alternatives. The at-grade roadway with Alternative 4 would disturb little of the vegetation outside of the roadway limits, reducing the visual impact on the stream valley. Furthermore, because this alternative would be at-grade throughout substantial portions of the area north of Frederick Avenue, it would be most easily screened by existing trees or landscaping installed as part of the project.

The over/under Conrail/Amtrak crossing option with Alternatives 1, 2 and 4 has various effects to the visual environment at both the Southwestern High School and the residences along Baltimore Street. Crossing over Conrail/Amtrak would place the roadway at or near the same elevation as the field track (within 25 feet) without any vegetative buffer and approximately 30 feet above the houses on Baltimore Street. If the under Conrail/Amtrak option is chosen, the highway would be constructed in a 35-foot cut section and would be below the field track, and out of view. Crossing under Conrail/Amtrak would place the roadway 10 feet below the level of the adjacent houses on Baltimore Street. The southbound roadway for Alternative 3 would cross over Conrail/Amtrak and the northbound roadway would cross under Conrail/Amtrak. The southbound roadway would be located close to the field track and the houses on Baltimore Street, and would have an adverse visual affect on both of these areas.

The largely industrial corridor adjacent to the Conrail/Amtrak line between the Gwynns Falls Valley and existing I-170 is an area of relatively little visual significance. Separated from residential neighborhoods by the Conrail/Amtrak right-of-way, and removed from any well-traveled streets such as Edmondson Avenue, the area is not prominent in the public's "eye."



Only at the eastern end of the corridor, where the proposed highway would meet I-170, is there a potential for a significant, noticeable visual impact. At this location, I-595 would pass over both the Conrail/Amtrak Corridor and Mulberry Street, as it turns to the east to meet existing I-170. The imposing highway structures to be located between Franklin and Mulberry Streets would have a negative visual impact on the residences to the south and north of these streets.

A comprehensive description of the visual impacts of the three alternatives for connecting I-595 to Hilton Parkway is not appropriate at this stage, for there are at least 20 possible variations of these connections. The three alternatives, designated A, B and C, are interchangeable with the four I-595 alternatives and some generalizations are possible.

In the area south of the Amtrak bridge over the Gwynns Falls, construction of any new roadways as part of Alternatives A, B or C will alter the appearance of this area. Selection of the combination of Alternative 1 or 4 (for I-595) and Alternative A (for the Hilton Parkway Connector) would result in the least change, as existing Ellicott Driveway could be utilized for the northbound portion of the Hilton Parkway Connector. Any combination of the other alternatives would result in a greater change, as both directions of the Hilton Parkway Connector would have to be built in existing wooded land on the west side of the Gwynns Falls.

Immediately north of the Amtrak bridge, the differences in Alternatives A, B and C are negligible. While Alternative A would allow use of existing Ellicott Driveway, and would thereby avoid roadway construction in a new location, the alignment of Alternatives B and C would generally follow that of the Western Maryland Railway and the access road to the existing quarry.

It is in the area of the Daisy Hill Field Recreation Complex where the differences in Alternatives A, B and C are most distinct. The alignment of Alternative A would have the least impact on Daisy Hill Field, since it would place the Hilton Parkway Connector generally within the valley of the tributary to the Gwynns Falls which runs between the Hilton Recreation Center and Daisy Hill Field. Primary impacts related to this alternative would be the removal of vegetation within this valley, and the creation of a new intersection with Hilton Street between Montastery Street and Culver Street. Alternative B would substantially modify the existing appearance of the park area east of Hilton Street and south of Edmondson Avenue. Hilton Parkway would be relocated, new ramps constructed, and an overpass created carrying the southbound connector to I-595 over the relocated Hilton Parkway. Alternative C would have little effect on the visual quality of the Daisy Hill Field area, as it locates the Hilton Parkway Connector to the east and north of the plateau on which the recreation complex sits. In fact, Alternative C would reduce the amount of roadways separating the residential community west of Hilton Street from Daisy Hill Field, as it would eliminate existing Hilton Parkway south of the intersection of Franklin Street and Hilton Street.

## TRANSPORTATION EFFECTIVENESS

The transportation effectiveness of the proposed project can be evaluated in terms of the extent to which it fulfills the project goals outlined in Section I.

One of the goals of the proposed project is to provide regional access connecting Downtown and West Baltimore with western Baltimore County, and outlying areas. Interstate 170, which serves the western CBD and the Fulton/Monroe Corridor, would be connected to I-95 and thus to the regional highway network. The Hilton Parkway Connector alternatives would also provide connections to Hilton Parkway, Edmondson Avenue, and the Frederick/Wilkins Corridor.

The proposed project is also designed to provide a more attractive route for intra-city movements from Central and West Baltimore to much of the rest of the City. Alternatives 2 and 4, which include ramp connections to Wilkins and Frederick Avenues, and the Hilton Parkway Connector alternatives would provide the maximum access points and would enhance intra-city travel.

The connectors with I-170, which provides access to Fulton and Monroe Streets, would relieve traffic on Fulton/Monroe, especially those trips destined for areas adjacent to I-95. With the inclusion of the Hilton Parkway Connector, the proposed project would serve as a bypass of Hilton Street, removing traffic destined outside the project corridor from this narrow congested street.

The proposed project is also designed to reduce traffic volumes on the east-west roadways in West Baltimore. Traffic diversion forecasts for each east-west street in West Baltimore were developed based on construction of the proposed facility. These projected traffic volumes are shown in Table IV-1.

Interstate 170 extends from U.S. 40 at the western edge of the CBD on the east, to U.S. 40 on the west, a distance of approximately 1.5 miles. Currently, the only function of I-170 is serving as a bypass of Franklin and Mulberry Streets. This proposed project would connect I-170 with I-95, linking it to the regional highway network, and substantially increasing the utilization of I-170, allowing it to serve its intended function.

The final goal of the proposed project is to provide a bypass for Russell Street, I-395, and the Martin Luther King, Jr. Boulevard. There are three major routes into Baltimore from the south: Hanover/Light Streets, Russell Street and I-395. All three of these routes deposit the traffic destined to downtown at the southern end of the CBD. Conway Street, and the one way pair of Pratt and Lombard Streets are the first major

Table IV-1  
Local Street Volumes  
Design Year (2005)

Station	No Action	Alternatives 1 & 3		Alternative 2	Alternative 4
		Without Frederick- Wilkins Connection	With Frederick- Wilkins Connection	Boulevard	
0 Ramp - I-83 NB to I-695 NB	7,890	7,876	7,876	7,876	7,880
1 Ramp - I-695 EB to I-83 SB	9,145	9,113	9,113	9,113	9,141
2 Ramp - Northern Parkway EB to I-83 SB	12,283	12,109	12,109	12,109	12,182
3 Ramp - I-93 NB to Northern Parkway NB	11,583	11,463	11,463	11,463	11,513
4 Ramp - Washington Boulevard to I-95 SB	5,224	4,925	4,925	4,925	5,051
5 Ramp - Russell Street SB to I-95 SB	13,325	11,568	11,568	11,568	12,306
6 Ramp - I-95 NB to SR Caton Avenue	6,915	6,317	6,317	6,317	6,526
7 Ramp - I-95 NB to Russell Street NB	14,629	12,562	12,562	12,562	13,430
8 Ramp - Caton Avenue NB to I-95 SB	5,039	5,586	5,586	5,586	5,693
9 Ramp - I-95 NB to Washington Boulevard	3,694	3,400	3,400	3,400	3,524
10 Reisterstown Road	18,918	18,092	18,092	18,092	18,397
11 Park Heights Avenue	23,161	22,513	22,513	22,513	22,785
12 Liberty Heights Avenue	37,739	34,792	34,792	34,792	36,029
13 Gwynns Falls Parkway	29,849	26,226	26,226	26,226	27,747
14 Windsor Mill Road	11,517	10,417	10,417	10,417	10,880
15 North Avenue	18,509	14,849	14,849	14,849	16,387
16 Franklinton Road	5,189	4,536	4,536	4,536	4,810
17 Edmondson Avenue	48,739	39,134	39,134	39,134	42,548
18 Baltimore Street	9,102	8,599	8,599	8,599	8,810
19 Frederick Avenue	18,915	10,565*	10,565*	14,000	13,936
20 Wilkins Avenue	24,272	11,913*	11,913*	15,800	16,961
TOTALS	366,237	286,555	293,877		306,563

\* East of the ramps.

east-west streets reached by this traffic, and subsequently experience high traffic and turning volumes. The traffic volumes are high on Pratt and Lombard Streets, limiting the amount of traffic entering the CBD from the south. The Martin Luther King, Jr. Boulevard will provide a bypass of the Inner Harbor area (where the three major facilities intersect Pratt and Lombard Streets), however, this facility is an at-grade roadway, and traffic will be subjected to delays at intersections. The proposed project would provide a high speed uninterrupted (except under the Boulevard scheme) bypass of the CBD. Traffic would be deposited at the northern end of the CBD, allowing motorists to bypass the Inner Harbor and central CBD area.

The transportation effectiveness of the proposed project would be influenced by the type of facility selected (interstate or boulevard) and the inclusion of an interchange at Wilkens and Frederick Avenues and the Hilton Parkway Connector.

An interstate-type facility would provide the highest capacity, the shortest travel times, and the greatest transportation benefits. A high level design would attract a greater number of trips than a boulevard facility, based on uninterrupted flow and time savings. Table IV-1 shows predicted traffic volumes on existing West Baltimore streets with (including access to Wilkens and Frederick Avenues and a Hilton Parkway Connector) and without the proposed project.

A boulevard facility would include at-grade intersections at Wilkens and Frederick Avenues, reducing the roadway capacity and increasing traffic delays. The boulevard facility is predicted to attract only 50 percent of those trips from the local street system that would be attracted by an interstate-type facility. Thus, the benefits associated with the construction of a boulevard facility would not be as great as those anticipated with an interstate facility. On the other hand, the Boulevard Alternative (Alternative 4) would provide the greatest flexibility of movement within the corridor.

Alternatives 2 and 4 would provide access to Wilkens and Frederick Avenues. Traffic on Wilkens and Frederick Avenues east of the Gwynns Falls would be expected to be significantly reduced with an interchange at this location. Predicted design year 2006 combined volumes on these two roadways east of the proposed project would be approximately 22,500 vehicles per day with an interchange and approximately 30,000 vehicles per day without an interchange. West of the proposed project, design year 2006 combined traffic volumes on Wilkens and Frederick Avenues are estimated to be approximately 30,000 with or without access to the proposed facility. Traffic volume reductions on Wilkens Avenue (the residential area) east of the proposed project would be beneficial, particularly due to the significant reduction in the volume of through medium and heavy trucks that is anticipated to occur when the proposed project is constructed.

The Hilton Parkway Connector would provide direct access to Hilton Parkway and Edmondson Avenue from the proposed project. The connector would be expected to greatly reduce traffic volumes on Hilton Street.

## NOISE IMPACTS

### Prediction of Future Noise Levels

Mainline future traffic noise levels were developed using the Federal Highway Administration's (FHWA) Level 2 Highway Traffic Noise Prediction Model known as STAMINA 1.0. Cross street noise levels were combined with mainline levels.

When assessing the relative degree of noise impact the various alternatives have on the community, the following basic characteristics of known human response to noise were used:

- . Except in carefully controlled laboratory experiments, an increase of only 1 dBA cannot be perceived;
- . Outside the laboratory, a 3 dBA increase is considered a just noticeable difference;
- . A change of at least 5 dBA is required before any noticeable change in community response would be expected; and
- . A 10 dBA increase is subjectively heard as a doubling in loudness, and would almost certainly cause an adverse change in community response.

### Future Noise Levels

Predicted future noise levels (for the site locations shown on Exhibit III-10) are presented in Table IV-2. This table compares existing noise levels with the future predicted levels for the four alternatives at representative locations along the study routes.

With Alternative 1, the expressway alternative without connecting ramps at Wilkens Avenue and Frederick Avenue, noise levels at nine receptor locations would exceed the FHWA noise abatement criteria of 67 dBA  $L_{eq}$ . Of these nine locations, six receptors have existing ambient noise levels in excess of the FHWA criteria. At Receptor 3, the Bentalou Recreation Area, the existing ambient noise level measured at 66 dBA. With the addition of the highway, a level of 70 dBA was projected. At Receptor 15 which will be

Table IV-2

## Predicted Future Noise Levels - I-595 Corridor

Site Number	Location	Existing Leq (hr)	Predicted Leq (hr)			
			Alternative 1	Alternative 2	Alternative 3	Alternative 4
1	Southeast Corner of Mulberry and Smallwood	71	74	74	74	72
2	Northwest Corner Franklin and Wheeler	70	72	72	72	71
3	Bentalou Recreation Area	66	70	70	70	68
4	Kinsey Avenue at Amtrak Right-Of-Way (Adjacent to Historic Houses)	52	70	71	70	65
5	Rear Houses Franklinton and Ellicott (in Butcher's Lane Historic District)	53	61	61	61	59
6	Northeast Corner Frederick and Ellicott	69	70	70	70	70
7	Rear of Houses Southeast Corner Frederick and East Lynn (in Old Mill Hill Historic District)					
8	Building Line at #800 Frederick Avenue	60	65	65	66	64
9	Rear Houses Fonthill Avenue	71	73	73	73	72
10	Southwestern High School Running Track	54	65	65	65	63
11	Southwestern High School (front steps)	50	67	68	67	65
12	Northwest Corner Wilkens and Brunswick	54	63	64	63	61
13	Building Line North Side of Wilkens at Gwynns Falls	75	75	75	75	75
14	Gwynns Falls Recreation Center (GFRC)	74	75	75	75	75
15	Baseball Diamond at GFRC	56	66	66	66	66
		55	72	72	72	67

approximately 70 feet from the proposed roadway, in the Gwynns Falls Recreation Center, a 72 dBA noise level is projected. The ambient existing noise level at this site is 55 dBA. At Receptor 4 on Kinsey Street adjacent to the Conrail/Amtrak right-of-way, the projected noise level is 70 dBA. The existing ambient noise level at this location is 52 dBA.

In Alternative 2, the expressway alternative with connecting ramps at Wilkens Avenue and Frederick Avenue, noise levels at 10 receptor locations would exceed the FHWA noise abatement criteria of 67 dBA  $L_{eq}$ . Of these nine locations, six receptors experience existing noise levels in excess of the FHWA criteria. At Receptor 3, the Bentalou Recreation Area, the ambient noise level was measured at 66 dBA. With the addition of the highway, a level of 70 was projected. At Receptor 15, which will be approximately 70 feet from the proposed roadway in the Gwynns Falls Recreation Center, a 72 dBA noise level is projected. The ambient existing noise level at this site is 55 dBA. At Receptor 4 on Kinsey Street at the Conrail/Amtrak right-of-way, the projected noise level is 70 dBA. The existing ambient noise level at this location is 52 dBA. Receptor 10, located at the Southwestern High School track, would experience a minor exceedance of FHWA criteria of 1 dBA (68 dBA). The existing ambient noise level at this location is 50 dBA.

Noise levels for Alternative 3, the double decked expressway without connecting ramps at Wilkens Avenue and Frederick Avenue, are projected to be identical to those of the bifurcated expressway, Alternative 1. The dominant reason for this is that the traffic projections and usage of the highway will be the same and the alignment similar.

With Alternative 4, the Boulevard Alternative, noise levels at seven receptor locations have been projected to exceed the FHWA noise abatement criteria of 67 dBA  $L_{eq}$ . Of these seven locations, five have ambient noise levels in excess of the FHWA criteria. At Receptor 3, the Bentalou Recreation Area, the existing ambient noise level was measured at 66 dBA. With the addition of the highway, a level of 68 dBA is anticipated. At Receptor 15, which will be approximately 70 feet from the proposed roadway in the Gwynns Falls Recreation Center, a 68 dBA noise level is projected. The ambient existing noise level at this site is 55 dBA.

Noise levels in residential areas can be reduced by noise barriers. The Final Environmental Impact Statement within this project will address noise barrier design and study mitigation alternatives.

### Construction Noise

Highway construction noise is characterized by noise levels which differ significantly from those generated by traffic due to the unusual spectral and temporal nature of construction noise. The noise



generated during a highway construction project can vary substantially from site to site based on type of project being constructed, the mix of equipment and the construction procedures being employed.

Within the general classification of "highway construction" there exists several types of construction activities, each exhibiting its own set of noise characteristics. Construction of this proposed project would consist of some intensive construction activities. Each of the construction projects, whether scheduled concurrently or singularly, will tend to increase the ambient noise levels in the immediate vicinity of the work areas. However, a number of measures can be considered in order to minimize noise resulting from these activities.

Such measures include but may not be limited to:

- . Any internal combustion engine used for any purpose on or related to the job should be equipped with a properly operating muffler;
- . Conduct truck loading, unloading and hauling so that noise is kept to a minimum;
- . Route construction equipment and vehicles over streets that will cause the least disturbance to nearby residents, where possible;
- . Limit pile-driving activities (when required) to daylight hours when reasonable and feasible; and
- . When appropriate, place continuously operated diesel-powered equipment, such as compressors or generators, in areas as far from or shielded from noise sensitive locations.

#### Mitigation Plan

A preliminary analysis was performed to identify the extent and number of areas along the project corridor where noise mitigation would be investigated. The identification process utilized the following criteria:

. Mitigation would be investigated for all sites where predicted  $L_{eq}$  values are in excess of FHWA criteria of 67 dBA or where the predicted  $L_{eq}$  comprises an increase of more than 6 dBA over the existing  $L_{eq}$ .

. Mitigation would not be investigated at those sites where the predicted  $L_{eq}$  is less than 67 dBA and less than 6 dBA above the existing  $L_{eq}$  or where the predicted  $L_{eq}$  is greater than 67 dBA but less than 3 dBA above existing  $L_{eq}$  noise levels.

Applying this criteria to the predicted noise levels in Table IV-2 resulted in the identification of 10 areas where noise mitigation would be investigated (see Table IV-3).

The most effective method of noise impact reduction for these sites would be to construct barriers between the new roadway and the affected area. Flexibility in the horizontal location of such barriers is limited by the elevated profile of the new roadway, which would mean that only barriers constructed on and above the parapet wall of the elevated structure would be both feasible and effective. Such barriers, while typically more expensive to construct than ground barriers, would serve to greatly reduce traffic noise levels in sensitive areas. The design goal of barriers would be to achieve a minimum 8 to 10 dBA reduction in predicted  $L_{eq}$  values. Design of noise barriers would include a community involvement program to provide coordination with local residents and park officials.

Preliminary investigations indicate that approximately 10,000 linear feet of structure-mounted barriers, averaging eight feet in height, would be necessary to meet the level of reduction desired at each identified site. Based on an assumed cost of 25 dollars per square foot, this barrier system would add approximately \$2 million to the construction costs of any of the four mainline alternatives.

Further details of these barriers, including lengths, heights, material and costs, will be developed during the preparation of the Final EIS for this project.

## AIR QUALITY IMPACTS

In order to assess the potential effects of the project on future air quality, each of the study alternatives was analyzed for potential impacts.

### Methodology

In the project corridor, the first step in the air quality analysis was the determination of existing background air quality and meteorological conditions. These background levels are discussed in Section III of this report. Future carbon monoxide (CO) levels were then calculated for sensitive receptor sites in the project corridor (see Exhibit III-10) using the EPA-approved computer model CALINE 3. Projections of carbon monoxide levels were then made for 1985, the earliest anticipated year in which the proposed facility would be fully operational, and for 2005, the

Table IV-3  
Noise Mitigation Summary Chart

<u>Site Number</u>	<u>Location</u>	<u>Proposed Mitigation*</u>
1	Southeast Corner of Mulberry and Smallwood	B
2	Northwest Corner Franklin and Wheeler	D
3	Bentalou Recreation Area	A
4	Kinsey Avenue at Amtrak Right-Of-Way (Adjacent to Historic Houses)	A
5	Rear Houses Franklinton and Ellicott (in Butcher's Lane Historic District)	B
6	Northeast Corner Frederick and Ellicott	D
7	Rear of Houses Southeast Corner Frederick and East Lynn (in Old Mill Hill Historic District)	C
8	Building Line at #800 Frederick Avenue	D
9	Rear Houses Fonthill Avenue	B
10	Southwestern High School Running Track	A
11	Southwestern High School (front steps)	B
12	Northwest Corner Wilkens and Brunswick	D
13	Building Line North Side of Wilkens at Gwynns Falls	D
14	Gwynns Falls Recreation Center (GFRC)	B
15	Baseball Diamond at GFRC	A

---

\* A - Mitigation to be studied - predicted  $L_{eq}$  in excess of FHWA design noise levels (67 dBA), and 3 or more dBA above existing.

B - Mitigation to be studied - predicted  $L_{eq}$  less than 67 dBA but more than 6 dBA above existing.

C - Mitigation not to be studied - predicted  $L_{eq}$  less than 67 dBA and less than 6 dBA above existing.

D - Mitigation not to be studied - predicted  $L_{eq}$  greater than 67 dBA but less than 3 dBA above existing.

design year for the project. CO concentrations were modeled for the worst one- and eight-hour periods for comparison with National Ambient Air Quality Standards (NAAQS).

Peak-hour traffic conditions were considered for this analysis. The one-hour case employed the p.m. peak-hour weekday volume and speeds, while the eight-hour case utilized the time period from 10:00 a.m. to 6:00 p.m., which contains the highest traffic volumes. Traffic input for this analysis was developed by IDBC using traffic counts, driver origin/destination data and computer simulations from the Regional Planning Council.

Meteorological conditions used in these models were as follows:

- . One-hour case: wind speed of 1.0 meter/second, varying direction clockwise by 22.5 degrees from the north, and a stable atmosphere; and

- . Eight-hour case: six hours of mutual stability at 2.5 meters/second plus two hours of a stable atmosphere at 1.0 meter/second, with wind varying direction clockwise 22.5 degrees from the north.

Temperature factors utilized were those employed by the Maryland State Highway Administration in their air quality analyses and based on the lowest realistic temperatures for the approximate averaging periods--20 degrees F for the one-hour case and 35 degrees F for the eight-hour case.

Free-flowing vehicle emission strengths were determined by the use of the MOBILE 1 computer program. Included in the MOBILE 1 program were Mobile Source Emission Factors from the EPA, and a reduction factor for a vehicle inspection and maintenance program of 30 percent stringency.

#### National Ambient Air Quality Standards

Vehicular traffic on highways is a significant cause of carbon monoxide (CO), and as such can be directly responsible for high ambient CO concentrations. The National Ambient Air Quality Standards (NAAQS) developed for CO reflect the conclusion that short-term exposure to high concentrations of CO have definite effects on the human body, and as a result, CO standards for one- and eight-hour periods were established as follows:

**National Ambient Air Quality Standards  
For Carbon Monoxide**

<u>Time</u>	<u>Standard</u>
One-Hour Average	40 mg/m <sup>3</sup> (35 ppm)
Eight-Hour Average	10 mg/m <sup>3</sup> (9 ppm)

These standards are not to be exceeded more than once per year. The Maryland State Standards are the same as the NAAQS.

**Background Air Quality**

Existing background levels of CO were determined from available air quality monitoring data. As noted previously, of the several monitoring sites considered, the data obtained from the sampling station located at 200 Read Street was determined to be the most representative of the base year background in the vicinity of the project for the 1980 year.

The 200 Read Street station site is characteristic of an urban "hot spot" or source monitor due to the fact that not only is it adjacent to I-83, but also because it is located in an area of heavy, slow-moving arterial traffic and is consequently subject to the effects of acceleration, deceleration and queuing at nearby intersections.

Background CO concentrations for the analysis years 1985 and 2005 were obtained by scaling the 1980 background concentrations by the ratio of the analysis years' emissions to 1980 emissions for CO during the appropriate time period. The following formula depicts the method used in estimating future year background concentrations.

$$X_{\text{future year}} = X_{\text{base year}} \cdot \frac{\text{future year emissions}}{\text{base year emissions}}$$

where 1980 is the base year.

**Alternative Analysis**

Tables IV-4 through IV-7 present the results of the modeling to determine both one- and eight-hour CO levels anticipated from each of the study alternatives.

Table IV-4

**Future Carbon Monoxide Concentrations  
Including Background - Alternative 1  
(mg/m<sup>3</sup>)**

<b>Air Quality Receptors</b>	<b>1985</b>		<b>2005</b>	
	<b>One-Hour Background 13.53<sup>a</sup></b>	<b>Eight-Hour Background 5.7<sup>b</sup></b>	<b>One-Hour Background 9.75<sup>a</sup></b>	<b>Eight-Hour Background 4.1<sup>b</sup></b>
1	13.53	5.7	9.75	4.1
2	13.53	5.7	9.75	4.1
3	13.53	5.7	9.75	4.1
4	13.53	5.7	9.75	4.1
5	13.63	5.7	9.75	4.1
6	13.63	5.7	9.75	4.1
7	13.63	5.7	9.75	4.1
8	13.63	5.8	9.85	4.1
9	14.03	6.2	9.95	4.2
10	13.63	5.8	9.85	4.1
11	13.63	5.8	9.85	4.1
12	13.73	5.9	9.75	4.1
13	13.63	5.8	9.85	4.1
14	14.93	6.9	10.55	4.7
15	14.83	6.5	10.55	4.5
16	13.53	5.7	9.75	4.1
17	13.53	5.7	9.75	4.1

<sup>a</sup> NAAQS CO standard - one-hour average: 40 mg/m<sup>3</sup>.

<sup>b</sup> NAAQS CO standard - eight-hour average: 10 mg/m<sup>3</sup>.

Table IV-5

**Future Carbon Monoxide Concentrations  
Including Background - Alternative 2  
(mg/m<sup>3</sup>)**

<b>Air Quality Receptors</b>	<b>1985</b>		<b>2005</b>	
	<b>One-Hour Background 13.53<sup>a</sup></b>	<b>Eight-Hour Background 5.7<sup>b</sup></b>	<b>One-Hour Background 9.75<sup>a</sup></b>	<b>Eight-Hour Background 4.1<sup>b</sup></b>
1	13.53	5.7	9.75	4.1
2	13.53	5.7	9.75	4.1
3	13.53	5.7	9.75	4.1
4	13.53	5.7	9.75	4.1
5	13.63	5.8	9.75	4.1
6	13.63	5.7	9.75	4.1
7	13.63	5.8	9.75	4.1
8	13.63	5.8	9.85	4.1
9	14.03	6.1	10.05	4.2
10	13.73	5.8	9.85	4.1
11	13.73	5.8	9.85	4.2
12	13.73	5.8	9.85	4.1
13	13.63	5.8	9.85	4.1
14	15.03	6.8	10.55	4.6
15	14.73	6.4	10.35	4.4
16	13.53	5.8	5.80	4.1
17	13.53	5.8	5.80	4.1

<sup>a</sup> NAAQS CO standard - one-hour average: 40 mg/m<sup>3</sup>.

<sup>b</sup> NAAQS CO standard - eight-hour average: 10 mg/m<sup>3</sup>.



Table IV-6

Future Carbon Monoxide Concentrations  
Including Background - Alternative 3  
(mg/m<sup>3</sup>)

Air Quality Receptors	1985		2005	
	One-Hour Background 13.53 <sup>a</sup>	Eight-Hour Background 5.7 <sup>b</sup>	One-Hour Background 9.75 <sup>a</sup>	Eight-Hour Background 4.1 <sup>b</sup>
1	13.53	5.7	9.75	4.1
2	13.53	5.7	9.75	4.1
3	13.53	5.7	9.75	4.1
4	13.53	5.7	9.75	4.1
5	13.63	5.7	9.75	4.1
6	13.63	5.7	9.75	4.1
7	13.63	5.7	9.75	4.1
8	13.63	5.8	9.85	4.1
9	14.03	6.2	9.95	4.2
10	13.63	5.8	9.85	4.1
11	13.63	5.8	9.85	4.1
12	13.73	5.9	9.75	4.1
13	13.63	5.8	9.85	4.1
14	14.93	6.9	10.55	4.7
15	14.83	6.5	10.25	4.5
16	13.53	5.7	9.75	4.1
17	13.53	5.7	9.75	4.1

<sup>a</sup> NAAQS CO standard - one-hour average: 40 mg/m<sup>3</sup>.

<sup>b</sup> NAAQS CO standard - eight-hour average: 10 mg/m<sup>3</sup>.

Table IV-7

**Future Carbon Monoxide Concentrations  
Including Background - Alternative 4  
(mg/m<sup>3</sup>)**

<b>Air Quality Receptors</b>	<b>1985</b>		<b>2005</b>	
	<b>One-Hour Background 13.53<sup>a</sup></b>	<b>Eight-Hour Background 5.7<sup>b</sup></b>	<b>One-Hour Background 9.75<sup>a</sup></b>	<b>Eight-Hour Background 4.1<sup>b</sup></b>
1	13.53	5.7	9.75	4.1
2	13.53	5.7	9.75	4.1
3	13.93	5.9	9.95	4.2
4	13.93	6.0	9.95	4.2
5	14.43	6.2	10.25	4.4
6	14.13	5.9	9.95	4.2
7	13.63	5.8	9.85	4.1
8	13.63	5.8	9.85	4.1
9	14.53	6.5	10.25	4.3
10	13.63	5.8	9.85	4.1
11	13.83	5.9	9.85	4.1
12	13.93	6.0	9.95	4.1
13	13.63	5.8	9.85	4.1
14	14.73	6.4	10.25	4.3
15	14.43	6.2	10.15	4.2
16	13.53	5.7	9.75	4.1
17	13.53	5.7	9.75	4.1

<sup>a</sup> NAAQS CO standard - one-hour average: 40 mg/m<sup>3</sup>.

<sup>b</sup> NAAQS CO standard - eight-hour average: 10 mg/m<sup>3</sup>.

No violations of either the one- or eight-hour National Ambient Air Quality Standard for CO would occur with any of the study alternatives.

#### Impact of Construction Activities

The construction phase of the proposed project has a potential impact on ambient air quality through such means as fugitive dust from grading operations, materials handling, and burning of land-clearing debris. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges and Incidental Structures which delineates procedures to be followed by contractors involved in State work. The Maryland Bureau of Air Quality and Noise Control has determined that the Specifications satisfy the requirements of the Regulations Governing the Control of Air Pollution in the State of Maryland.

#### Conformity With Regional Air Quality Planning

The project is in an air quality nonattainment area for CO which has transportation control measures in the State Implementation Plan (SIP). This project conforms with the SIP since it comes from a conforming transportation improvement program. The project is included in the regional transportation plan and Transportation Improvement Program for the Baltimore Metropolitan urbanized area and is programmed for Federal-aid highway funding. Accordingly, it is subjected to this Federal review and project development process, and the project's conformity with regional air quality planning was addressed prior to undertaking current project planning studies.

Since pollutants that have regional impacts, such as hydrocarbons and oxides of nitrogen (precursors of photochemical oxidants), are addressed through this regional planning process, only carbon monoxide emissions, a more localized pollutant, were addressed quantitatively in this analysis.

The results of the carbon monoxide air quality analysis indicate that, for most of the receptor sites analyzed, any of the "Build" Alternatives would result in either no change or a slight increase in projected CO concentrations as opposed to expected CO concentrations under the "No-Build" Alternative for the completion year (1985) and the design year (2005). In none of the alternatives under consideration would projected CO concentrations be in excess of applicable standards. As such, all alternatives would conform to the Maryland State Implementation Plan for the attainment and maintenance of ambient CO air quality standards within the Baltimore Metropolitan Area Air Quality Control Region (AQCR) of which the study area is a part.

## RELOCATION

### General

For Interstate projects in Baltimore City, the Highway Right-of-Way Division of the State of Maryland, acting under the provisions of 42 U.S.C. 4601-4655 (Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970) in cooperation with the Baltimore City Department of Housing and Community Development operates an aggressive program of relocation assistance and public information.

A highway project will be considered to be in the "conceptual stage," as defined by Federal Highway Administration Program Manual Volume 7, Chapter 5, Section 1, until such time as final location is approved. Information to be developed at this phase would be in the form of an estimate to determine: the estimated number of individuals, families, businesses, farms and nonprofit organizations that are to be relocated by each of the alternatives under consideration, and the probable availability of decent, safe and sanitary replacement housing within the financial means of the individuals and families affected by each of the alternatives under consideration.

Under a contract dated April 6, 1960 between the City and the Housing Authority of Baltimore City, the Housing Authority administers the relocation program for those displaced by action of any City agency involving acquiring property for a public purpose; i.e., urban renewal, public housing, expressways and other highways, schools, police stations, fire stations, libraries, code enforcement, medical clinics, and off-street parking facilities. Program administration includes determination of relocation needs, developing plans to meet such needs and providing complete relocation services and assistance.

This Relocation Assistance Plan was prepared by the Department of Housing and Community Development for IDBC in accordance with the U.S. Department of Transportation FHPM 7-5-1, paragraph 13. The plan provides relocation data for the project from I-95 to I-170. The estimated lead time required to complete relocation from initiation of negotiations is one year.

It must be noted that, in the period of time following publication of construction activities, changes in relocation required for construction are possible. The following report can only be approximate in its estimation of required relocatees, due to changes in occupancy that can occur during this period. The number of businesses affected should not change.

### Community Relocation Impact

NO RESIDENCES WILL BE TAKEN BY ANY OF THE PROJECT ALTERNATIVES.

The project proposed within the study corridor falls within a variety of communities. Although the project right-of-way primarily consists of existing open space, it also includes commercial and industrial properties.

The displacement of businesses will serve to reduce the number of employment opportunities in the immediate area, but only to a marginal degree. No jobs are expected to be lost in the area as a result of displacement. There will be little adverse effect on businesses and nonprofit organizations remaining in the area. The increased accessibility available to remaining businesses should be beneficial.

The proposed project will impose no severe hardships on elderly or handicapped persons. None will be displaced, and none will live close enough to the new highway to suffer from any potential adverse effects. In addition, the proposed project will have minimal effect on the use of various community facilities. There are no hospitals, libraries, school buildings, churches, or fire stations actually in the path of the highway.

The project will not adversely effect residential, commercial, and industrial development which is existing or planned nearby, as discussed earlier under "Land Use Compatibility."

No change in population density or distribution is anticipated at this time due to the complete lack of residential displacement for the project.

It is not known at this time where relocated firms would be re-established. Although some small firms may be expected to discontinue operations, the particular businesses affected by this project are more likely to resume at new locations. The zoning of these businesses ranges from B-1 to M-2. All of these businesses can be relocated in the Baltimore area. None have unusual site requirements. The businesses to be displaced are generally not neighborhood facilities. None are of the "storefront" variety.

### Estimated Displacement

There are approximately 13 businesses which could be affected by the project (see Table IV-8). It is not known at this time where the firms would be reestablished. Although some small firms may be expected to discontinue operations, the particular businesses affected by this project are more likely to resume at new locations. All of these businesses can be relocated in the Baltimore area. None have unusual site requirements.

Table IV-8

## Anticipated Commercial Acquisition/Relocation

<u>Property Owner</u>	<u>Address</u>	<u>Type of Business</u>	<u>Tenants</u>	<u>Acquisition</u>	<u>Relocation</u>
PBAW Railroad		Railroad	-	Partial	No
Baltimore Cottonfelt	2335 W. Franklin Street	Industrial	-	Partial	Yes
Anderson Ireland	2415 W. Franklin Street	Industrial	-	Partial	Yes
Maryland Lumber	2601 W. Franklin Street 300 N. Warwick Street	Commercial	-	Partial	Yes
PBAW Railroad		Railroad	-	Partial	No
S & G Realty	226 N. Franklinton Road	Vacant Industrial	-	Partial	No
PBAW Railroad		Railroad	-	Partial	No
PBAW Railroad		Railroad	-	Partial	No
Mayor & City Council Southwestern High School	200 Fonthill Avenue	Public School	-	Partial	No
Edward Azrael	2775 Wilkens Avenue	Light Industrial	Hess Truck Repairs Capital Bakers Gabes Coin Machine Peerless Chemical Ronn Creations Tender Touch Brand	Full	Yes
Harrison Bolt & Nut	2761 Wilkens Avenue	Light Industrial	Owner Occupant	Full	Yes
Bass	2793 Wilkens Avenue	Vacant	-	Full	No
Chesapeake Bulk	2765/67 Wilkens Avenue	Industrial	Ken Roland Truck Washing of America	Full	Yes
O'Donnell Realty	410 Brunswick Street	Vacant	-	Partial	No
<u>Hilton Parkway Connector</u>					
Genstar Harry T. Campbell	2902 W. Baltimore Street	Quarry	-	Partial	Yes
Western Maryland Railroad		Railroad	-	Partial	No

Another facility slated for relocation is the Baltimore City Animal Shelter on Calverton Road. The shelter is eligible for functional replacement.

Summary of the Relocation Assistance Program  
of the State Highway Administration of Maryland

All State Highway Administration projects will 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 through 12-209: The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance Program in the State of Maryland.

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, wage 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 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 moving the item. If



the business is being discontinued or the item is not to be replaced in the reestablished 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. 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 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 are 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, but 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.

A more detailed explanation of the benefits and payments available to displaced persons and businesses is available in the Relocation Brochures that will be distributed at the forthcoming Public Hearing for this project.

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.

All prior and all future required Relocation Assistance will be accomplished in accordance with the requirements of the Uniform Relocation Assistance and Land Acquisition Policies Act of 1970 (P.L. 91-646). Replacement sites are available for the businesses requiring Relocation Assistance.

### ENERGY CONSUMPTION

An analysis of energy consumption was performed to determine the potential effects of the project on vehicular fuel usage. Traditionally, highway projects tend to produce several types of fuel consumption effects that tend to offset one another. The mileage of some trips is shortened by the provision of a more direct route, for example, while other trips have increased mileage as a result of motorists' use of the new facility for its improved traffic flow in spite of longer distances traveled. Other offsetting effects would include speed versus congestion. Stops and starts required on local streets consume excess fuel that would not be used under free-flowing freeway conditions.

Methodology and detailed results of the energy consumption analysis conducted for the proposed project can be reviewed at the offices of the Interstate Division for Baltimore City at the address noted on the title page of this report.

The analysis indicates several effects of the proposed project as shown in Tables IV-9 and IV-10.

. VMT would be greater with I-595 than without. Estimates are that the vehicle miles traveled by the motorists on Frederick, Wilkens and Edmondson Avenues, estimated to be approximately 684,000 vehicle miles per day under the "No-Action" (in year 2006), would increase to almost 725,000 vehicle miles per day if I-595 were constructed in the year 2006. This increase is approximately six percent.

Table IV-9  
I-595 "No-Build"  
Energy Consumption

Street	Limits	Mileage	Speed	Steps/ Mile	Volume	VMT	Fuel Consumption Rate GPM	Stops/Mile Factor	Daily Fuel Consumption
Frederick Avenue via Frederick, Lombard and Green	Beltway to Fayette	5.83	30	2 H	18,915	110,085	.034	1.41	3,743
Wilkins Avenue via Wilkins, Monroe, Pratt, and Green	Beltway to Fayette	5.09	30	2 H	24,272	123,544	.034	1.41	4,200
Edmondson Avenue via U.S. 40		6.64	40	2 H	39,134	259,850	.036	1.47	9,354
Edmondson Avenue via 175, 29, 40	at 95 & Md. 175 to Fayette	21.63	40	2 H	5,638	122,232	.039	1.47	4,767
Edmondson Avenue	at US 29 & Md. 175 to Fayette	17.22	40	2 H	3,967	68,312	.039	1.47	2,664
						<u>684,023</u>			<u>24,728</u>

Future Fuel Economy Factor: .538

Table IV-10  
I-595 "Build"  
Energy Consumption

Street	Limits	Mileage	Speed	Steps/ Mile	Volume	VMT	Fuel Consumption Rate GPH	Stops/Mile Factor	Daily Fuel Consumption
Frederick Avenue via Frederick, Lombard, Green, Local Streets (0.45)	Beltway to Fayette	5.82	30	1 L	10,565	61,488	.029	1.28	1,926
Freeway* (0.49)		8.45	50	0 M	9,185	77,613	.026	1.00	2,018
Wilkins Avenue Local Streets	Beltway to Fayette	5.09	30	1 L	11,913	60,637	.029	1.28	2,250
Freeway*		7.36	50	M	13,595	100,059	.026	1.00	2,602
Edmondson Avenue via US 40 (.045)	Beltway to Downtown	6.64	40	1 M	39,134	259,050	.030	1.32	8,420
Edmondson Avenue via 175, 29, 40b	I-95 & 175 to Downtown	13.73	50	M	6,822	93,666	.026	1.00	2,435
Edmondson Avenue via 175, 29, 40b	US 29 & 175 to	14.91	50	M	4,800	71,568	.026	1.00	1,861
						724,881			21,512

\* Volume Increase by 10 percent.

Future Fuel Economy Factor: .538

. Despite the increase in VMT, the improved traffic flow provided by I-595 would decrease daily fuel consumption in 2006 from 24,728 gallons (under the "No-Build" case) to 21,512 (if I-595 is constructed). This is a 13 percent improvement in fuel efficiency achieved by constructing I-595.

### TOPOGRAPHY, GEOLOGY AND SOILS IMPACTS

The topography, geology and soils discussion in Section III, Affected Environment, outlined the general site conditions of the study area.

The project corridor follows the Lower Gwynns Falls Valley which is characterized by steep slopes, bluffs, and plateaus.

Impacts on the topography of the study corridor can be assessed in terms of the type of roadway section, cut/fill versus structure. Cut/fill sections could have a greater adverse impact on topography and soils since soil would either be removed or added, altering the existing ground line. Alternative 4, the Boulevard Alternative, would more closely follow the natural contours of the valley and require the greatest amount of cut/fill. Alternatives 1, 2 and 3 would be constructed on structure throughout the majority of their length. These alternatives constructed on structure rather than fill would have less potential impact on soil erosion and sedimentation since less earth would be disturbed. However, Alternative 3 (the double-decker alternative) would require deeper cuts into the valley walls, and would have a greater topographical impact than Alternatives 1 or 2.

All of the alternative alignments would cut into the bluff at Southwestern High School. Alternatives 1 and 2 would require approximately 40-foot cuts with an under Amtrak design and 15-foot cuts with an over Amtrak design. With Alternative 3, the northbound lanes would pass under Amtrak, and would require a 40-foot cut into the bluff. The Boulevard Alternative, Alternative 4, would require approximately a 15-foot cut for either an over or under Amtrak design.

The Hilton Parkway Connector Alternatives would have approximately equal impacts on the topography. Alternatives A and B would involve a cut/fill section through the bluff east of Hilton Parkway between the Hilton Recreation Center and Daisy Hill. Alternative C would be located north of Daisy Hill Field, requiring a cut/fill section prior to tying in with Hilton Parkway.

The following section discusses potential soil erosion problems and impacts, and measures which will be used to minimize harm. The alternative constructed on structure rather than embankment would have less potential impact on soil erosion and sedimentation since less earth would be disturbed.

#### SOIL EROSION AND SEDIMENT CONTROL

The critical period for soil erosion and sediment control problems occurs during the construction phase of the project when excavated soils are exposed. The project would not involve any stream relocation, however, construction could result in erosion and sedimentation impacts. In order to minimize impacts, measures in accordance with Maryland Standard Specifications and Practices would be practiced to minimize erosion during construction. These measures could include such items as diversion dikes, silt fences, sediment traps, temporary shoulder berms and slope pipes at fill areas, temporary and permanent ground cover, early installation of permanent inlets and drains, prompt backfill of structure foundation excavations and all other measures to minimize erosion and sedimentation.

Section 8.05.03.01 of the State of Maryland Sediment Control Act of 1970 specifies that any land clearing, grading or earth disturbance of certain specifications shall require a plan for sediment control which must be approved by the appropriate department, Soil Conservation District, or municipality. In the case of the proposed construction, such a plan must be approved by the Maryland Department of Natural Resources. No work can begin on any individual contract until said permits have been obtained and detailed schedules and methods of operations 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 Act to obtain permits from the appropriate agency in cooperation with the local soil conservation district for any off-site work including borrow pits, waste areas, etc.

The Maryland State Highway Administration and the Interstate Division for Baltimore City have worked closely with the Maryland Water Resources Administration and the U.S. Department of Agriculture, Soil Conservation Service over the past several years to establish guidelines and procedures for the prevention of erosion and sedimentation, as well as material spillage into drainage channels. The adopted standards and specifications set forth the procedures and controls over construction measures to be used on all highway contracts. The adopted standards and construction measures to be used are effective and have been proven successful on other highway projects in the State.

The State Highway Administration, the Water Resources Administration and the Federal Highway Administration review the plans during

design and inspect the project during construction to insure implementation of these mitigating measures to minimize adverse impacts from erosion and sedimentation during the construction phase.

Upon completion of the project, the potential for erosion will be minimal. Both the State Highway Administration and the City of Baltimore have regular maintenance programs to keep the roadway, drainage systems and landscaping in proper condition. These normal and regular maintenance procedures will effectively control any erosion that may occur during the operational phase of the project.

### WATER QUALITY IMPACTS

The proposed project is not anticipated to have any significant impacts on ground or surface water resources in the study corridor. No known ground water or public surface water supplies exist in the vicinity of the project. The Gwynns Falls is not considered a wild or scenic river. The stream does not support any known aquatic threatened or endangered species nor is it considered critical habitat for any such species. Both Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands) will be complied with. No wetlands as defined by E.O. 11990 will be impacted.

Adequate erosion and sediment control measures will be implemented and maintained throughout the construction phase to minimize the amount of erosion and sedimentation. The Gwynns Falls will not have to be relocated or channelized with any of the proposed alternatives. The permanent loss of stream habitat as a result of pier construction will be minimal due to the small number of areas where this would occur.

Natural and beneficial floodplain values will not be significantly affected.

### ECOLOGICAL IMPACTS

Construction of a highway in the Lower Gwynns Falls Valley would impact ecological resources to varying degrees dependent upon the alternative considered. Each of the study alternatives would result in the removal of existing wooded acreage with a resultant reduction in the habitat available to terrestrial animals. All of the alternatives would be similarly located in the corridor segments between Interstate 95 and Wilkens Avenue in the south and the Conrail/Amtrak Corridor and Interstate 170 in the north. These two areas are highly industrialized and there exists little in the way of plant or animal resources that could be impacted.



The portion of the corridor between Wilkens Avenue and the connection to Hilton Parkway/Edmondson Avenue is a mixture of undeveloped wooded parkland, including the Gwynns Falls, open active recreational use, the Western Maryland railroad line and the Genstar Quarry north of Baltimore Street. The amount of woodland required for the proposed project would vary from 7.5 to 14 acres with the mainline alternatives. Alternative 3 would convert the smallest amount (7.5 acres) of woodland to transportation use while Alternative 2 would convert the most (14 acres), with Alternatives 4 and 1 next, utilizing 7.9 and 11.4 acres, respectively. The three Hilton Parkway Connector alternatives would convert from 4 to 5 acres of woodland to transportation use. Depending upon which Hilton Parkway Connector is combined with which mainline alternative, the impact upon woodland, i.e., removal, would range from 11.5 to 19 acres. Accompanying this conversion of woodland would be the loss of habitat available for terrestrial wildlife and the probable reduction in the species populations in the corridor. It can be expected that some of the species may find suitable replacement habitat in adjacent areas, particularly Leakin Park to the north. The degree of adverse impact is not anticipated to be significant. Erosion and subsequent sedimentation during construction can adversely affect aquatic wildlife, however, due to the general lack in the Gwynns Falls of sensitive species, no adverse impacts are anticipated.

Coordination with the U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources indicated that there are no known rare or endangered plant or animal species in the study corridor, therefore, no adverse impact to these are anticipated. Copies of correspondence from these agencies are included in the Appendix.

### FLOODPLAIN IMPACTS

The proposed project is expected to have little adverse effect on the flood flows within the stream valley, but would produce an increase in flood levels to some degree.

The highway alternatives have been developed so they would not be inundated by a 50-year frequency storm event. The 100-year frequency storm event has been evaluated to determine the highway impact on the floodplain and the surrounding property. A complete analysis of the relation of the flood flow depth and floodplain storage volumes for each of the alternatives studied is contained in Technical Report No. 3, available for review at the offices of IDBC.

The area downstream of Washington Boulevard would not be affected by any increase in storm flows or level of flooding because the additional ponding caused by the project would maintain or reduce existing storm peak flows. Construction of the project could raise the flood level approximately one foot which would inundate an additional area estimated to be two

acres with a 100-year frequency storm. Of the estimated two acres, 0.3 acre would be within the project right-of-way and 1.7 acres would be within the boundary of the Carroll Park Golf Course (see Exhibit IV-1). This additional 1.7 acres would be a narrow strip following the existing floodplain limit along the southwestern edge of Carroll Park and would not adversely impact the developed areas within the park.

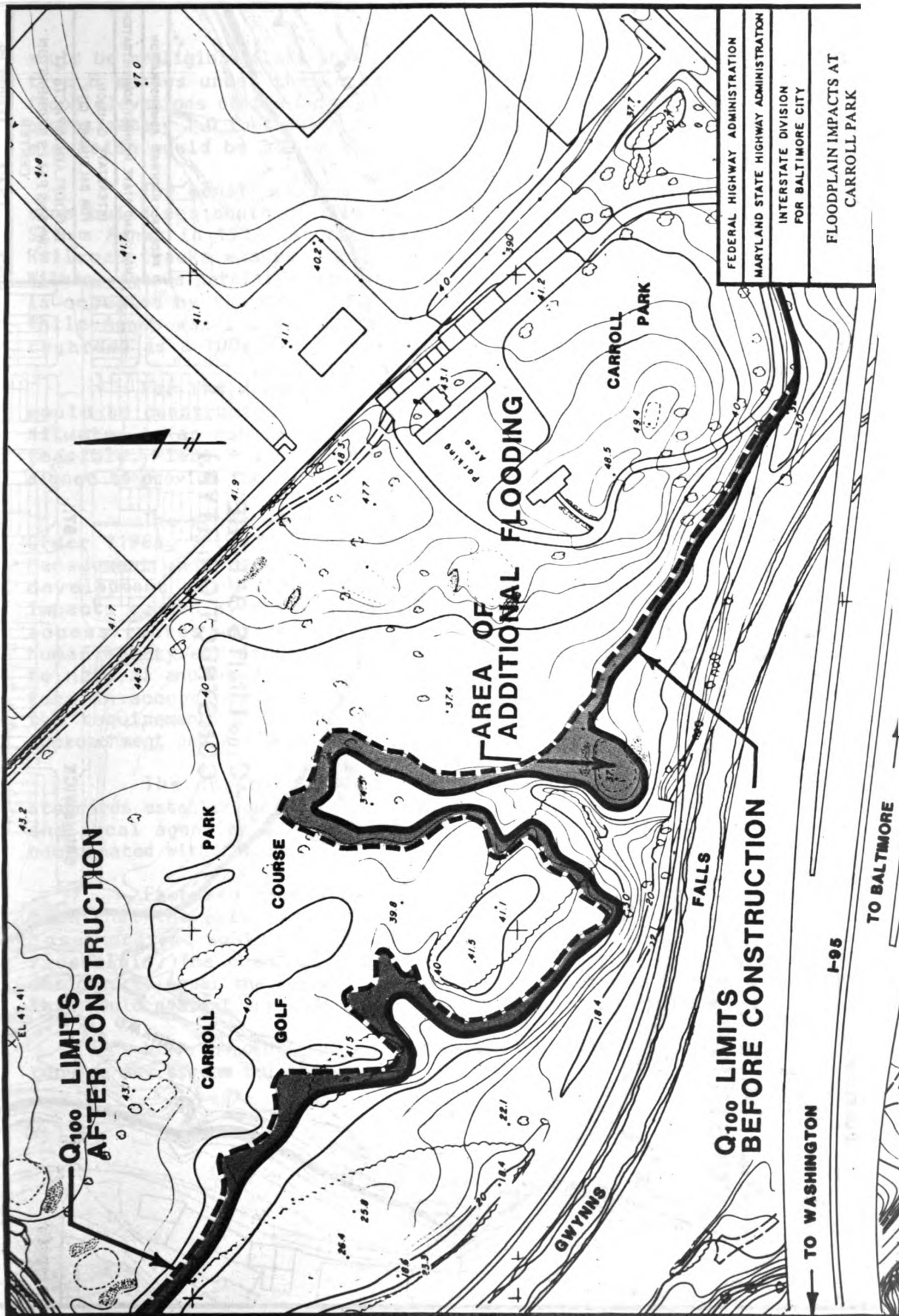
South of Wilkens Avenue, the project would involve construction within the floodplain, but would be located in an area of ineffective flow presently occupied by warehouses. The embankment areas within the floodplain would not encroach on the limits of the Federal Emergency Management Agency (FEMA) designated floodway. The additional area inundated by the 100-year storm would be approximately 1.0 acre under any of the project alternatives.

The flow in the Gwynns Falls between Wilkens Avenue and Baltimore Street would be affected to varying degrees depending upon the alternative and the under/over option at Frederick Avenue. The additional area inundated by the maximum increase in the 100-year water level would be approximately 0.3 acre south of Frederick Avenue. The construction of any of the project alternatives would increase the depth of flooding at the Gwynns Falls Recreation Center by approximately 0.5 foot (see Exhibit IV-2). The Recreation Center building is not within the limits of the floodplain and would not be affected by the proposed project.

Crossing under Frederick Avenue for Alternatives 1, 2 and 3 would require the placing of roadway fill within the floodplain, creating a longitudinal encroachment both upstream and downstream of Frederick Avenue. North of Frederick Avenue and south of the Western Maryland Railroad Bridge, Alternative 2 would have the greatest impact on the 100-year storm flow elevations and Alternative 4 would have the least impact. The maximum increase in the 100-year water level with the proposed project would be approximately 0.7 acre. The profile option of going under Frederick Avenue would be expected to raise the flood elevation to a level where the 100-year storm would be approximately one foot above the edge of the shoulder. The 50-year storm water elevation would be approximately one foot below the edge of the shoulder, which does not meet the AASHTO design for the 50-year storm floodwater criteria of three feet below the edge of shoulder elevation.

The additional area inundated by the maximum increase in the 100-year floodwater levels would be approximately 1.0 acre between the Western Maryland Railroad Bridge and Baltimore Street. The properties affected by the increase would be the Western Maryland Railroad on the west side and Gwynns Falls Park property on the east and west sides of the stream. Alternative 2 would have the greatest impact while Alternative 3 would have the least impact in this area.

For the Hilton Parkway Connector Alternatives, the additional area inundated by the maximum increase in the 100-year floodwater level





FEDERAL HIGHWAY ADMINISTRATION	DATE	SCALE	EXHIBIT NO.
MARYLAND STATE HIGHWAY ADMINISTRATION	JAN. 83	1" = 200'	IV-2
INTERSTATE DIVISION FOR BALTIMORE CITY			
FLOODPLAIN IMPACTS AT GWYNNS FALLS RECREATION CENTER			

would be negligible (less than 0.1 acre). Hilton Parkway Connector Alternative B passes under the Conrail/Amtrak Bridge, but would not raise the flood elevations of the Gwynns Falls. The 100-year flood elevation would be approximately 1.0 foot below the edge of the shoulder and the 50-year flood elevation would be 3.0 or more feet below the edge of shoulder elevation.

The construction of the project would necessitate the removal of some buildings south of Wilkens Avenue which were damaged during Tropical Storm Agnes in 1972. At that time, a portion of the Western Maryland Railroad tracks was partially washed out and several buildings south of Wilkens Avenue partially submerged. North of Wilkens Avenue, the floodplain is occupied by the Gwynns Falls Park and the Western Maryland Railroad. While Agnes was the greatest storm of record in this area, it was not regarded as a 100-year storm with the drainage area fully developed.

For the most part, the highway located within the floodplain would be constructed on aerial structure and pier placement would be situated so as not to impinge upon the normal flow of the stream wherever feasible. Piers would be skewed to parallel the stream flow, and/or designed to provide the least obstruction to stream flow.

The proposed project is considered in compliance with Executive Order 11988, "Floodplain Management" and DOT Order 5650.2, "Floodplain Management and Protection." The proposal will not encourage floodplain development along the corridor since access will be controlled. The impacts caused by the proposal will not disrupt or terminate emergency access routes within the City, will not cause a significant risk to human safety and property, and will not cause significant adverse impacts to natural and beneficial floodplain values along the Gwynns Falls. Therefore in accordance with the requirements of FHPM 6-7-3-2 which implement the requirements of Executive Order 11988, there will not be a significant encroachment and a floodplain finding will not be required.

The design of the proposed project will be consistent with standards established by the Federal Emergency Management Agency, and State and local agencies and the analysis and study of the project has been coordinated with them.

Proposed reconstruction of any of the existing bridges would be such that the existing floodplain conditions can be maintained. The proposed project would not affect the natural beneficial aspects of the floodplain. The openings proposed for the reconstructed bridges will be designed to equal the current restriction in stream flow wherever feasible. This would prevent any additional flooding problems downstream.

None of the project alternatives under consideration would require any stream relocation.



## HISTORICAL IMPACTS

None of the historical sites or districts in the project corridor as described in Section III of this report will be directly affected by any of the "Build" Alternatives.

## ARCHAEOLOGICAL IMPACTS

The Phase I archaeological reconnaissance for the project (summarized in Technical Report No. 1) found that the majority of the corridor consists of highly urbanized areas, undeveloped parkland, steep slopes, and floodplain of low archaeological potential. This report discussed in Section III identified Three Mill site (18BE34) and Gwin site (18B34) and one sensitive area, Mount Clare Mill.

Three Mill site is the only archaeological site that may be potentially impacted by the proposed project. In order to further assess the potential for National Register significance, further investigation is needed to determine the condition and extent of the site.

## PARK AND RECREATION AREA IMPACTS

In Section III, a number of park and recreation areas in the study corridor were identified. Of those discussed, the following will not be affected:

- . Carroll Park
- . Hilton Recreation Center
- . Bloomingdale Oval
- . Cardinal Gibbons/Archbishop Keough High Schools

No land would be required from the Bentalou Recreation Center, however, the area could experience noise impacts. A noise barrier is being considered for this area. No active recreation areas would be taken from the Southwestern High School with any of the proposed alternatives. An adverse impact from traffic generated noise levels could result at the running track/football field facility. The proposed project would require from 5.0 to 10.2 acres of land from the Southwestern High School property, depending upon the mainline and Hilton Parkway Connector alternatives combination selected.

Impacts to Gwynns Falls Park, Daisy Hill Field and the Gwynns Falls Recreation Center are detailed in Section V, Section 4(f) Evaluation, of this document.

### FUNCTIONAL REPLACEMENT

The need for functional replacement of public-owned areas has been established by the Federal Highway Administration for the taking of existing similar areas from the Southwestern High School property under the "Build" Alternatives, for both the mainline roadway and the Hilton Parkway Connector. A survey to determine the availability of land for this replacement within or close to the project area has indicated that adequate lands do exist where such replacement could occur. They include approximately 34 acres of the Gwynns Falls floodplain south of Wilkens Avenue (see Exhibit V-16) and approximately 31 acres of land currently occupied by the Genstar Quarry. These areas are identified as potential areas only and not necessarily the exact sites to be purchased for this purpose. Future studies of the feasibility and availability of these lands will be performed contingent upon the amount of land required, the cost of the land, and the level of improvements necessary to create viable open space for community use.

A new site for the Animal Shelter has been selected on the north shore of the Middle Branch of the Patapsco River at Warner and Stockholm Streets.

Park and recreation areas to be functionally replaced are detailed in Section V, Section 4(f) Evaluation, of this document.





**Section V:**

---

**Section 4(f) Evaluation**





## SECTION V: SECTION 4(f) EVALUATION

### INTRODUCTION

This Draft Section 4(f) Evaluation has been prepared to describe the potential use and mitigation measures to those properties within the proposed I-595 Corridor which are protected under Section 4(f) of the Department of Transportation Act of 1966. Identification and significance of these properties has been determined through coordination with the Maryland Historical Trust, the Maryland Geological Survey's Division of Archaeology, and the Baltimore City Department of Recreation and Parks.

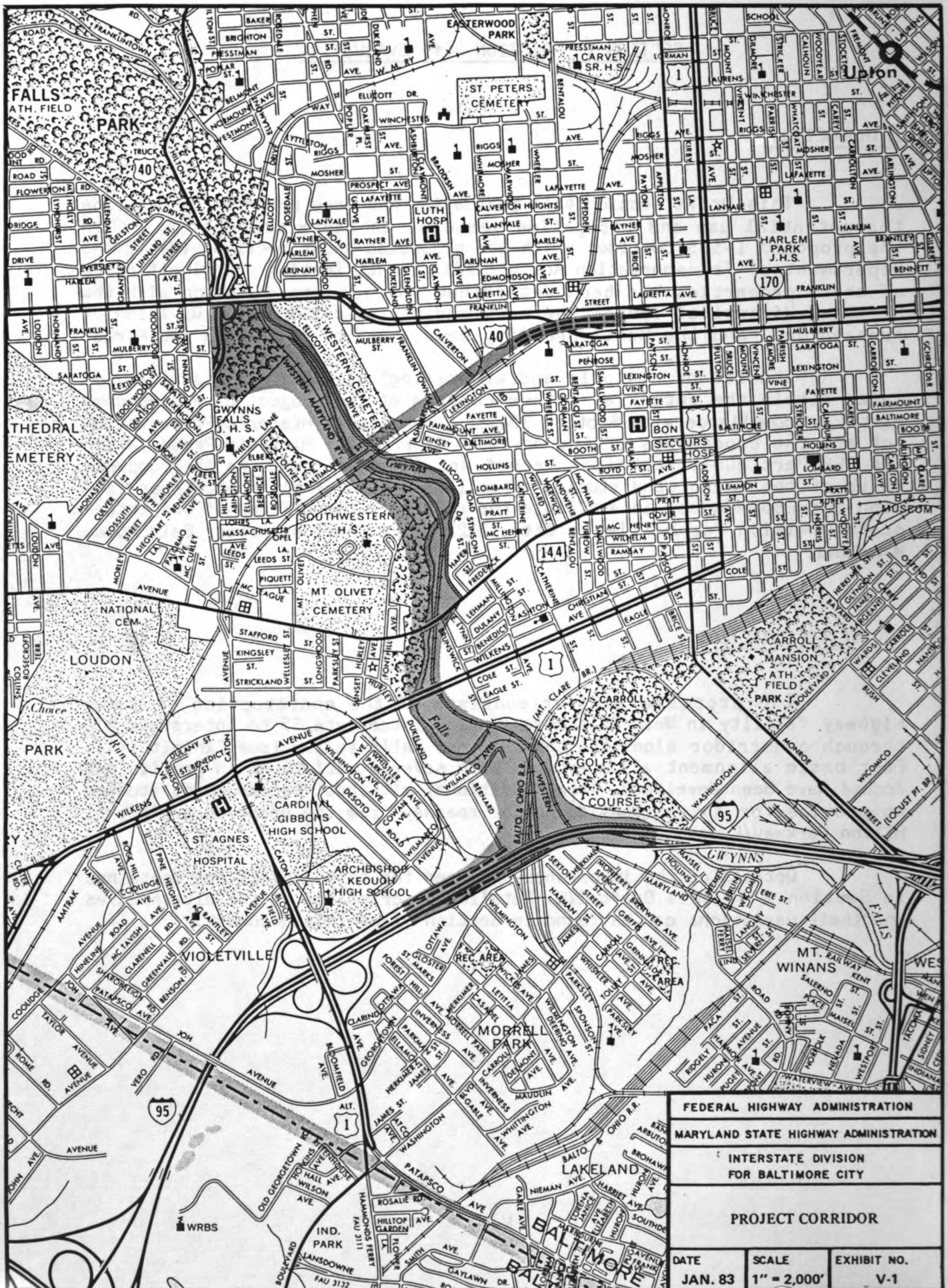
Studies of historic and archaeological sites and districts located within the potential influence area of the project have been completed in compliance with Section 106 of the National Historic Preservation Act and the procedures of the Advisory Council for Historic Preservation (36 CFR Part 800). Technical Report No. 1, which contains the complete texts of the background studies as well as copies of all agency coordination correspondence, is available for review at the offices of the Interstate Division for Baltimore City, 2225 North Charles Street, Baltimore, Maryland.

### PROJECT DESCRIPTION

The proposed project consists of the construction of a new highway facility in West Baltimore linking Interstate 95 to Interstate 170 through a corridor along the Lower Gwynns Falls Valley (see Exhibit V-1). Four basic alignment alternatives with several variations in profile and access have been developed. Three additional alternatives are being studied to provide for an optional connector roadway from the proposed project to Hilton Parkway/Edmondson Avenue.

Details on the importance and need for this project are contained in Section I of this Draft EIS. Detailed descriptions of the alternatives and their variations can be found in Section II of this document.





DESCRIPTION OF SECTION 4(f) LANDS  
IN THE PROJECT CORRIDOR

The proposed I-595 roadway and the optional Hilton Parkway Connector could require Section 4(f) takings from two of the identified sites within the project corridor (see Exhibit V-2):

- . Three Mill Archaeological Site
- . Gwynns Falls Park

Detailed descriptions of these sites are presented below.

Three Mill Archaeological Site

The site is located on the east side of the Gwynns Falls along the north side of Frederick Avenue including and west of Ellicott Driveway. At this location the Ellicott family built three merchant mills around 1795 that operated through the nineteenth century. An earlier mill possibly existed at this site prior to the Ellicotts' purchase. During the early twentieth century, a large woolen mill dominated the site, though one of the original Ellicott structures may have remained standing as late as 1915. No standing structures are present today.

Shovel test pits indicated that portions of the mill yard exist, though no structural remains were found. Structural debris, including brick, mortar, and large building stones were noted along the steep hillside running north from the Frederick Avenue bridge. Portions of the site may have been damaged during construction of the Western Maryland Railroad and the straightening of Frederick Avenue in the early twentieth century.

Three Mill site, documented by maps, newspapers, and county histories, has historic significance through its ties with the commercial and industrial development of Baltimore City. Closely associated with this site is the Old Mill Hill, a residential area previously recommended for inclusion on the National Register. Archaeological indications of a possible industrial mill yard also exist.

Phase I investigations have located this site but are not sufficient to examine the integrity of the site. This merchant mill site is potentially eligible for the National Register from evidence researched in historic documents.

## Gwynns Falls Park

Gwynns Falls Park is a 718-acre linear park which, when considered with Leakin Park to its west, forms the oldest and largest stream valley park in Baltimore. Originally conceived in the first decade of the twentieth century as part of the Olmstead Brothers Park Plan, the Gwynns Falls Park has stayed relatively free from outside development since that time. The park presently follows the course of the Gwynns Falls stream from Windsor Mill Road to Wilkens Avenue varying in width from six-tenths of a mile west of Hilton Parkway and northeast of Stokes Drive, to several hundred feet opposite Southwestern High School, which at one time was also part of the park.

However, three areas of the Gwynns Falls Park have been developed and are maintained by the Baltimore City Bureau of Recreation. These are active recreation areas which include basketball, tennis and baseball/softball facilities and are identified as Daisy Hill Field, Bloomingdale Oval, and Gwynns Falls Recreation Center.

The majority of the park is intended for passive recreation such as fishing, camping, hiking, and bicycle riding, though no defined trails exist within the park itself. Access to the various segments of the park is provided at the streets which cross over the park; however, there are no formal entrances at any of these points.

Vegetation in the park is largely undisturbed, with many portions heavily overgrown and inaccessible, particularly between Frederick Avenue and Baltimore Street where the park is narrow and lies in a deep, gorge-like valley improved only by the privately owned Western Maryland Railroad tracks. Several of the more remote areas show signs of misuse, as evidenced by scattered dumping sites for debris and junk noted during recent site visits.

Due to the random access to Gwynns Falls Park, usage figures are not kept by the Park Bureau. During late summer site visits, small groups of school-age children were observed fishing at several locations, with one of the more popular spots being underneath the Baltimore Street and Conrail/Amtrak Railroad bridges.

The Daisy Hill Field is an attractive, ten-acre open field on top of a plateau between the Gwynns Falls stream and Hilton Parkway immediately south of Edmondson Avenue. Current facilities include a brick comfort station, a fenced-in basketball court, a softball diamond, and a multipurpose field.

The fence of the basketball court is partially destroyed and one of the backboard rims is broken; otherwise, the field is well maintained. Due to its location on a plateau high above the stream valley, no easy access exists to other portions of Gwynns Falls Park.



LEGEND

- 1 2801 TO 2821 KINSEY AVENUE
- 2 BUTCHER'S LANE DISTRICT
- 3 OLD MILL HILL DISTRICT
- 4 LONGEST ROWHOUSE BLOCK
- 5 MOUNT OLIVET CEMETERY
- 6 OLD FREDERICK ROAD/FONTHILL AVENUE DISTRICT
- 7 CARROLLTON VIADUCT
- 8 HILTON RECREATION CENTER
- 9 GWYNNS FALLS PARK
- 10 DAISY HILL FIELD
- 11 BLOOMINGDALE OVAL
- 12 GWYNNS FALLS RECREATION CENTER
- 13 SOUTHWESTERN HIGH SCHOOL ATHLETIC FIELDS
- 14 BENTLOU RECREATION CENTER
- 15 CARROLL PARK
- 16 BOYD-BOOTH HISTORIC DISTRICT
- 17 FRANKLIN SQUARE/UNION SQUARE HISTORIC DISTRICTS
- 18 EXTENSION OF BUTCHER'S LANE DISTRICT
- 19 BREWERY/INDUSTRIAL HISTORIC DISTRICT

— HISTORIC SITE/DISTRICT  
 — PARKLAND  
 — RECREATION AREA



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
CORRIDOR 4(f) PROPERTIES		
DATE JAN. 83	SCALE 1" = 1,000'	EXHIBIT NO. V-2



The Gwynns Falls Recreation Center is located in the northwest quadrant of the intersection of the Gwynns Falls Stream and Wilkens Avenue. It is the largest and most varied of the three formal recreation areas within Gwynns Falls Park. The current improvements to this 16-acre, well-maintained site include:

- . General recreation building (7,000 square feet)
- . One 90-foot baseball diamond
- . One 75-foot baseball/softball diamond
- . One basketball court
- . One playground with play equipment
- . One tennis court

Numerous other improvements such as benches and water fountains are scattered around the site.

Little Leagues use both diamonds daily except on Sundays from early April to the end of July, with utilization as high as 200 people per day during this time. During the spring, the Junior Varsity baseball team from Southwestern High School uses the baseball diamond for practice on weekdays from 3-6 p.m. The playground is well-used during the summer months, with up to 150 children per day utilizing these facilities. The basketball court receives the heaviest year-round use of all playground facilities. Direct access to the Gwynns Falls stream is also available from the ballfield area.

#### DESCRIPTION OF PROPOSED DEIS ALTERNATIVES

During the initial study phase for this project, a variety of preliminary alignments were developed and analyzed. Location flexibility of the alignments was limited by the defined project endpoints--the I-95 connector ramps on the south and I-170 in the Franklin/Mulberry Corridor on the north. Additional location constraints included the topography of the Lower Gwynns Falls Valley, the Gwynns Falls stream itself, the several roadways crossing the valley, the Western Maryland and Conrail/Amtrak rail corridors, and the numerous 4(f) lands both within and adjacent to the study corridor.

The following subsections will summarize each of the DEIS alternatives which resulted from this analysis and will describe their respective impacts on 4(f) properties. More detailed descriptions of these alternatives are contained in Section II of this DEIS.

### Alternative 1

Alternative 1 is an interstate-type facility that would provide a connection between I-170 and I-95 with no points of access from the local street system (see Exhibits V-3 and V-4). As with each of the four "Build" Alternatives, this alternative originates at the existing terminus of I-170 east of Mulberry Street and consists of two two-lane roadways. After crossing Mulberry Street, the alignment would continue westerly on separate parallel structures, pass over the Conrail/Amtrak rail corridor and proceed parallel to and north of the railroad to a second crossing in the vicinity of Baltimore Street, where two crossing options, either over or under the railroad, would be available. Beyond this crossing, the roadways widen to three lanes in each direction to allow for the possible Hilton Parkway Connector and the alignment turns in a southerly direction passing just east of the Southwestern High School football field and running track, cutting through an existing wooded bluff that juts out into the valley. At this point, the roadways would diverge slightly and continue parallel to the Gwynns Falls, converging again just south of the Frederick Avenue crossing. Two crossing options (over and under) are feasible at Frederick Avenue. South of Frederick Avenue the alignment continues on structure, above and parallel to the Gwynns Falls Recreation Center. The southbound roadway would be located directly above the existing home plate area of the baseball field furthest from the Recreation Center building. The alignment would then cross the Gwynns Falls just north of Wilkens Avenue, pass over Wilkens Avenue, and continue on structure to its interchange with I-95.

### Impacts

#### Three Mill Archaeological Site

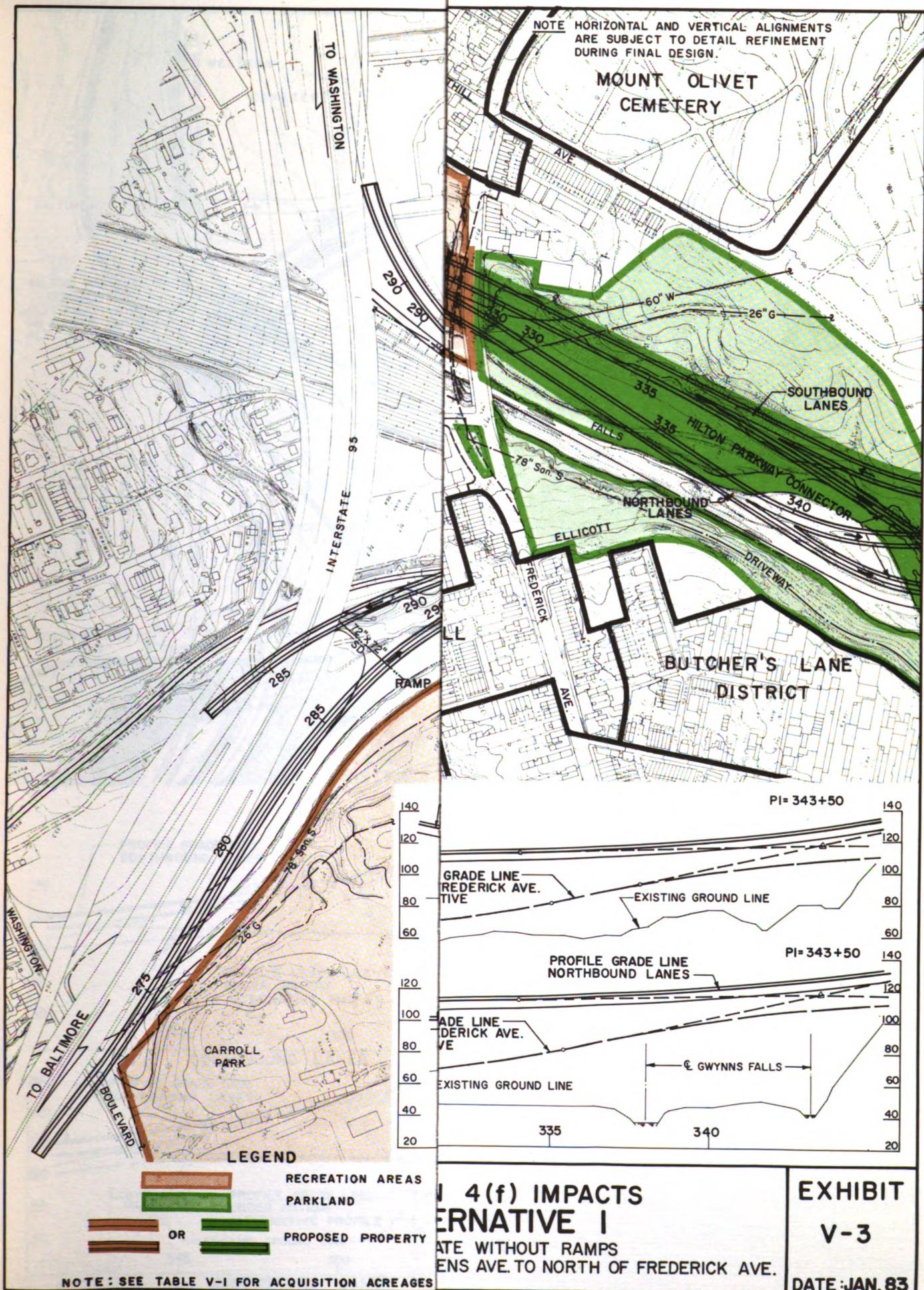
No impact.

#### Gwynns Falls Park

##### (a) Passive Recreation Area

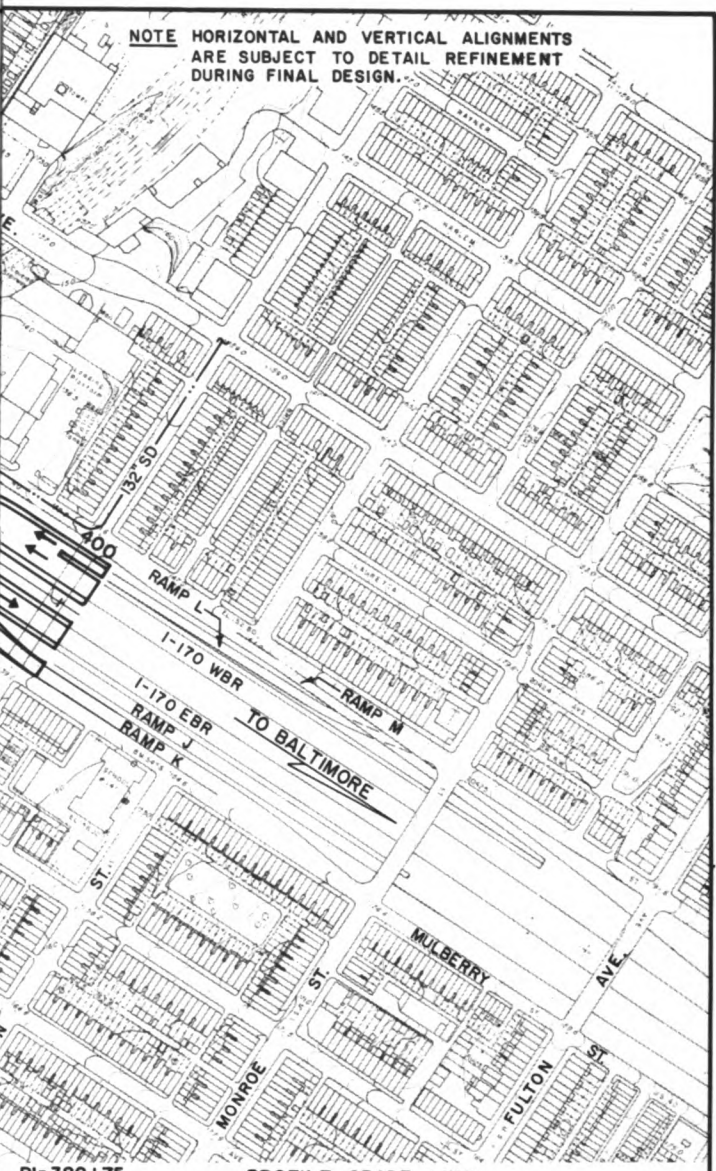
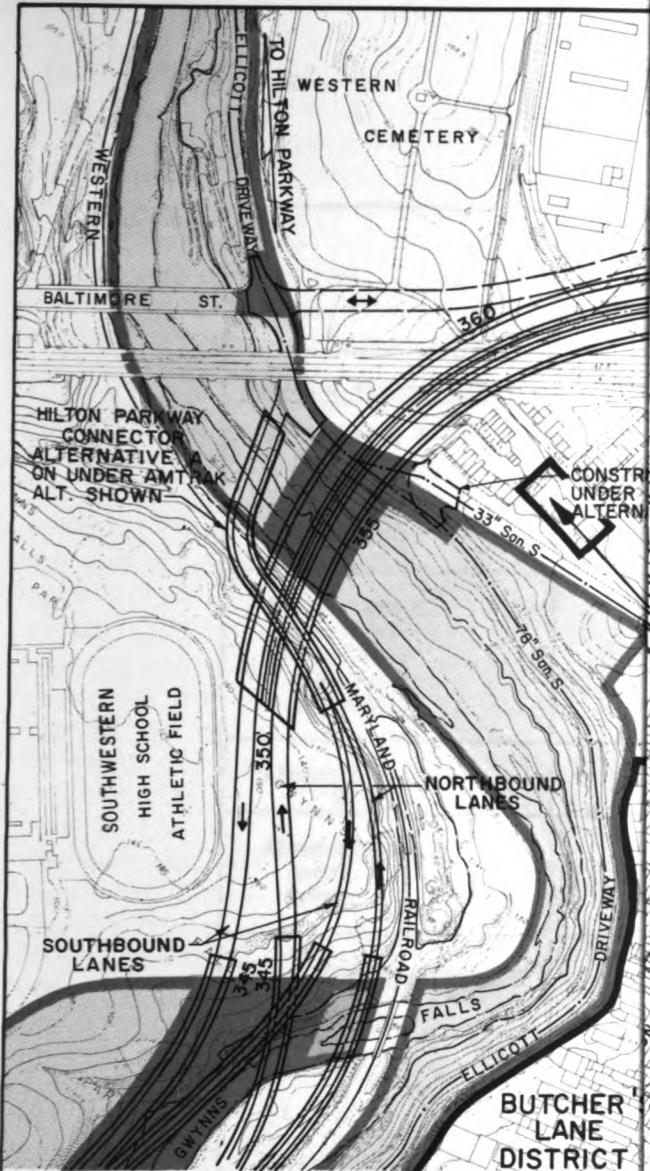
Depending on the profile option used, Alternative 1 would require between 3.3 to 10.6 acres from passive recreation areas of the park (see Table V-1).



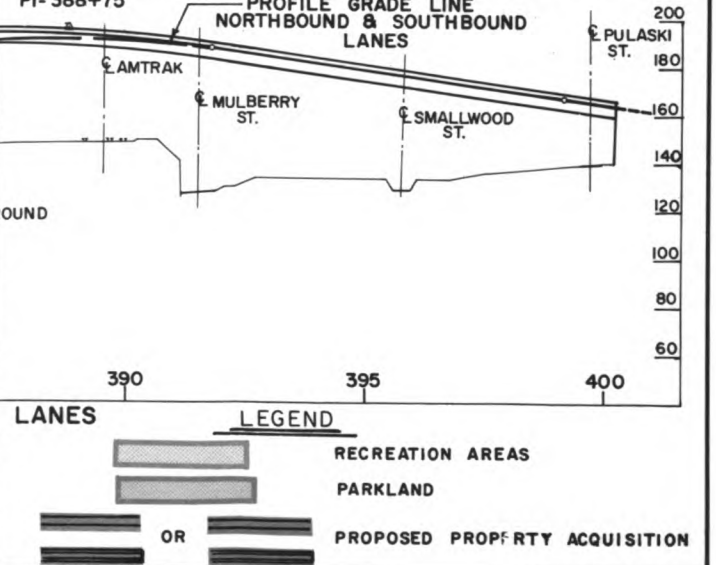
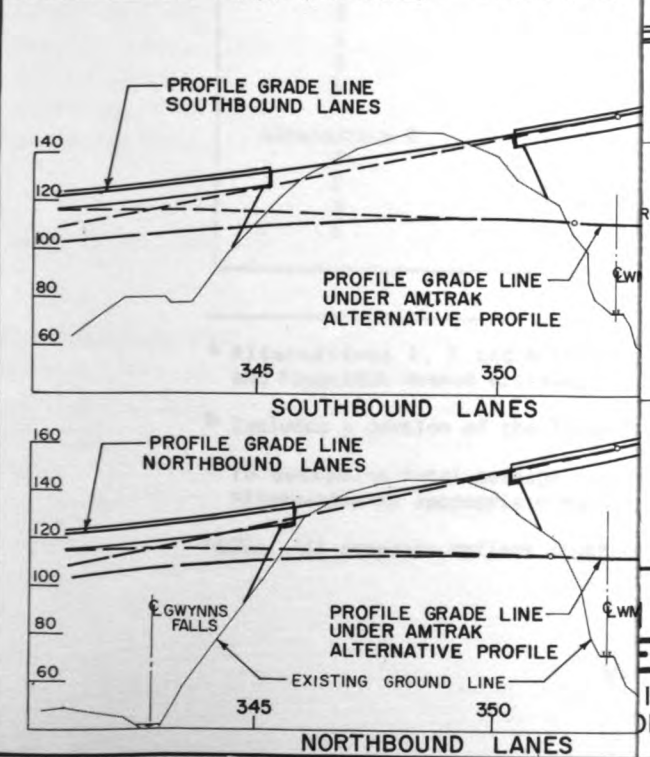








NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



**4(f) IMPACTS**

**ALTERNATIVE I**

**INTERSTATE**

**DERICK AVE. TO I-170 AT PULASKI ST.**

**EXHIBIT**

**V-4**

**DATE: JAN. 83**





Table V-1  
4(f) Property Acquisition

	Gwynns Falls Park		
	Passive Recreation Area	Daisy Hill Field	Gwynns Falls Recreation Center
<b>Mainline Alternatives<sup>a</sup></b>			
Alternative 1			
Over/Over	3.3	--	3.8
Over/Under	10.6	--	4.0
Under/Over	10.2	--	3.8
Under/Under	10.6	--	4.0
Alternative 2			
Over/Over	11.5 <sup>b</sup>	--	4.8
Over/Under	12.5 <sup>b</sup>	--	4.7
Under/Over	12.4 <sup>b</sup>	--	4.8
Under/Under	13.4 <sup>b</sup>	--	4.7
Alternative 3	5.8	--	3.6
Alternative 4			
Over/ -	9.6 <sup>b</sup>	--	3.4
Under/ -	9.6 <sup>b</sup>	--	3.4
<b>Hilton Parkway Connector<sup>c</sup></b>			
Alternative A			
1	3.4	3.0	--
2	3.6	3.0	--
3	4.7	3.0	--
4	3.4	3.0	--
Alternative B			
1	1.3	7.5	--
2	2.2	7.5	--
3	2.0	7.5	--
4	1.0	7.5	--
Alternative C			
1	5.3	0.5	--
2	6.2	0.5	--
3	6.3	0.5	--
4	5.0	0.5	--

<sup>a</sup> Alternatives 1, 2 and 4 indicate over-under options at the Conrail/Amtrak and Frederick Avenue crossings, respectively.

<sup>b</sup> Includes a portion of the Three Mill Archeological Site.

<sup>c</sup> To determine total acreage requirements, add acreage from Hilton Connector Alternative to appropriate Mainline Alternative.

NOTE: All acreages reflect right-of-way to right-of-way acquisition.

No air quality violations are expected to occur within the park under this alternative, nor will Federal noise abatement criteria be exceeded. A tabulation of predicted noise levels is contained in Table IV-2, while future air quality values for carbon monoxide are indicated in Tables IV-4 through IV-7.

North of Frederick Avenue, some of the native vegetation between the northbound and southbound lanes would be preserved, thereby diminishing the overall visual effect the highway would have. The northbound roadway, however, crosses the Gwynns Falls on a skew, eliminating many excellent upstream views of Gwynns Falls Park from Frederick Avenue. In addition, with both northbound and southbound roadways located close to the stream, the passive visual character of the stream valley would be impaired.

If Alternative 1 is constructed under the Conrail/Amtrak bridge, a 35-foot-deep cut section would result. Views of Gwynns Falls Park from the high school would be better since the roadway would be well below the level of the track and out of view. Where vegetation is removed as a result of construction, long vistas of the Gwynns Falls Valley and downtown would be possible. Views to the roadway from within the valley or across the valley will be marred, however, by the cut slopes and excessive loss of vegetation, destroying the natural character of the plateau.

(b) Daisy Hill Field

No impact from the I-595 mainline alternatives. This area of the park is affected only by the Hilton Parkway Connector options.

(c) Gwynns Falls Recreation Center

Alternative 1 would require 3.8 to 4.0 acres from Recreation Center lands. This acreage would be predominately from the area occupied by the Recreation Center's two baseball fields and would alter their present function. The proximity of the highway to the remaining portion of the Center will result in an increase in  $L_{eq}$  noise levels from 55 dBA to 72 dBA which is in excess of the 67 dBA FHWA noise abatement criteria.

No air quality violations are predicted to occur at the Center.

The extreme height, width and mass of the elevated highway would adversely affect views from the Recreation Center.

## Alternative 2

Alternative 2 would also provide an interstate-type facility identical to Alternative 1 from its point of beginning at Interstate 170 to the second Conrail/Amtrak right-of-way crossing at Baltimore Street (see Exhibits V-5 and V-6). South of this crossing, the roadways separate, with the southbound roadway continuing along approximately the same alignment as in Alternative 1. The northbound roadway would cross the Gwynns Falls and proceed southward down the center of the valley, traversing the Gwynns Falls again prior to the Frederick Avenue crossing. South of Frederick Avenue the roadways would rejoin and continue parallel, passing over Wilkens Avenue on separate structures to the I-95 interchange.

Connections to Frederick Avenue and Wilkens Avenue would be provided with this alternative by a system of service roads connecting the two local streets.

## Impacts

### Three Mill Archaeological Site

The northbound roadway of Alternative 2 will pass through the western portion of the site. Since the exact limits of the site are not known at this time, computation of the actual acreage is not possible. Should this alternative be selected, however, further investigations will be conducted throughout the area defined in the preliminary archaeological survey in order to identify and possibly retrieve extant artifacts (see Technical Report No. 1).

### Gwynns Falls Park

#### (a) Passive Recreation Area

Alternative 2 would require between 11.5 and 13.4 acres of this area of the park, depending on the profile option selected.

No air quality violations are predicted to occur, nor will any areas exceed FHWA noise abatement criteria.

With the additional ramps that serve Wilkens and Frederick Avenues, this alternative varies from 180 to 250 feet wide, visually dominating the valley, disrupting views of the stream and sharply contrasting with the natural character of the stream itself. A great deal of the existing vegetation in the Gwynns Falls Park would be denuded. Some of these areas, particularly beneath the southbound lanes and adjacent ramp at Frederick Avenue, would not be able to be revegetated, due to

the steepness of the slope and extensive shade resulting from the different levels of the highway. Visually, this would contract with the adjacent natural areas of the park. The northbound roadway would screen views upstream as a result of crossing the Gwynns Falls at a skew. At the crossing of the Conrail/Amtrak bridge, the effects on the visual quality would be the same as discussed in Alternative 1.

(b) Daisy Hill Field

No impact from the I-595 mainline alternatives. This area of the park is affected only by the Hilton Parkway Connector options.

(c) Gwynns Falls Recreation Center

Between 4.7 and 4.8 acres of Recreation Center land, depending on the profile option used, would be required by Alternative 2. This acreage would be predominately from the area occupied by the Recreation Center's two baseball fields and would alter their present function. Noise impact would be at the same as Alternative 1.

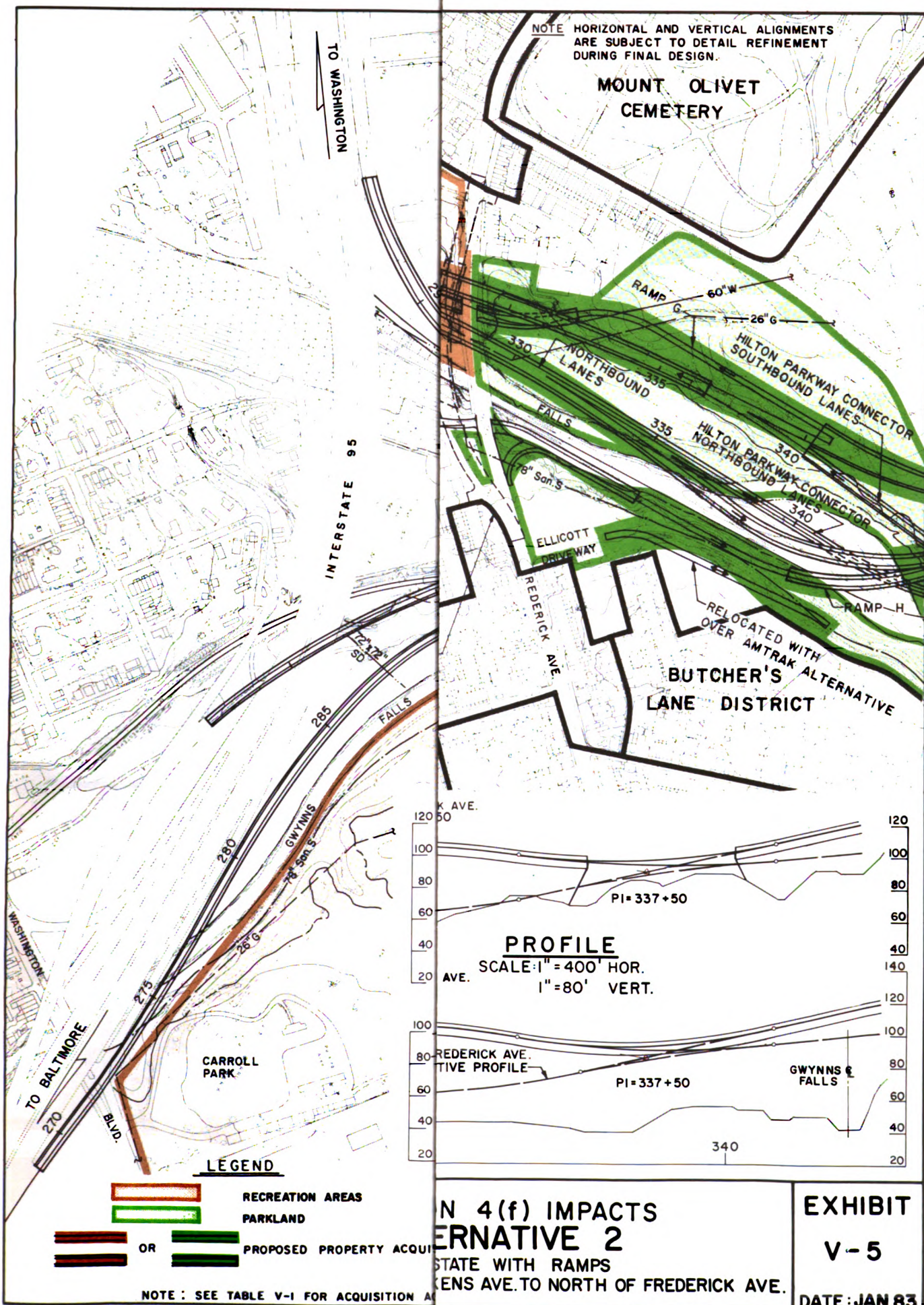
This alternative will not produce any violations of the National Ambient Air Quality Standards.

From the Center, the elevated expressway would dominate the field of view, with lanes crossing over Wilkens Avenue, either over or under Frederick Avenue and on- and off-ramps at-grade with both streets, thus having essentially the same negative visual impact as Alternative 1.

Alternative 3

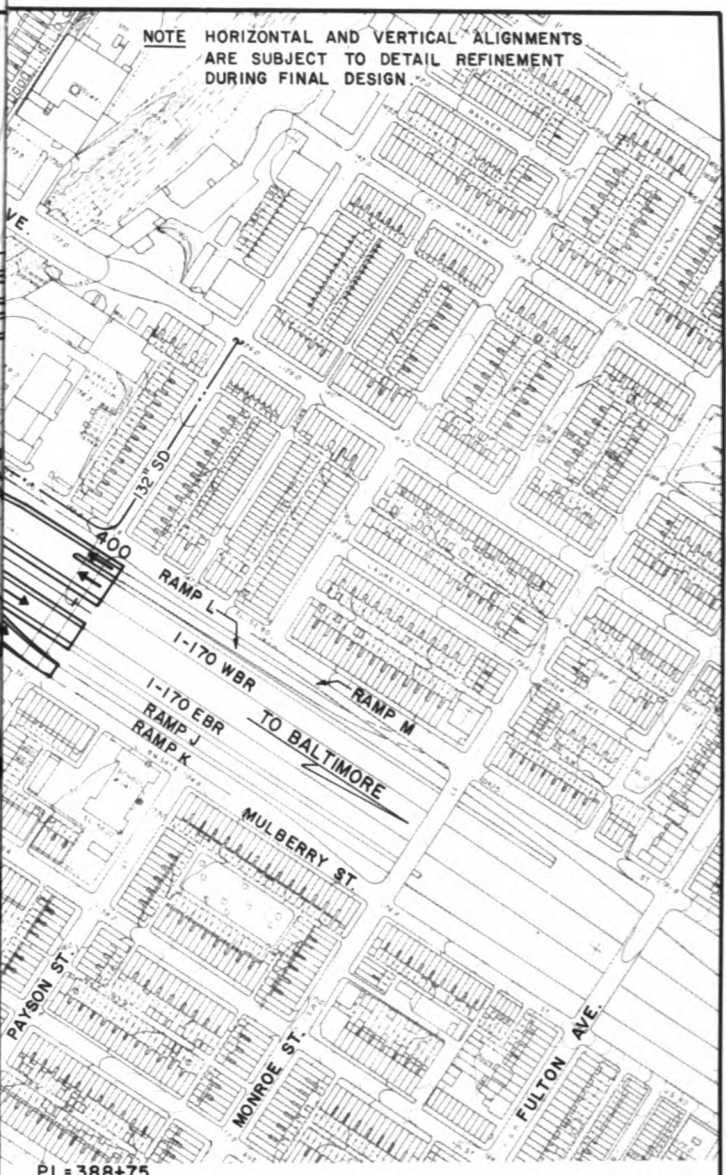
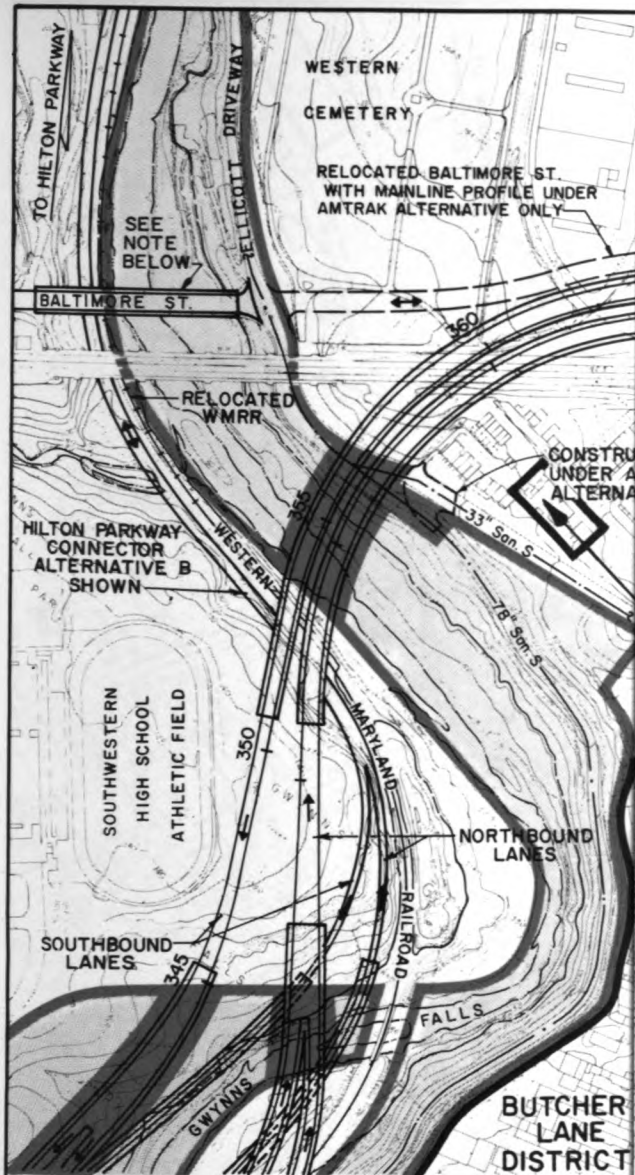
Alternative 3 (see Exhibits V-7 and V-8) is an interstate facility featuring a double-decked configuration from the Conrail/Amtrak Corridor crossing at Baltimore Street to south of Frederick Avenue, and is similar to Alternative 1 in that it provides a direct connection between I-170 and I-95 with no planned local connections. The southbound roadway would be constructed over the Conrail/Amtrak Corridor at Baltimore Street and the northbound roadway under this crossing, requiring the relocation of Baltimore Street. From the railroad crossing to south of Frederick Avenue, the southbound roadway would continue generally above the northbound roadway on structure. The northbound roadway would be constructed under Frederick Avenue and the southbound roadway over. The highway would transition to a normal section south of Frederick Avenue, continuing to interchange with I-95, the same as Alternatives 1 and 2.



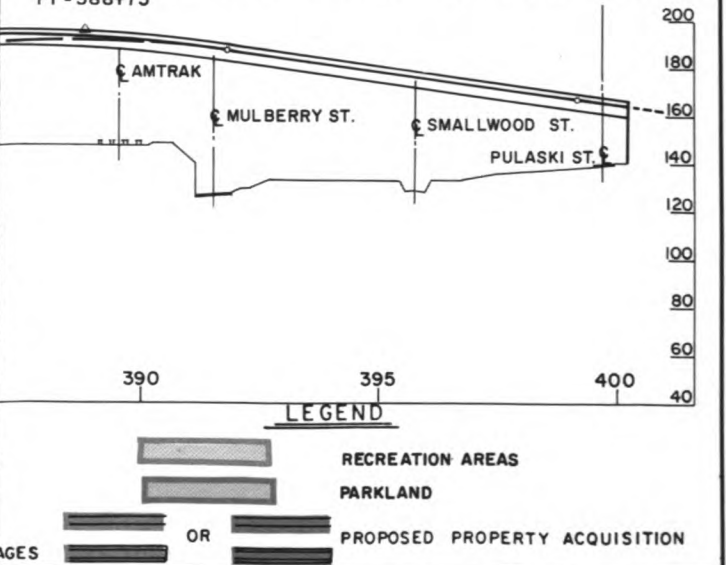
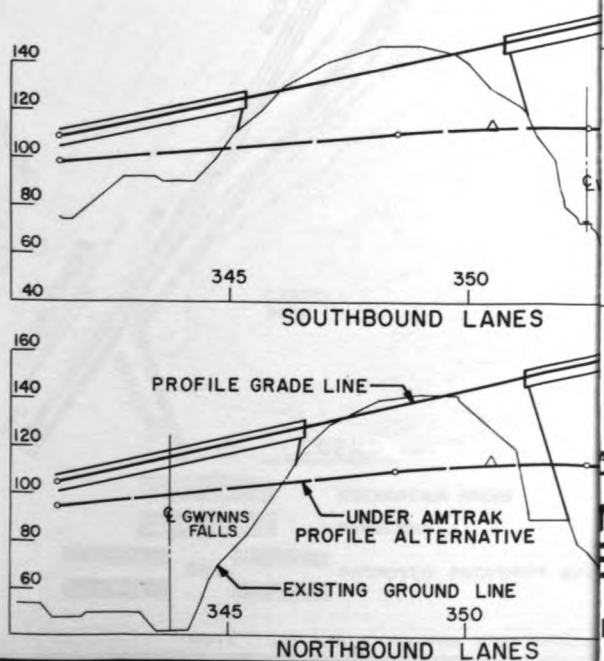








NOTE: NEW BALTIMORE ST. BRIDGE REQUIRED ONLY WITH ALTERNATIVES B AND C HILTON PARKWAY CONNECTORS

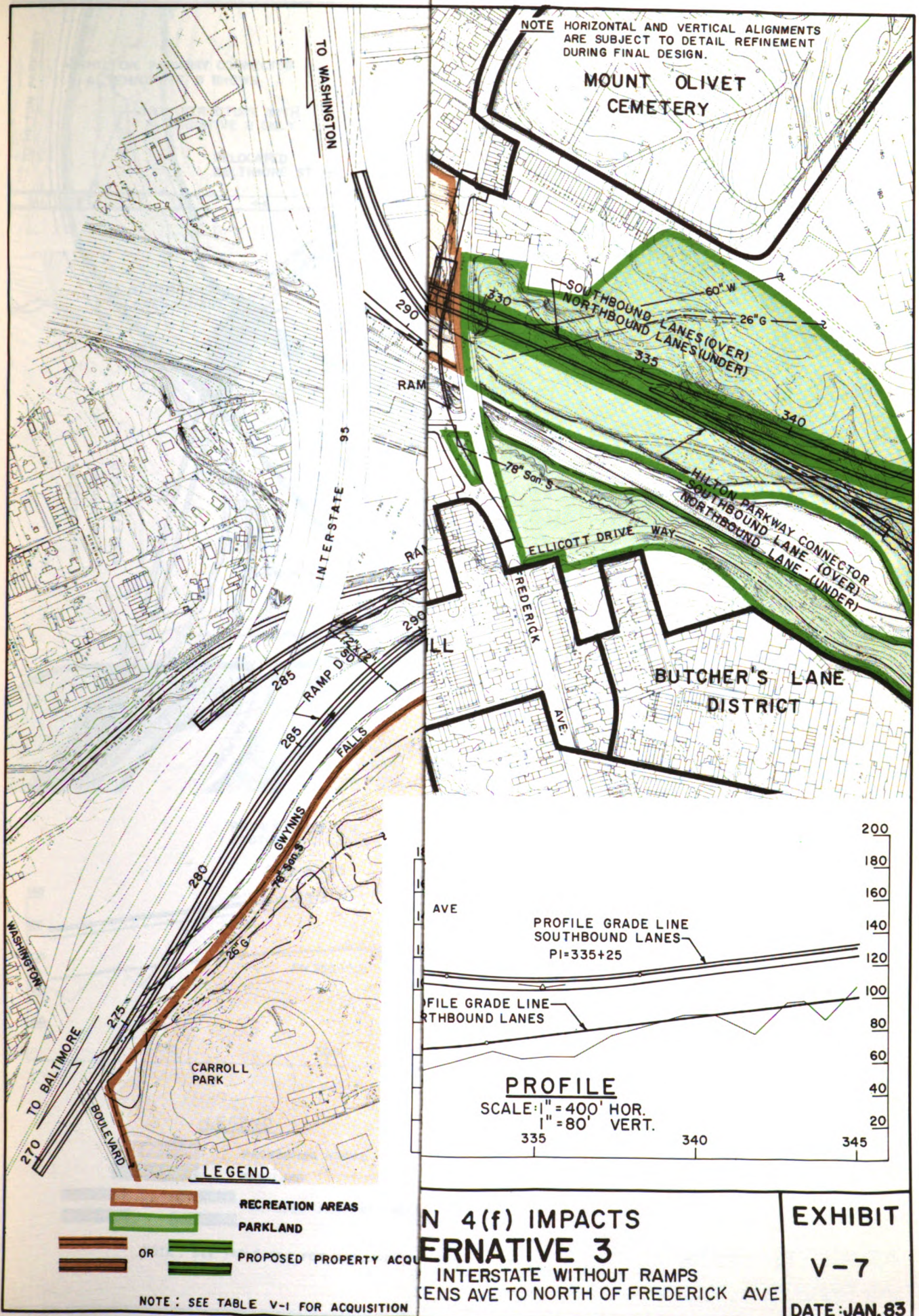


N 4(f) IMPACTS  
 ALTERNATIVE 2  
 INTERSTATE  
 DERRICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
 V-6  
 DATE: JAN. 83

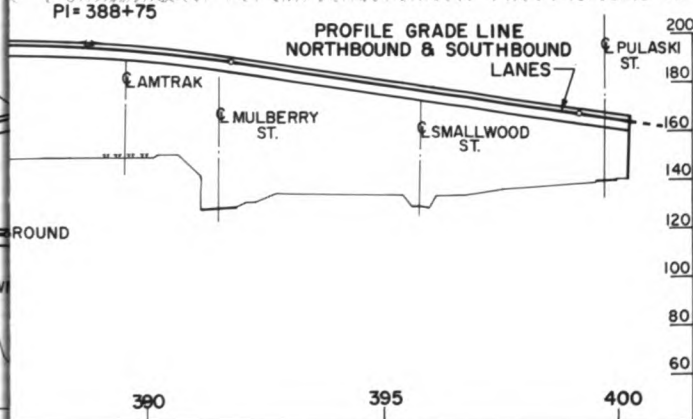
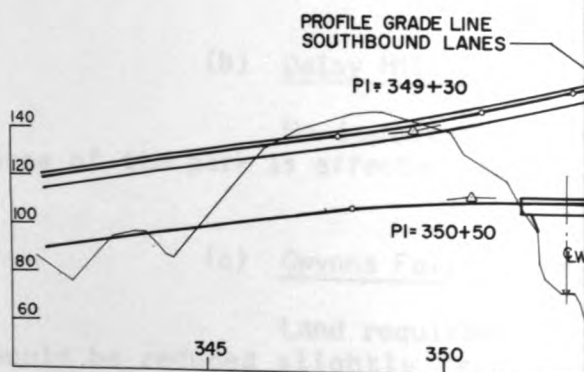
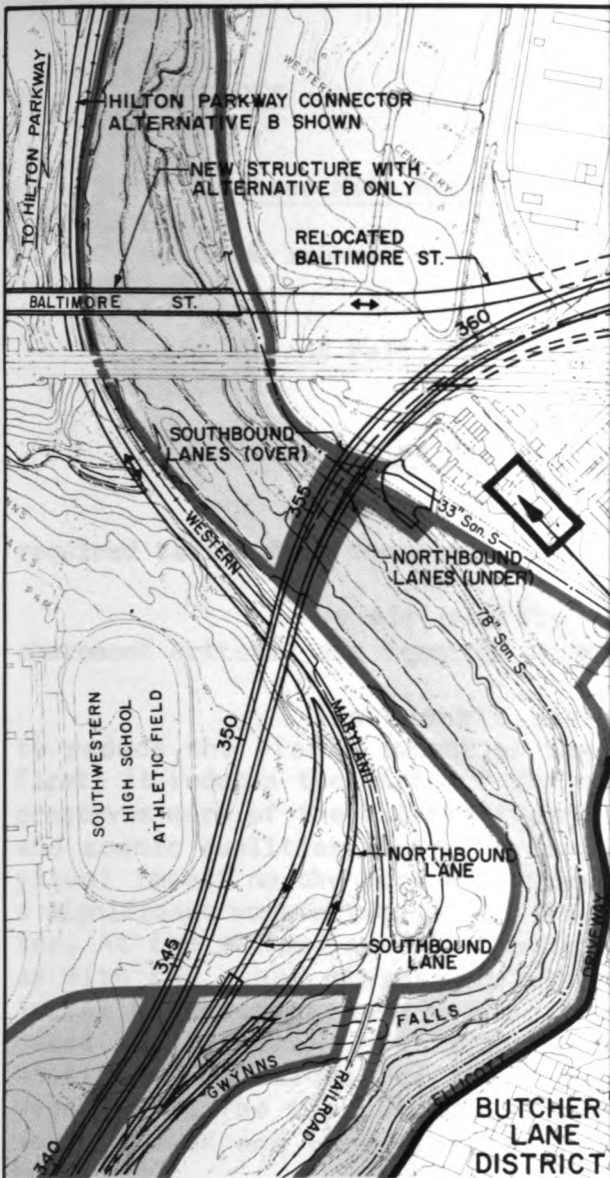












NOTE: SEE TABLE V-1 FOR ACQUISITION

# SECTION 4(f) IMPACTS ALTERNATIVE 3

UNDECKED INTERSTATE  
DERICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
V-8

DATE: JAN. 83



## Impacts

### Three Mill Archaeological Site

No impact.

### Gwynns Falls Park

#### (a) Passive Recreation Area

The narrowed width of Alternative 3 would reduce the required taking from these areas of the park to 5.8 acres.

No air quality violations or exceedances of FHWA noise abatement criteria are expected to occur.

The "double-decker" expressway does three major things to reduce the visual impact of the highway through the Gwynns Falls Park. First, it reduces the width of the cross section of the highway. Second, it preserves more of the existing vegetation, retaining its screening function and scenic qualities. Third, this configuration reduces the road's adverse visual impact on the park and stream by staying away from it and retaining a significant vegetative buffer, thus maintaining the park's visual character. At the plateau east of the high school, the lower lane is in deep cut as with the other expressway alternatives that cross under the Conrail/Amtrak bridge. The adverse visual impact of excessive cut slopes is mitigated significantly by the top deck (lanes) and the narrower road cross-section which allows for the preservation of most of the plateau and its vegetation. The top roadway, however, is at the same grade as the high school track and very close to it. The visual impact would be negative here.

#### (b) Daisy Hill Field

No impact from the I-595 mainline alternatives. This area of the park is affected only by the Hilton Parkway Connector options.

#### (c) Gwynns Falls Recreation Center

Land requirements from the Center under this alternative would be reduced slightly from previous alternatives to 3.6 acres. This acreage would be predominately from the area occupied by the Recreation Center's two baseball fields and would alter their present function.



Noise and air quality impacts would be the same as Alternative 1.

The increased height of the stacked roadways would have a more severe visual impact on the Center than Alternatives 1 or 2. With the southbound lanes crossing over Frederick Avenue and the northbound lanes going under Frederick Avenue, views eastward to the stream and across the Gwynns Falls Park valley would be virtually cut off by the vertically stacked roadways.

#### Alternative 4

This alternative is a boulevard facility with access provided to and from Frederick Avenue and Wilkens Avenue via at-grade intersections (see Exhibits V-9 and V-10). It consists of three travel lanes throughout, widening to five lanes per direction at the intersections to accommodate turning movements. From the connection at I-170 to the Conrail/Amtrak right-of-way crossing at Baltimore Street, the horizontal and vertical alignment is identical to Alternatives 1-3 with the exception of one additional lane per roadway. From the Conrail/Amtrak right-of-way crossing to Frederick Avenue, the southbound roadway would be located on the western slope of the valley where, after intersecting with Frederick Avenue, it would join the northbound roadway.

The northbound roadway from the Conrail/Amtrak Corridor crossing south to Frederick Avenue would be located on the eastern slope of the valley intersecting Frederick Avenue just east of the point where Brunswick Street intersects Frederick Avenue. Below Frederick Avenue, the roadway would curve to the west to join the southbound roadway at Wilkens Avenue. South of Wilkens Avenue the two roadways continue parallel to interchange with I-95 in a manner similar to the other alternatives. Brunswick Street would be cul-de-sac'd at Frederick Avenue in the same manner as described for Alternative 2.

#### Impacts

##### Three Mill Archaeological Site

Impacts to the site under this alternative would be essentially the same as Alternative 2.

NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.

MOUNT OLIVET CEMETERY

TO WASHINGTON

INTERSTATE 95

TO BALTIMORE

WASHINGTON BLVD

TO WASHINGTON

60° W

26° G

SOUTHBOUND LANES

340

78° S

NORTHBOUND LANES

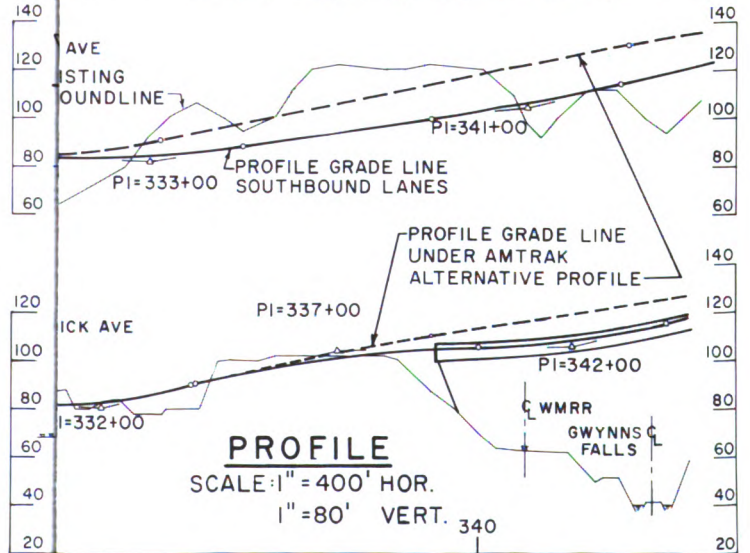
340

ELICOTT DRIVE WAY

FREDERICK AVE

NOTE: EXISTING ELICOTT DRIVEWAY WOULD BE USED TO CONNECT NORTHBOUND LANES TO HILTON PARKWAY CONNECTOR ON ALTERNATIVE 4 OVER AMTRAK

BUTCHER'S LANE DISTRICT



PROFILE

SCALE: 1" = 400' HOR.

1" = 80' VERT.

LEGEND

- RECREATION AREAS
- PARKLAND
- OR  PROPOSED PROPERTY

NOTE: SEE TABLE V-1 FOR ACQUISITION

ALTERNATIVE 4

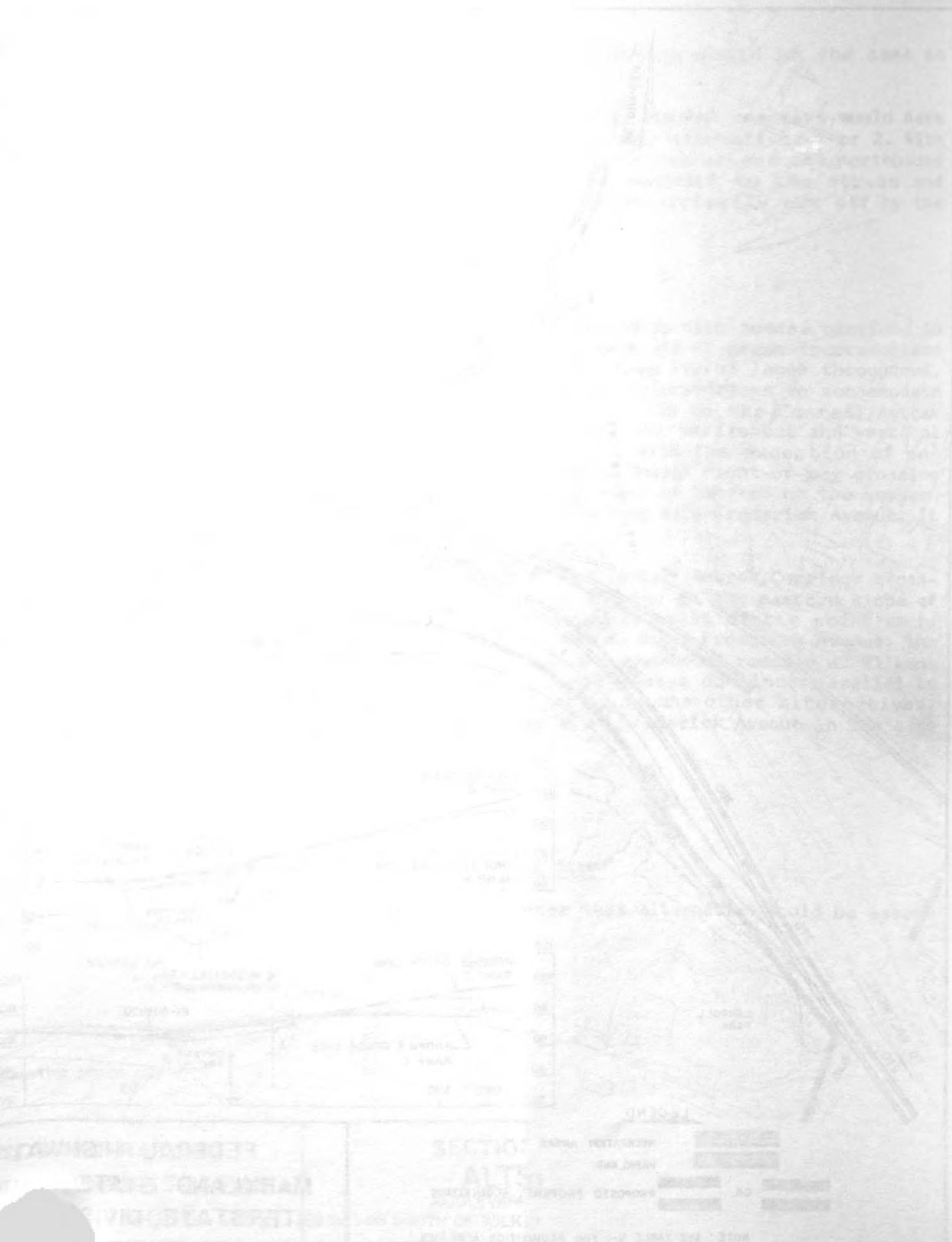
WITH INTERSECTIONS

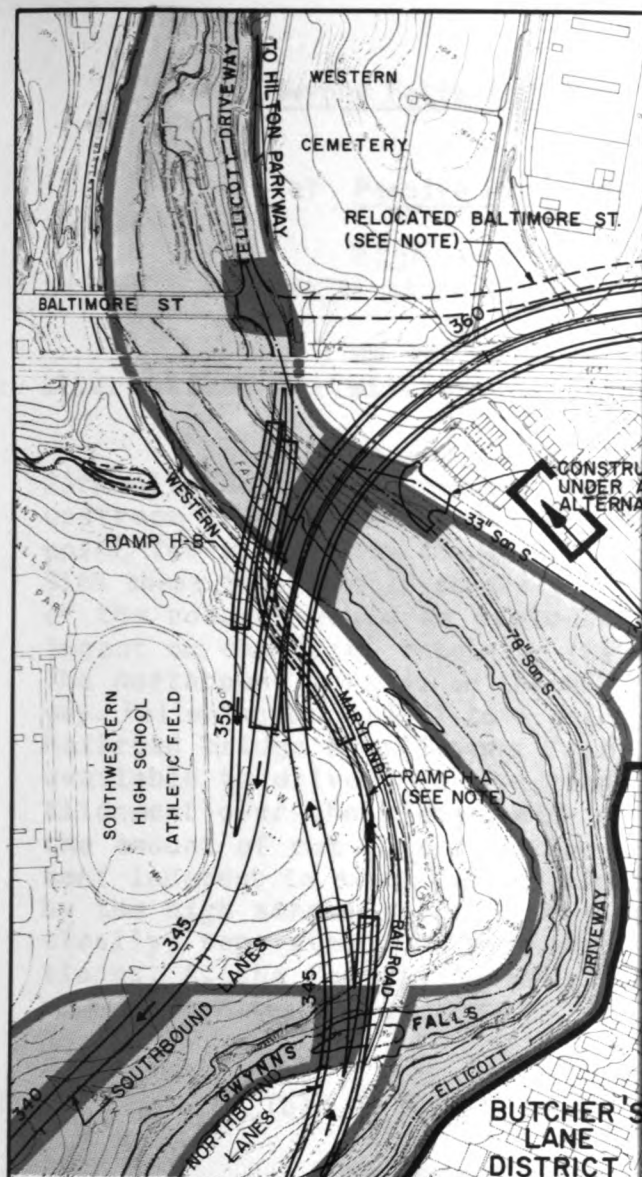
FROM WASHINGTON BLVD TO NORTH OF FREDERICK AVE

EXHIBIT  
V-9

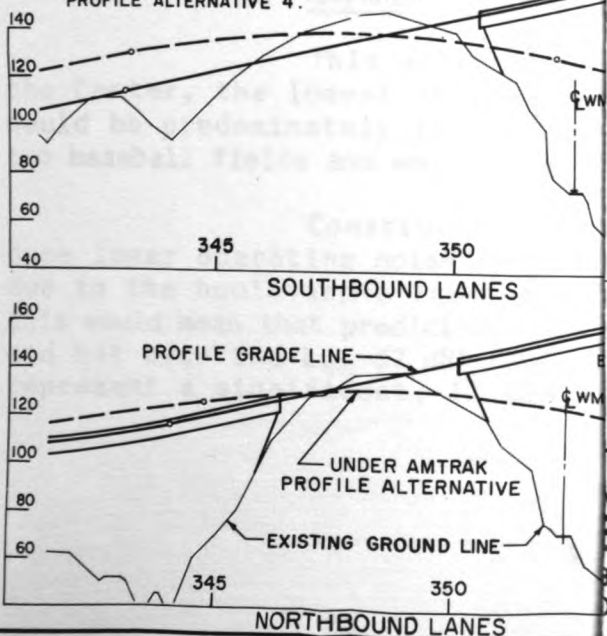
DATE: JAN. 83



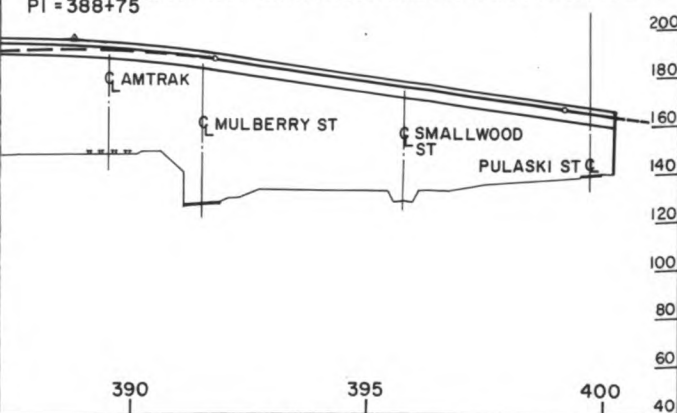




NOTE: RAMP H-A AND RELOCATED BALTIMORE STREET WOULD ONLY BE NECESSARY ON UNDER AMTRAK PROFILE ALTERNATIVE 4. EXISTING ELLICOTT DRIVEWAY WOULD BE USED TO CONNECT TO HILTON PARKWAY ON OVER AMTRAK PROFILE ALTERNATIVE 4.



NOTE: HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



#### LEGEND

- RECREATION AREAS
- PARKLAND
- OR  PROPOSED PROPERTY ACQUISITION

## ALTERNATIVE 4

BOULEVARD  
DERICK AVE. TO I-170 AT PULASKI ST.

EXHIBIT  
V-10

DATE: JAN. 83



## Gwynns Falls Park

### (a) Passive Recreation Area

Right-of-way requirements for Alternative 4 would include 9.6 acres of property from the park.

No air quality violations are anticipated under this alternative, nor will any areas exceed FHWA noise abatement criteria.

Visual impact on the stream valley of the Gwynns Falls Park will be greatly reduced by comparison with Alternatives 1-3. Looking upstream from the Frederick Avenue bridge (the most accessible vantage point for views into the valley), only the southbound lanes will be seen. With these lanes nearly at-grade, little of the existing vegetation outside of the roadway would be disturbed. This significantly reduces the visual impact on the Park, retaining its natural character and aesthetic values. The northbound lane is on the bluff presently occupied by Ellicott Driveway. Following this bluff to a point slightly south of the Western Maryland Railroad bridge over Gwynns Falls, superior views of the valley would be available to drivers on the road. Adopting somewhat of a "rollercoaster" alignment over the plateau east of the high school, Alternative 4 reduces the amount of cut in the plateau and the resultant visual quality impairment inherent to excessive cut slopes. A "desirable" amount of cut is used by the high school track, allowing the road to be visually (and acoustically) separated from the track without leaving excessive unsightly cut slopes. At the Conrail/Amtrak crossing, the visual impacts would be the same as in Alternatives 1 and 2.

### (b) Daisy Hill Field

No impact from the I-595 mainline alternatives. This area of the park is affected only by the Hilton Parkway Connector options.

### (c) Gwynns Falls Recreation Center

This alternative would require 3.4 acres of land from the Center, the lowest of the four mainline alternatives. This acreage would be predominately from the area occupied by the Recreation Center's two baseball fields and would alter their present function.

Construction of the boulevard-type facility would produce lower operating noise levels than any of the expressway alternatives due to the boulevard's lower traffic volumes and operating speeds. While this would mean that predicted noise levels at the Center would be right at and not over the  $L_{eq}$  67 dBA FHWA noise abatement criteria, it still would represent a significant, 12 dBA, increase over existing noise levels.

No adverse air quality impact at the Center is expected under this alternative.

The reduction in the height of the elevated roadway adjacent to the Center in comparison to the previous three alternatives will also serve to somewhat reduce the visual impact of this alternative.

#### HILTON PARKWAY/EDMONDSON AVENUE CONNECTOR

This connecting link is considered as an option which could be combined with any of the four mainline alternatives.

A number of preliminary alternatives were developed and evaluated including alignments east and west of the Gwynns Falls which would tie in to either Hilton Parkway or Edmondson Avenue. Of these, three were selected (Alternatives A-C) for further engineering and environmental analysis. Descriptions of the alignment and associated impacts of each connector option are described below.

##### Alternative A

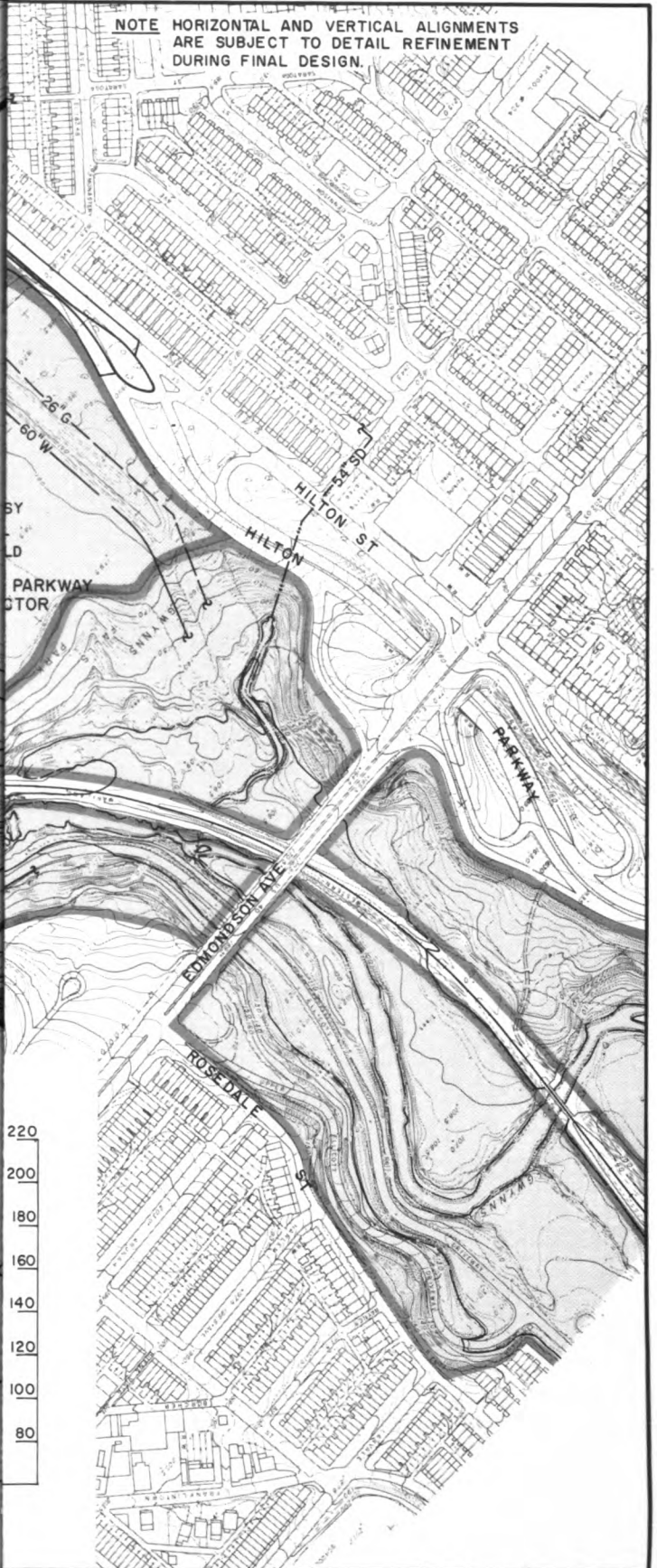
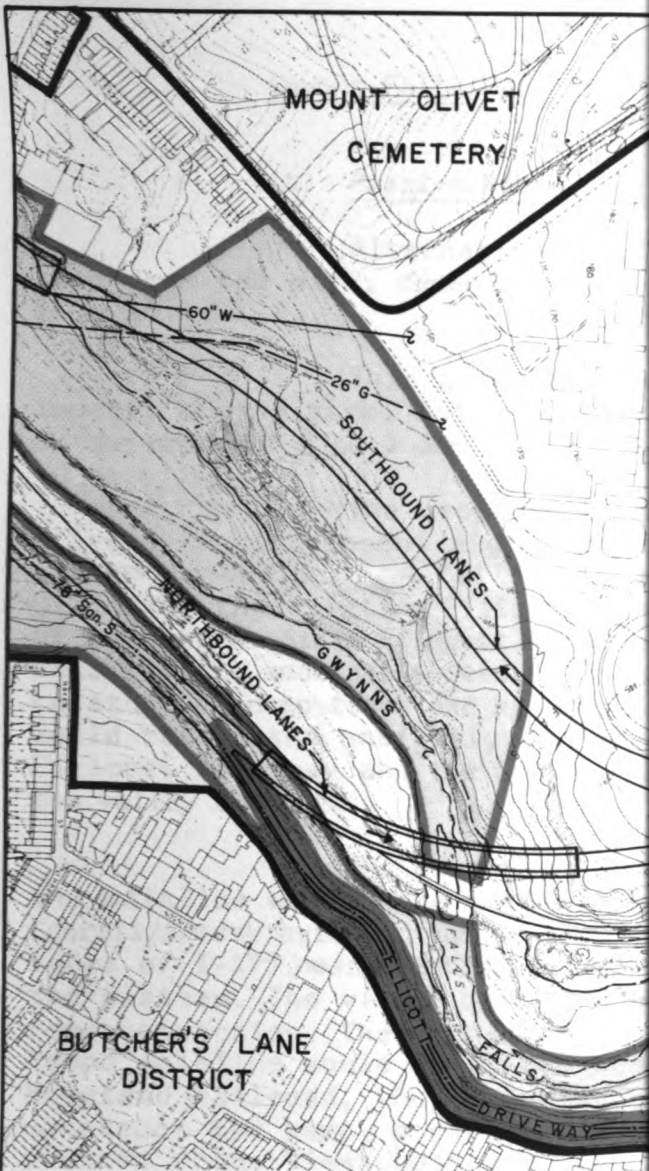
Alternative A as shown on Exhibit V-11 would exit the northbound roadway onto existing Ellicott Driveway north of Frederick Avenue and cross beneath the Conrail/Amtrak rail corridor and continue northerly utilizing the existing Ellicott Driveway alignment. Ellicott Driveway, presently closed to traffic, would be reconstructed to a point approximately 1,900 feet north of Baltimore Street, at which point the alignment would curve to the west, cross the Gwynns Falls on a new structure, skirt the northern boundary of the Genstar Quarry, and connect to Hilton Street/Hilton Parkway with a T-type intersection.

##### Impacts

##### Three Mill Archaeological Site

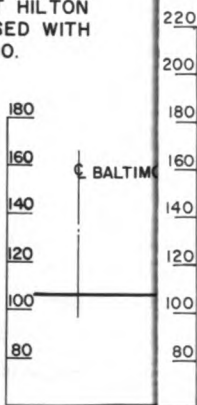
No impact.





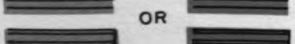



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.

NOTE-ALTERNATIVE 4 PLAN OVER AMTRAK SHOWN SOUTH OF BALTIMORE STREET, BUT HILTON PARKWAY ALTERNATIVE A MAY BE USED WITH ALL INTERSTATE ALTERNATIVES ALSO.



**LEGEND**

-  RECREATION AREAS
-  PARKLAND
-  OR  PROPOSED PROPERTY ACQUISITION

NOTE: SEE TABLE V-1 FOR ACQUISITION AC

4(f) IMPACTS  
 ALTERNATIVE A  
 PARKWAY CONNECTOR  
 HITTING ELLICOTT DRIVEWAY

EXHIBIT  
 V-11  
 DATE JAN 83



## Gwynns Falls Park

### (a) Passive Recreation Area

Alternative A will require between 3.4 and 4.7 acres of land from the park, depending upon the mainline alternative with which it is combined.

This alignment should produce no additional air quality impacts on the park. Noise levels will increase in the park, but only on the order of 2 to 3 dBA.

The proposed bridge over the Gwynns Falls to Ellicott Driveway would present a good vantage point for views upstream and downstream in the park. A falls upstream may be visible from the bridge. Utilizing the existing Ellicott Driveway would improve the visual quality of this area. Since Ellicott Driveway in this area is closed to traffic at this time, a moderately used road would make it more difficult for people to stop and dump trash and household garbage into the valley. Construction would remove the unsightly garbage that lines the banks between existing Ellicott Driveway and the Gwynns Falls, restoring the aesthetic values of the valley and park.

The connecting ramps southward from Ellicott Driveway to the mainline would take off in the vicinity of the Baltimore Street and Conrail/Amtrak bridges. The southbound ramp would merge with the southbound lanes of I-595 near the high school track without cutting drastically into the plateau. The visual quality of this area would be preserved with this ramp connection. The northbound off-ramp to Alternative A from the northbound mainline would skirt the top of the cut section above the Western Maryland Railroad, thus reducing the amount of disturbance necessary to construct the ramp, preserving the existing vegetation and views to the plateau area. Views upstream from this ramp perched on the edge of the bluff would be excellent.

### (b) Daisy Hill Field

Three acres of land from the field will be required for this alternative; however, the actively used area of the field would remain essentially intact.

This alignment passes immediately south of, and for the most part, well below the elevation of the actively used area of Daisy Hill Field. These factors, combined with the relatively light predicted future year traffic volumes (640 vehicles per hour), will serve to minimize the Connector's air quality and noise impacts on the field.

Alternative A forms a "T" intersection with Hilton Street just south of Daisy Hill. The resultant loss of vegetation at this new intersection would open up some new scenic views along the Connector corridor in the ravine between Daisy Hill Field and the Hilton Recreation Center. At the eastern end of Daisy Hill, most of the vegetation on the bluffs would be removed due to road construction. This would allow filtered views of Gwynns Falls Park downstream from Daisy Hill.

(c) Gwynns Falls Recreation Center

No impact.

Alternative B

Alternative B would be constructed on the western side of the Gwynns Falls as shown on Exhibit V-12 and pass beneath both the existing Conrail/Amtrak and Baltimore Street structures over the Gwynns Falls. Reconstruction of the Baltimore Street Bridge would be included in this alternative and is necessary because the arches of both this and the Conrail/Amtrak structure are not aligned.

Once past Baltimore Street, the roadway would proceed northerly, west of the Western Maryland Railroad and on the Genstar Quarry property. Approximately 1,200 feet north of Baltimore Street the alignment would curve to the west with the roadway separating into two one-lane ramps which would terminate at an interchange with Hilton Parkway.

Impacts

Three Mill Archaeological Site

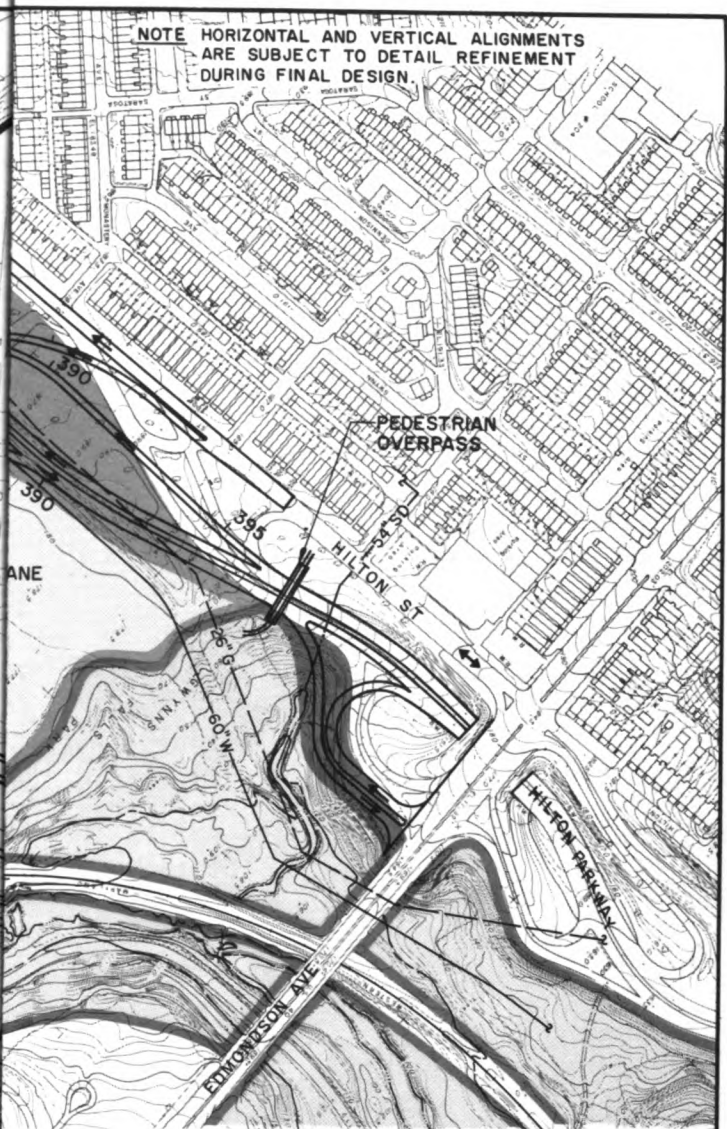
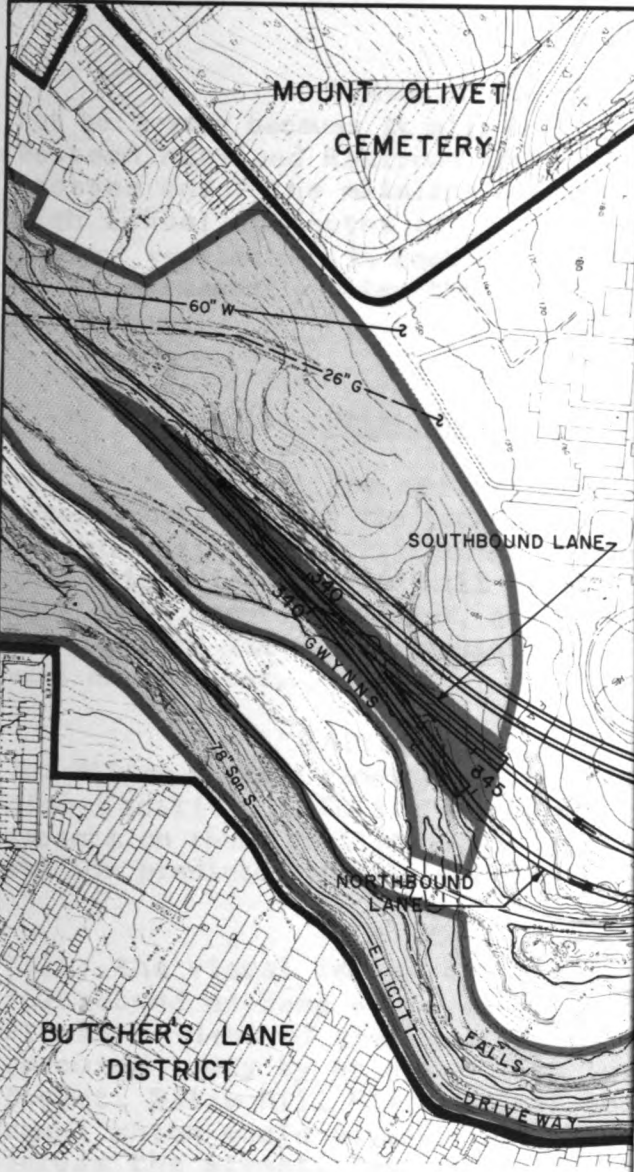
No impact.

Gwynns Falls Park

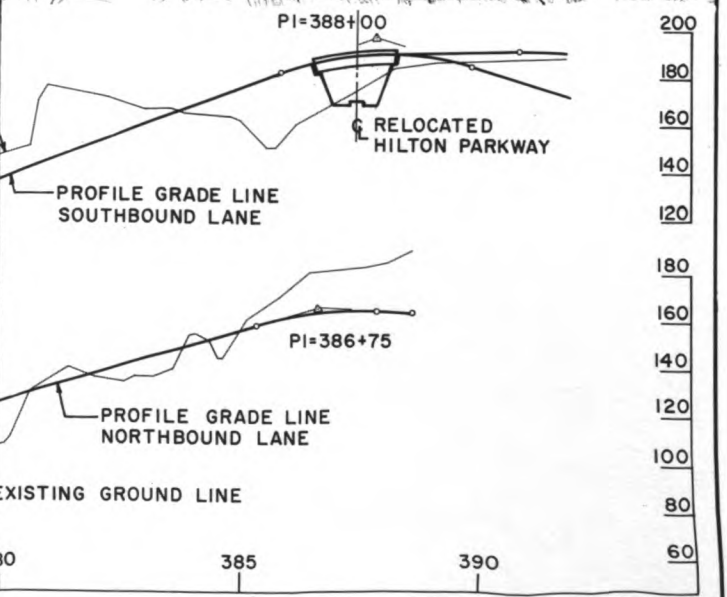
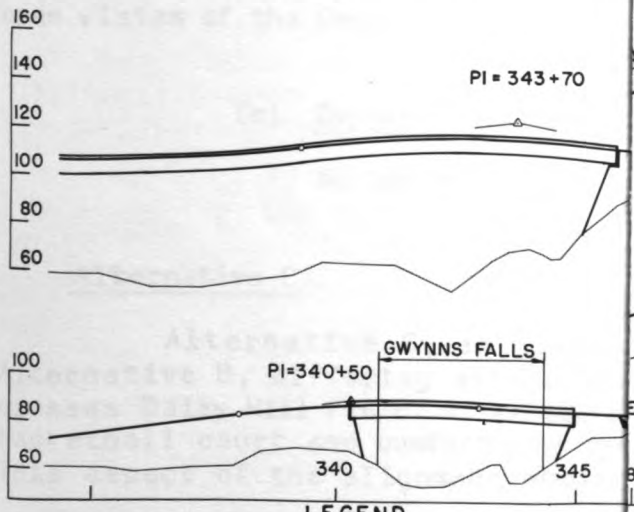
(a) Passive Recreation Area

Land requirements from the passive areas of the park range from 1.0 to 2.2 acres under this alternative.

Noise and air quality impacts would be at the same low levels as Alternative A.



NOTE: HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



**LEGEND**

- RECREATION AREAS
- PARKLAND
- OR PROPOSED PROPERTY ACQUISITION

NOTE: SEE TABLE V-1 FOR ACQUISITION LINES AND SOUTH OF DAISY HILL FIELD

**ALTERNATIVE B**  
PARKWAY CONNECTOR

**EXHIBIT**  
**V-12**

**DATE: JAN. 83**





Views of the Connector in the Gwynns Falls Park would not be severe because it will be at-grade with and adjacent to the existing Western Maryland Railroad tracks. South of Baltimore Street Alternative B crosses under the mainline and cuts through the plateau near Southwestern High School at depths of up to 40 feet. This depth of cut and resultant loss of vegetation, in combination with the visual impacts of the mainline, would permanently alter the scenic qualities of this portion of the Gwynns Falls Park.

(b) Daisy Hill Field

The necessary relocation of the Hilton Parkway access ramps, combined with the Connector ramps for this alternative, will require the acquisition of 7.5 acres of the western portion of Daisy Hill Field. This significant taking will necessitate relocation of the field's basketball court, comfort station, and ball diamond to the east, where sufficient land exists for such purposes. Thus, the primary active uses of the field will not be lost.

Alternative B will place portions of both the Connector and Hilton Parkway ramps directly adjacent to the field's relocated recreation facilities. This will relatively increase both air quality and noise impacts on these facilities; however, these impacts should be slight due to the low predicted traffic volumes for these roadways.

From the residences on Hilton Street across from Daisy Hill, the visual impact of Alternative B will be moderately severe. The southbound on-ramp would be on structure over northbound Hilton Parkway, blocking views of the Park across the street. This view is partially obscured today by an earth berm located on park property east of Hilton Street. Daisy Hill Field itself would also be impacted by the connector ramps which would visually and physically isolate it from its user groups across the street. Traversing the ravine, then the quarry, drivers on the Parkway would experience a range of views from enclosed directed views to open vistas of the Gwynns Falls Park.

(c) Gwynns Falls Recreation Center

No impact.

Alternative C

Alternative C, as shown on Exhibit V-13, is a variation of Alternative B, differing with respect to the horizontal alignment as it crosses Daisy Hill Field. Alternative C would avoid direct impact upon the basketball court and comfort station that would occur with Alternative B. This aspect of the alignment would also be adaptable to Alternative A.

The alignment would be almost totally out of the developed portion of Daisy Hill Field, located north of this area. All other aspects of this alternative south of the quarry are identical to Alternative B.

### Impacts

#### Three Mill Archaeological Site

No impact.

#### Gwynns Falls Park

##### (a) Passive Recreation Area

Property acquisition from these areas of the park would range from 5.0 to 6.3 acres, mostly from the area between Daisy Hill Field and Edmondson Avenue.

Air quality, noise and visual impacts in the park will be the same for this alternative as for Alternative B.

##### (b) Daisy Hill Field

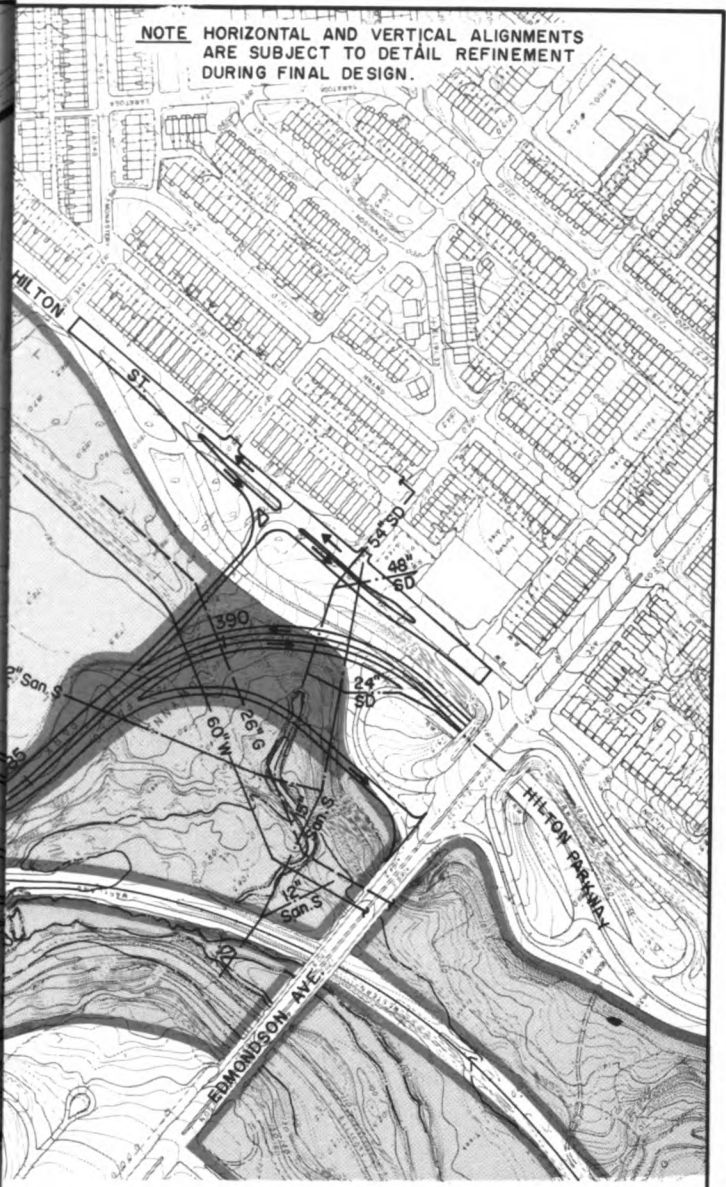
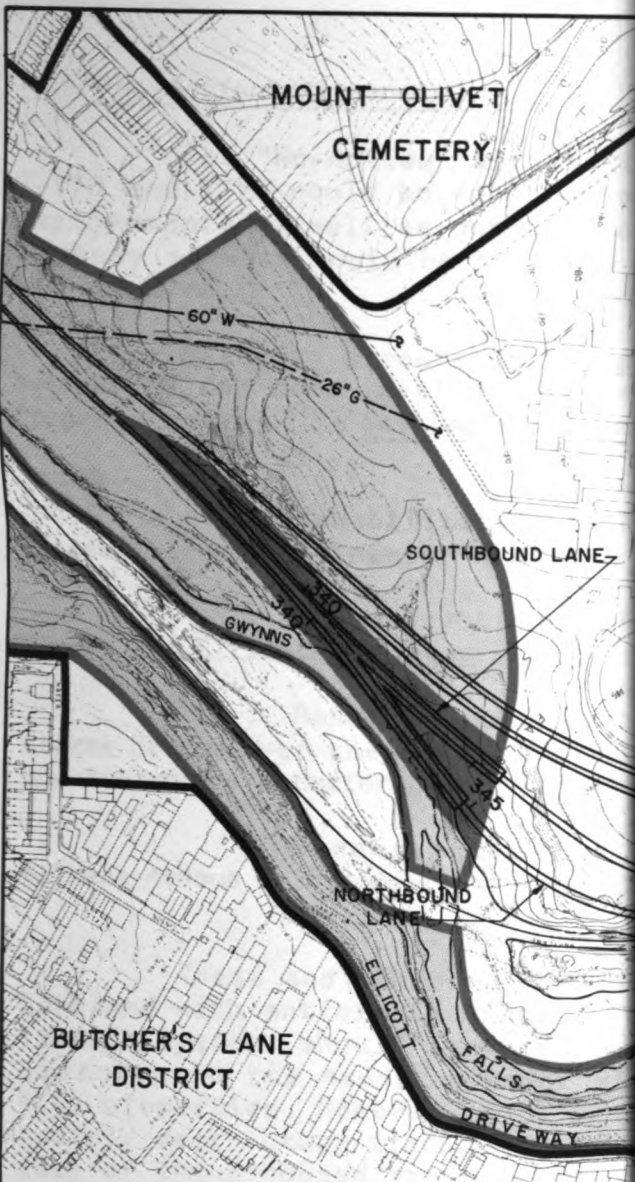
Alternative C will require only 0.5 acre of the field's property as it mostly skirts the field's eastern and northern boundaries.

Air quality and noise impacts on the field will be essentially the same as those for Alternative A.

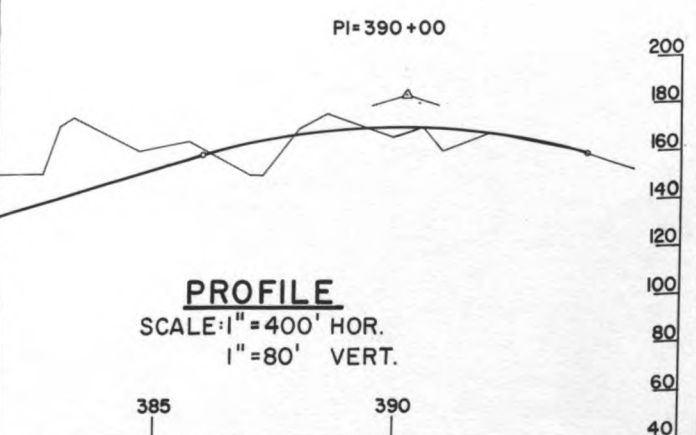
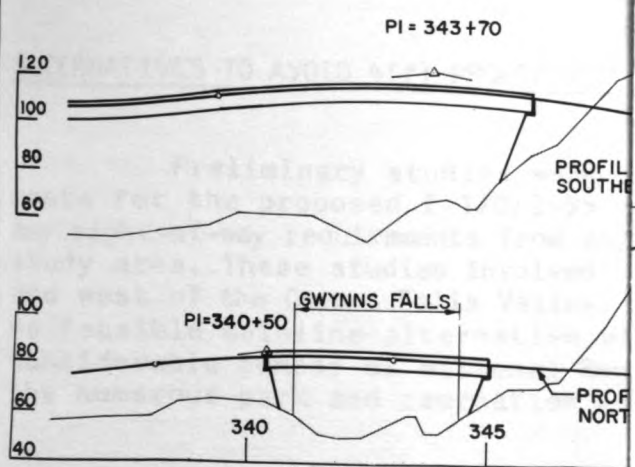
Alternative C differs from Alternative B only in that portion north of the Genstar Quarry where it continues northward as parallel ramps through Gwynns Falls Park and skirts the northern edge of the Daisy Hill Field plateau before separating into the two access ramps. This configuration will eliminate the view of elevated structures from Daisy Hill Field, while reducing the view of the ramps from within Gwynns Falls Park itself due to its somewhat lower profile in that area.

##### (c) Gwynns Falls Recreation Center

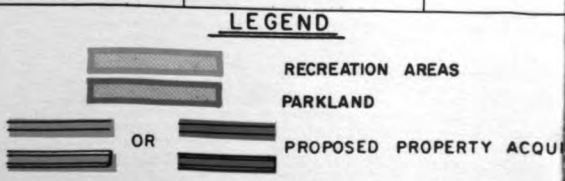
No impact.



NOTE HORIZONTAL AND VERTICAL ALIGNMENTS ARE SUBJECT TO DETAIL REFINEMENT DURING FINAL DESIGN.



**PROFILE**  
SCALE: 1" = 400' HOR.  
1" = 80' VERT.



NOTE: SEE TABLE V-1 FOR ACQUISITION AREAS AND NORTH OF DAISY HILL FIELD

**SECTION 4(f) IMPACTS**  
**ALTERNATIVE C**  
**PARKWAY CONNECTOR**

**EXHIBIT**  
**V-13**

**DATE: JAN. 83**



### "No-Action" Alternative

The "No-Action" Alternative assumes that no connector between I-170 and I-95 would be constructed, and that short-term minor highway improvements as well as ongoing maintenance activities on the existing highway network would be the only transportation improvements in the project area.

Existing streets in the project corridor which are currently scheduled for some level of improvement under the Six-Year Construction Program contained in Baltimore's Development Program, include:

- . Rehabilitation of Franklin and Mulberry Streets between Pulaski Street and Wheeler Avenue to correct surface deterioration (1987).
- . Reconstruction of Franklinton Road between Poplar Grove Street and Ellicott Driveway (1984).
- . Rehabilitation of the Edmondson Avenue Bridge and Hilton Street Bridge over the Conrail/Amtrak Railroad to correct deck surface and superstructure deterioration (1983-1984).
- . Reconstruction of the deck and superstructure of the Wilkens Avenue Bridge over the Conrail/Amtrak Railroad.

These and other maintenance improvements to existing streets, combined with anticipated service and routing improvements to the local transit system, should serve to slightly increase overall transportation capacity in the study corridor without adversely impacting existing 4(f) properties. However, such increases will not be sufficient to adequately meet future traffic demands for this area, nor would the intended role of the proposed project and its reducing effect on local traffic congestion be met.

### ALTERNATIVES TO AVOID 4(f) PROPERTIES

Preliminary studies were conducted to attempt to develop alignments for the proposed I-170/I-95 connector which would completely avoid any right-of-way requirements from any historical sites or parklands in the study area. These studies involved various potential alignments both east and west of the Gwynns Falls Valley. Study results indicated that there is no feasible mainline alternative which would completely avoid both the considerable number of National Register-eligible historic districts and the numerous park and recreation areas. In addition, only the "No-Build"

Alternative would avoid 4(f) impacts. These alternatives are described below along with a discussion of their degree of impact relative to the proposed mainline "Build" Alternatives.

#### Parkland Avoidance Alternative

This alternative is similar to Alternatives 1-4 between existing Interstate-170 and the eastern edge of Gwynns Falls Park at the Baltimore Street bridge (see Exhibit V-14). At this point, instead of turning southward, the four-lane roadway continues to the west on elevated structure over Baltimore Street and parallel to the Conrail/Amtrak right-of-way. Crossing the Conrail/Amtrak tracks on a slight skew where Baltimore Street curves to the northeast, the alignment, still on structure begins a long, sweeping southward curve just west of the Southwestern High School property and curves over Opel Lane, Leeds Street and Piquett Lane. The long curve ends as the alignment crosses over Frederick Avenue just west of the intersection at Mount Olivet Lane/Wellesley Street, continuing to the southeast through the residential neighborhood and crossing over such local streets as Stafford, Longwood, Parksley, Sunset and Hurley before passing over Wilkens Avenue at its intersection with Dukeland Street. South of Wilkens Avenue the alignment cuts southeastwardly through the Crossroads Industrial Park and splits into four access ramps to I-95 in the area of the B&O Railroad tracks east of Bernard Drive.

While this alternative avoids all parklands in the area, it would necessarily require taking of identified potential historic resources.

The Parkland Avoidance Alternative, totally on elevated structure, would require the taking and subsequent relocation of 113 residences, and 16 commercial/industrial properties. The alignment would pass through areas of older buildings of National Register eligibility, particularly the block bounded by Frederick Avenue, Wellesley Street, Stafford Street and Longwood Street. This block contains mid to late nineteenth century brick and frame buildings on Frederick Avenue, a group of older brick buildings on Longwood Street, and a series of mid- to late nineteenth century detached frame dwellings on Stafford Street. There are also two stone structures in the vicinity of Stafford Street, Longwood Street and Parksley Street just east of the above-mentioned block. These buildings may relate back to the early mill era history of the Gwynns Falls as well as the early slaughterhousing industries of the vicinity. The proposed alignment would either run through or right next to these structures.

In total, this alternative would require the taking of 25 historically significant houses.

While this alternative will provide the basic I-170/I-95 connection, its necessary design and location will preclude any consideration of additional connections at Frederick and Wilkens Avenues, thus minimizing the traffic potential diversions afforded by these two connections. In



LEGEND

- 1 2801 TO 2821 KINSEY AVENUE
- 2 BUTCHER'S LANE DISTRICT
- 3 OLD MILL HILL DISTRICT
- 4 LONGEST ROWHOUSE BLOCK
- 5 MOUNT OLIVET CEMETERY
- 6 OLD FREDERICK ROAD/FONTHILL AVENUE DISTRICT
- 7 CARROLLTON VIADUCT
- 8 HILTON RECREATION CENTER
- 9 GWYNNS FALLS PARK
- 10 DAISY HILL FIELD
- 11 BLOOMINGDALE OVAL
- 12 GWYNNS FALLS RECREATION CENTER
- 13 SOUTHWESTERN HIGH SCHOOL ATHLETIC FIELDS
- 14 BENTALOU RECREATION CENTER
- 15 CARROLL PARK
- 16 BOYD BOOTH HISTORIC DISTRICT
- 17 FRANKLIN SQUARE/UNION SQUARE HISTORIC DISTRICTS
- 18 EXTENSION OF BUTCHER'S LANE DISTRICT
- 19 BREWERY/INDUSTRIAL HISTORIC DISTRICT

— HISTORIC SITE/DISTRICT  
 — PARKLAND  
 — RECREATION AREA

CATON

TO I-695

WASHINGTON

B.&O.

BOULEVARD

WESTERN MARYLAND RAILROAD

TO BALTIMORE

DRIVEWAY

CEMETERY

FRANKLIN STREET

EDMONDSON AVENUE

HILTON PARKWAY

10

9

9

9

11

FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
PARKLAND AVOIDANCE ALTERNATIVE		
DATE	SCALE	EXHIBIT NO.
JAN. 83	1" = 1,000'	V-14



addition, the longer and more circuitous route may discourage some potential users who will continue to use local streets. These factors indicate that the overall transportation effectiveness of the Parkland Avoidance Alternative would be less than that of the proposed mainline alternatives.

As the necessary design of this alternative is entirely on structure with an anticipated average height of at least 20 feet, its visual impact on the various residential and mixed use areas through which it passes would be considerable. The expressway structure would become the dominant feature of the viewscape and would constitute a significant visual barrier for residents and travelers on local streets. In addition, the required demolition, particularly those portions of existing rowhouse blocks, would serve to severely impact the well-established visual continuity of the areas adjacent to the structure.

### "No-Build" Alternative

Another possible alternative to the proposed connector roadway would be the implementation of the "No-Build" Alternative (see Exhibit V-15) for the western portion of I-170 and no other new roadway construction of any type. This would involve tying the present terminus of I-170 at Pulaski Street into the existing roadway network. To accomplish this, both the eastbound and westbound mainline roadway pavements and retaining walls between Monroe Street and Pulaski Street would be removed and a turnaround area would be constructed east of Monroe connecting the eastbound and westbound roadways. Additional ramps would also be built west of Fulton Avenue allowing westbound access from I-170 to Franklin Street east of Pulaski and eastbound access from Mulberry Street at Smallwood Street to I-170.

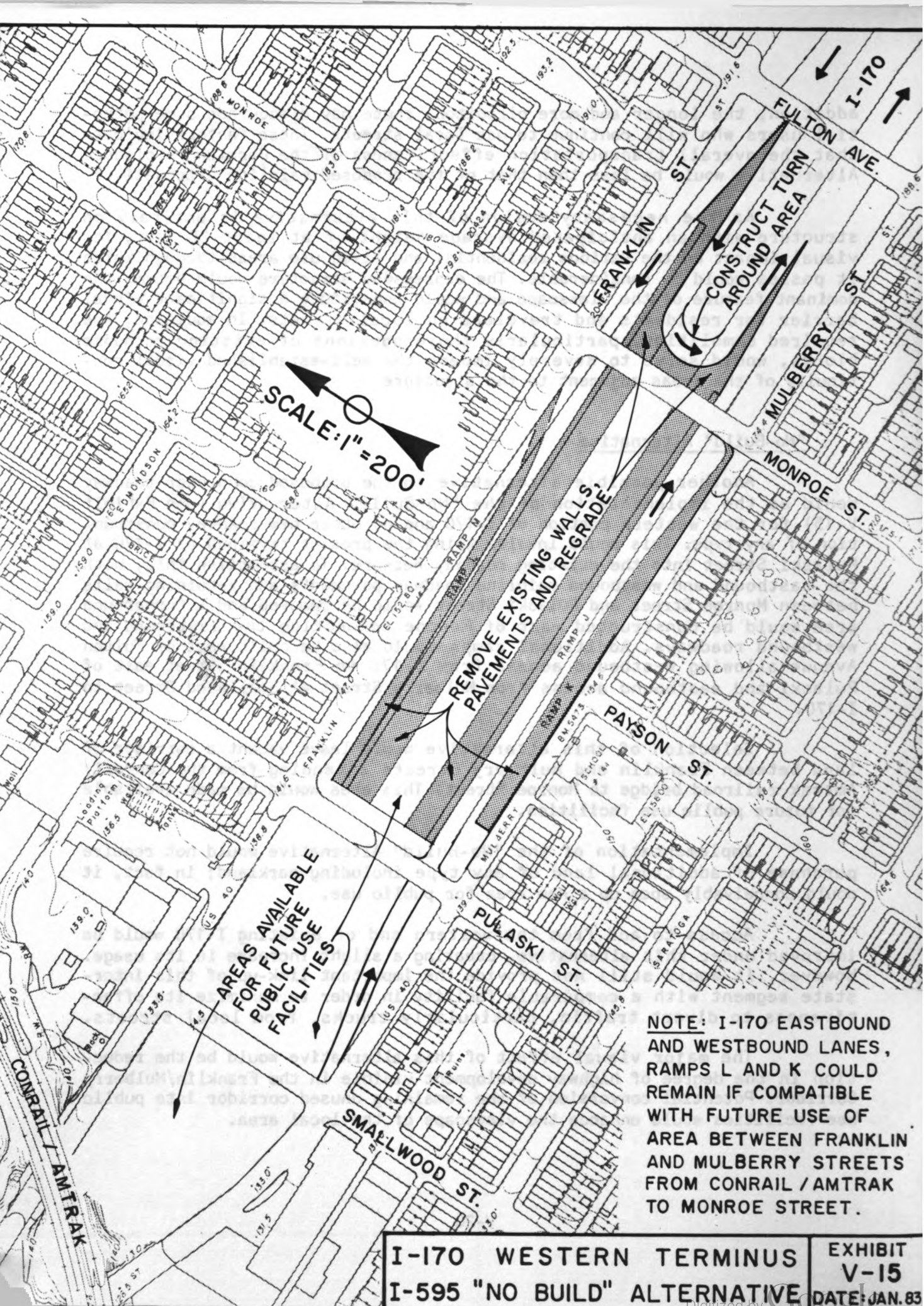
Selection of this alternative would leave vacant a corridor of land between Franklin and Mulberry Streets extending from the Conrail/Amtrak railroad bridge to Monroe Street. This area would be made available for future public use facilities.

Implementation of the "No-Build" Alternative would not require purchase of additional land of any type including parkland; in fact, it could conceivably open up a new area for public use.

Access to and from the western end of existing I-170 would be improved under this alternative, creating a slight increase in its usage. However, it would still not provide the important link-up of this interstate segment with a comparable facility in order to maximize its effectiveness to divert traffic, particularly trucks, from local streets.

The major visual effect of this alternative would be the reduction in the degree of highway development visible in the Franklin/Mulberry Corridor. Potential conversion of the remaining unused corridor into public use facilities would enhance the viewscape of the local area.





**NOTE:** I-170 EASTBOUND AND WESTBOUND LANES, RAMPS L AND K COULD REMAIN IF COMPATIBLE WITH FUTURE USE OF AREA BETWEEN FRANKLIN AND MULBERRY STREETS FROM CONRAIL / AMTRAK TO MONROE STREET.

**I-170 WESTERN TERMINUS  
I-595 "NO BUILD" ALTERNATIVE**

**EXHIBIT  
V-15  
DATE: JAN. 83**

## ADVANTAGES AND DISADVANTAGES OF 4(f) AVOIDANCE ALTERNATIVES

### Parkland Avoidance Alternative

The preliminary engineering and environmental analysis concluded that the Parkland Avoidance Alternative offers the following advantages and disadvantages compared to Alternatives 1-4:

#### Advantages

- . No required takings from designated park and recreation areas.
- . No impact on the Lower Gwynns Falls floodplain.

#### Disadvantages

- . Approximately 3,000 feet (26 percent) longer than proposed Alternatives 1-4 which, when combined with anticipated design (100 percent on structure), would make it by far the most expensive roadway to construct.

- . Necessitates acquisition and placement of 113 residences, 16 commercial/industrial concerns, including 25 buildings of recognized National Register potential.

- . Would still require a Section 4(f) determination for historic resources.

- . Would not offer any options for connections at Frederick Avenue and on Wilkens Avenue.

### "No-Build" Alternative

The "No-Build" Alternative has advantages and disadvantages as listed below:

#### Advantages

- . No effect on corridor 4(f) lands.

- . Slight increase in access and usage of existing I-170.
- . No change in visual impact, particularly if public use facilities are developed.

#### Disadvantages

- . Would not achieve the desired diversion of traffic from local streets in northern portion of corridor.
- . Would not provide any relief for congested conditions on Frederick and Wilkens Avenues.
- . Would not improve access between I-170 and I-95.

It is believed that the disadvantages of both the Parkland Avoidance and "No-Build" Alternatives far outweigh their advantages, and that there exist no feasible or prudent alternatives to those proposed through the Lower Gwynns Falls study corridor (Alternatives 1-4).

#### PROJECT MITIGATION/COORDINATION ITEMS

In order to lessen the impact of the proposed highway facility on identified Section 4(f) lands, a four-step mitigation/coordination program has been incorporated as an integral part of the project planning process. Some of these steps are also being implemented for other areas within the corridor. These steps involve:

Step One - Replacement of a portion of the parkland required for the highway right-of-way.

Step Two - Restorative landscaping of portions of the right-of-way along the highway with native vegetation and ground cover. This step would also include new landscaping of cut and fill slopes as well as screen-type planting to reduce visual impacts.

Step Three - Construction of site-specific recreational and public access facilities at 4(f) sites where certain alternatives would limit or otherwise affect existing usage.

Step Four - Identification of those portions of each mainline alternative where it would be feasible to construct barriers to reduce traffic noise levels to within FHWA criteria along impacted segments of the project corridor.



Preliminary details of the portions of this plan which directly affect the study corridor's 4(f) resources are presented below. Further information on the overall Mitigation Plan is contained in Section IV.

### Parkland Replacement

The need for replacement of 4(f) park and recreation areas has been established by the Federal Highway Administration for the taking of existing similar areas under the "Build" Alternatives for both the mainline roadway and the Hilton Parkway Connector. A survey to determine the availability of land for this purpose within or close to the project area has indicated that adequate lands do exist where such replacement could occur. They include approximately 34 acres of the Gwynns Falls floodplain south of Wilkens Avenue (see Exhibit V-16) and approximately 31 acres of land currently occupied by the Genstar Quarry. These areas are identified as potential areas only and not necessarily the exact sites to be purchased for this purpose. Future studies of the feasibility and availability of these lands will be performed contingent upon the amount of land required, the cost of the land, and the level of improvements necessary to create viable park areas for community use.

Table V-2 lists the minimum acreages to be replaced under each mainline "Build" Alternative by itself and in combination with each of the three Hilton Parkway Connector options. These figures represent a combined total of acreages from three identified 4(f) sites--the Gwynns Falls Recreation Center, the Gwynns Falls Park, and Daisy Hill Field.

The tabulation indicates that Alternative 3 would require the least amount of replacement (7.6 to 17.0 acres) for every Hilton Parkway/Edmondson Avenue Connector option (both with and without), while Alternative 2 would require the most (16.4 to 25.1 acres). Connector Alternative B, when combined with any of the mainline alternatives, produces the most acreage for that mainline alternative; Alternative A adds the least acreage to each mainline alternative. The combined mainline/connector alternative which would require the most replacement is Alternative 2/Alternative B (25.1 acres). Alternative 3 with no connector would require only 7.6 acres of replacement land, the least of any "Build" Alternative.

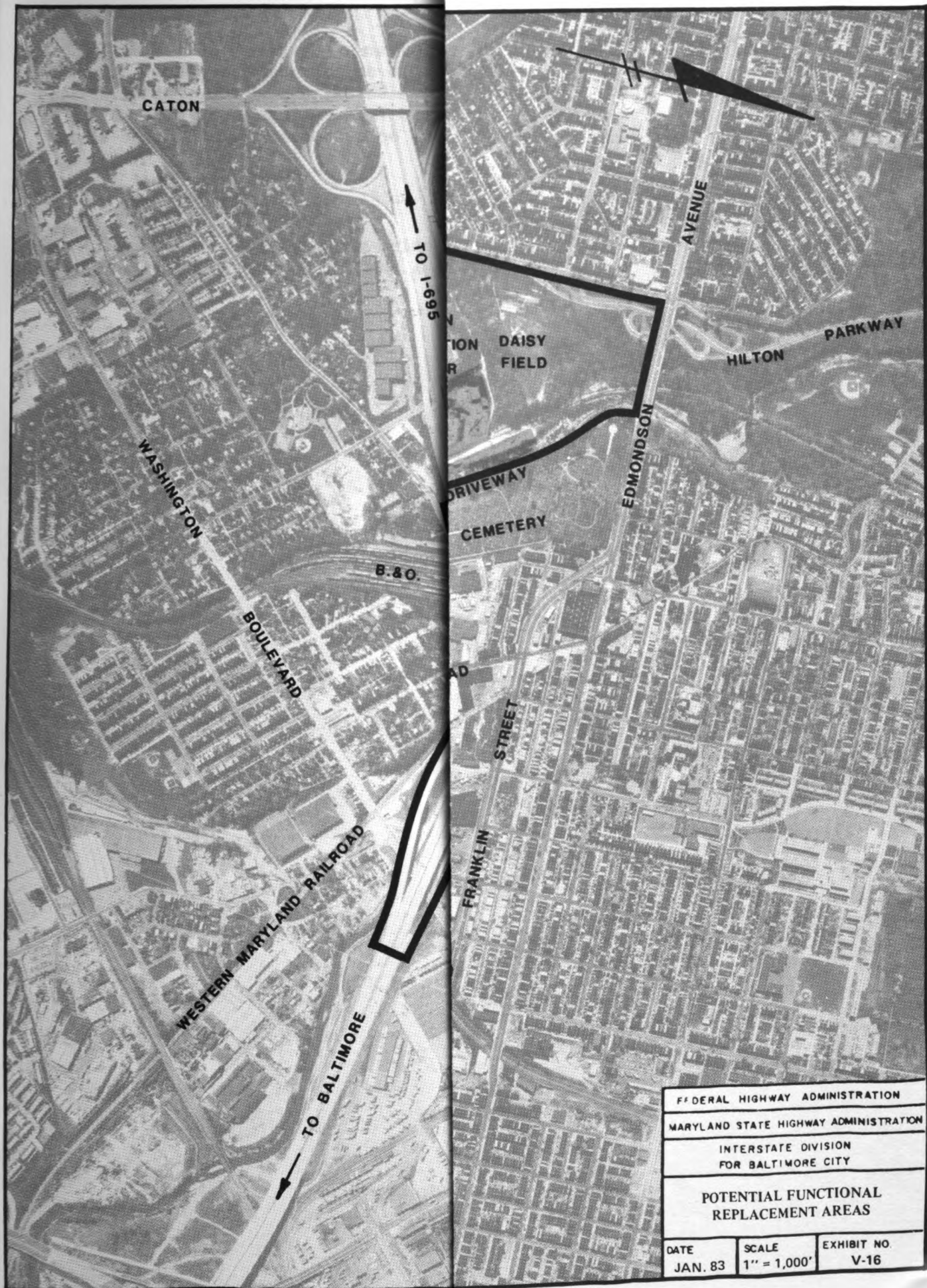
### Design of Replacement Recreational Facilities

All of the proposed mainline alternatives would require land from the ballfields at the Gwynns Falls Recreation Center. The functional replacement process for this facility necessitates restoration of these fields for similar use. Preliminary analyses indicate that these fields can be realigned and restored on the remaining acreage of the Center without loss of function. Further detailed design of the fields and related facilities will be undertaken after selection of a preferred alternative.

Table V-2

Acreage of 4(f) Lands Eligible for Replacement  
(Based on Limit 20 Feet Beyond Shoulders/Edge of Structure)

<u>Alternative</u>	<u>Without Connection</u>	<u>Hilton Parkway Connector Alternative</u>		
		<u>A</u>	<u>B</u>	<u>C</u>
1	13.8	19.0	22.2	19.7
2	16.4	20.9	25.1	22.6
3	7.6	14.1	17.0	14.5
4	12.5	16.9	19.8	17.3



FEDERAL HIGHWAY ADMINISTRATION		
MARYLAND STATE HIGHWAY ADMINISTRATION		
INTERSTATE DIVISION FOR BALTIMORE CITY		
POTENTIAL FUNCTIONAL REPLACEMENT AREAS		
DATE JAN. 83	SCALE 1" = 1,000'	EXHIBIT NO. V-16



Hilton Parkway Connector Alternative B will take significant acreage from the western side of Daisy Hill Field, including that portion presently occupied by a basketball court and comfort station. These facilities, too, can be replaced on the remaining land and will be designed in detail should this alternative be chosen.

#### Noise Mitigation

Noise barriers are being investigated for sensitive areas along the proposed project route. For a discussion of this mitigation, see page IV-14.





## **Section VI:**

---

### **List Of Preparers**





## SECTION VI: LIST OF PREPARERS

This Draft Environmental Impact Statement was prepared by the Interstate Division for Baltimore City and the Federal Highway Administration, with assistance from Greiner Engineering Sciences, Inc., Whitman, Requardt and Associates, Synterra, Ltd. and Coastal Resources, Inc. The following personnel were instrumental in the preparation of this document.

### INTERSTATE DIVISION FOR BALTIMORE CITY

Mr. William K. Hellmann, Chief  
Interstate Division for Baltimore City

Mr. David W. Chapin, Chief  
Bureau of Joint Development

Mr. Shubroto Bose  
Principal City Planner

Mr. Charles Landes, Chief  
Office of Appraisals &  
Negotiations

Mr. Robert D. Douglass  
Chief, Bureau of Design

Mr. Gerald L. Kreiner  
Environmental Analyst

Mr. Donald Hartmann  
Route Engineer

Mr. Frank J. Murphy  
Transportation Engineer

Mr. Jeffrey K. Drinkwater  
Environmental Analyst

### FEDERAL HIGHWAY ADMINISTRATION

Mr. Edward A. Terry, Jr.  
District Engineer

Ms. Kathleen O. Laffey  
Environmental Specialist

Mr. Charles L. Kolsky  
Area Engineer

Mr. William Sageman  
Regional Environmental Engineer

### GREINER ENGINEERING SCIENCES, INC.

#### Engineering:

Mr. Donald Henderson  
Project Director

Mr. C. C. Pancholi  
Structural Engineer

Mr. James Lutz, Jr.  
Engineer

Mr. Joseph Yakel  
Highway Engineer

**Environmental:**

**Mr. Charles B. Adams, Chief  
Environmental Services**

**Mr. Washington Bowie, VI  
Environmental Specialist**

**Mr. Michael L. Metcalf  
Graphic Specialist**

**Ms. Nancy R. Faller  
Project Engineer**

**Mr. Florian M. Galan  
Graphic Specialist**

**Mrs. Diane Horrell  
Vydec Operation**

**WHITMAN, REQUARDT & ASSOCIATES**

**Mr. H. Hudson Myers, Jr.  
Partner-In-Charge**

**Mr. Harry W. Beard  
Associate Engineer**

**Mr. Milton E. Volker  
Project Engineer**

**Mr. Alfred H. Boldtman  
Project Engineer**

**Mr. Thomas M. Smith  
Project Engineer**

**SYNTERRA, LTD.**

**Mr. Victor J. DePallo  
Regional Director**

**Mr. Walter Hood  
Landscape Architect**

**Mr. James Fries  
Landscape Architect**

**COASTAL RESOURCES, INC.**

**Mrs. Nancy G. Kelly  
President**



## **Section VII:**

---

**List Of Agencies, Etc., To Whom Copies  
Of This Statement Have Been Sent**







SECTION VII: LIST OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS  
TO WHOM COPIES OF THIS STATEMENT HAVE BEEN SENT

FEDERAL AGENCIES

U.S. Department of Housing and Urban Development  
Office of Environmental Project Review  
U.S. Department of Agriculture  
Soil Conservation Service  
U.S. Department of Commerce  
General Services Administration  
Office of Environmental Affairs  
U.S. Department of the Interior  
National Marine Fisheries Service  
U.S. Environmental Protection Agency  
Federal Energy Management Agency  
U.S. Department of the Navy  
U.S. Department of Energy  
U.S. Corps of Engineers  
National Capital Planning Commission  
Advisory Council on Historic Preservation  
Office of Economic Opportunity  
U.S. Department of Health and Human Services  
U.S. Department of Education  
Federal Emergency Management Agency  
Interstate Commerce Commission  
Community Services Administration  
U.S. Department of Labor  
National Marine Fisheries Service  
U.S. Department of Transportation  
    U.S. Coast Guard  
    Urban Mass Transit Administration  
    Federal Railroad Administration

STATE AGENCIES

State Department of Planning - State Clearinghouse  
Maryland Historical Trust  
Department of Economic and Community Development  
Community Development Administration  
Maryland Department of Public Safety and Correctional Services  
Maryland Division of Planning and Support Services

Maryland Department of Transportation  
State Highway Administration  
Maryland Department of Health and Mental Hygiene  
Department of General Services  
Regional Planning Council  
Mass Transit Administration  
Maryland Arts Council  
Maryland Department of Natural Resources  
Watershed Permit Section  
Wetlands Permit Section  
Coastal Zone Management Section  
Water Resources Administration  
Department of Budget and Fiscal Planning  
Department of Education  
Interagency Committee for School Construction  
Maryland Environmental Trust  
Maryland Geological Survey

#### CITY AGENCIES

Transportation Coordinator, Office of the Mayor  
Development Coordinator, Office of the Mayor  
Department of Recreation and Parks  
Department of Public Works  
Department of Planning  
Department of Transit and Traffic  
Department of Housing and Community Development  
Department of Finance  
Department of Health  
Department of Law  
Urban Services Agency  
Fire Department  
Commission on Historical and Architectural Preservation  
Baltimore City School Board  
Mayor's Stations  
Urban Service Agencies  
Charles Center Inner Harbor Management, Inc.  
Baltimore Economic Development Corporation

#### ELECTED OFFICIALS - BALTIMORE CITY

Mayor of Baltimore  
President and Members of City Council  
City Comptroller

## INTERESTED PARTIES

The Sunpapers  
The News American  
The Afro American  
Enoch Pratt Library  
Maryland Highway Contractors Association  
Charles Center Inner Harbor Management, Inc.  
Baltimore Economic Development Corporation  
Greater Baltimore Committee  
Chessie Resources, Inc.  
Conrail/Amtrak  
Rosemont Homeowners and Tenants Association  
Alliance of Rosemont Community Organization  
Citizens Organized for Improving Life  
Gwynns Falls Community Association  
Lexington Community Improvement Association  
Mill Hill Improvement Association  
Morrell Park & Vicinity Community Association  
Shipley Hill Improvement Association  
Western Improvement Association  
Allendale Improvement Association  
Carroll Improvement Association, Inc.  
St. Joseph's Improvement Association  
South Hilton Neighborhood Improvement Association  
Wilkins Avenue Coalition  
Greater West Hills Community Association  
Edmondson-Frederick Community Coalition  
United Neighbors  
Gelston-Allendale Neighborhood Improvement Association  
Alba Neighborhood Association  
Barre Circle Community Association  
Beechfield Community & Improvement Association  
Bridgeview Improvement Association  
Carroll Park Human Services Coordination Council  
Carrollton Circle Civic Association  
Community Neighborhood Association  
Comprehensive Planning Commission of Southwest Baltimore  
Downtown Merchants Association  
Edmondson Improvement Association  
Franklinton Community Association, Inc.  
Franklinton Road Neighborhood Improvement Association  
Franklin Square PAC  
Greater Walbrook Coalition  
Greater Mondawmin Coordination Council  
Greater West Hills Community Association  
Harlem Park Neighborhood Council, Inc.  
Hollins Park Association  
Hunting Ridge Community Assembly

Irvington Businessmen's Association  
 Irvington Community Association  
 Lafayette Square Association  
 Lexington Terrace/Poe Homes Tenant Council  
 Lutheran Hospital Community Advisory Board  
 Lynhurst Community Association  
 McHenry-Franklinton Improvement Association  
 Mosher Street Improvement Association  
 Mount Holly Community Organization of Edmondson Village  
 Mount Clare Circle Improvement Association  
 Neighborhood Committee, Inc.  
 Neighborhood Improvement Committee (NIC)  
 Northwest Community Action Group  
 Oaklee Improvement Association, Inc.  
 Old Southwest Civic Association  
 Poppleton Urban Planning Action Council, Inc.  
 Pratt-Monroe Community Improvement Association  
 Ridgely's Delight Association  
 Rosemont Multi-Purpose Center Planning Committee  
 Rosemont Neighborhood Improvement Association  
 St. Agnes Neighborhood Association  
 Southwest Community Council, Inc.  
 Southwest Interagency Neighborhood Group  
 Southwest Merchant's Association  
 Tremont Community Association  
 Union Square Association  
 Union Square Local Development Corporation  
 Upland Community Association, Inc.  
 Violetville Community Association  
 Walbrook Civic League  
 Walbrook Merchants' Association  
 Washington Village Businessmen's Association  
 West Baltimore Street Merchants' Association, Inc.  
 West Lexington Street Merchants' Association  
 West Pratt Street Businessmen's Association  
 Western District Police Community Relations Council  
 Westgate Community Association, Inc.  
 Westwood Avenue Neighborhood Association  
 Workers in Alliance Towards Community Unity  
 Yale Heights Community Improvement Association  
 Baltimore Neighborhoods, Inc.  
 Citizens Planning and Housing Association  
 Rapid Transit Coalition  
 Retail Merchants' Association of Baltimore, Inc.  
 V.O.L.P.E. (Volunteers Opposed to the Leakin Park Expressway)  
 Western Maryland Railway  
 Off-Street Parking Commission

# Appendices

---







## APPENDIX A

### HISTORY OF THE PROJECT

Planning for expressway facilities to handle crosstown traffic within the City of Baltimore has historically faced considerable opposition. Eleven transportation plans were prepared between 1939 and 1971, all attempting to serve the through traffic routing problem while ensuring access to the Central Business District (CBD), the Port, and the residential areas in the northern part of the City.

The Baltimore Beltway, I-695, was constructed in the 1950's and 1960's as an outer bypass facility. In 1955, an initial segment was opened for traffic, and by 1962, 75 percent of the Beltway was completed. The Beltway encircles the City, with 85 percent of its 51 miles lying in the Baltimore City suburbs.

The 1956 Federal Interstate Highway Act provided a financial incentive for local planning and highway construction. Numerous studies were undertaken to evaluate potential alternatives linking the Beltway with the downtown area. The Regional Planning Council recommended a transportation system in their 1959 Freeway Plan. One of the objectives of this report was to enhance the accessibility of the CBD. The main components of the recommended system were the Jones Falls and Harrisburg Expressways (I-83), running north from downtown, the Beltway, east-west and north-south radials, and freeway links south and west of the City. Most traffic needs were determined to be crosstown in nature.

The original approved interstate program for Baltimore was known as the 10-D System. The proposed system was an outgrowth of several studies through the late 1950's and early 1960's, primarily the 1961 Expressway Consultants' Report. With the 10-D System, I-70N entered Leakin Park at the City line and followed a northern park route to an interchange with Hilton Avenue. The proposed alignment then proceeded in a southeasterly direction through the Rosemont community, crossing the railroad line at Franklin Street. Interstate 70N then followed a route along the block between Franklin and Mulberry Streets to Freemont Avenue. The 10-D plan showed I-95 entering the City from the southwest and proceeding to the vicinity of Carroll Park where it followed Gwynns Falls Stream. After crossing Middle Branch, the proposed I-95 alignment turned north through the historic Federal Hill area to interchange with I-70N in the CBD.

Evaluation of the 10-D alignment produced several areas of concern to the City. The social and housing impacts of displacing a large number of residences, impacts on parks and historical areas, and poor downtown service were among the problems revealed.

Urban Design Concept Associates, a Concept Team, was formed in 1967 to re-appraise previous studies and to design the City's Interstate System. In 1968, a system known as the 3-A Alignment was selected and approved as the City's proposed Interstate System.

The 3-A System concept was developed through the planning process required under Section 134 of Title 23 U.S.C. The requirements of the Federal-Aid Highway Act of 1962, for a continuing, comprehensive, and cooperative urban transportation planning process, have been satisfied by the operation of the Transportation Steering Committee under the direction of the Regional Planning Council. The fundamental components of the regional transportation program include: the construction of a rapid transit system; improvements to bus service, rail, port and air travel facilities; and the development of an adequate and efficient highway and street network. The 3-A System was designed to separate the through traffic from the CBD and local traffic.

Local officials have determined the 3-A System to be essential to the future needs of the City. It is an integral part of the Baltimore City Master Plan and the Capital Improvement Program as adopted by the Mayor, City Council, Board of Estimates, Planning Commission and Department of Housing and Community Development of Baltimore City. The inclusion of the 3-A System in the Regional Planning Council's General Development Plan for Baltimore City has been established under the Regional Transportation Improvement Program, which consists of improvements recommended by the Transportation Systems Management document and the General Transportation Plan, the long-range planning document. These three documents form the transportation element of the General Development Plan.

### Historical Alternatives

The following synopsis of historical alternatives is divided into three segments: the Lower Gwynns Falls Corridor, the I-170 Connector and the Edmondson Avenue Connector, since these segments were sections of different studies. Copies of previous reports are available for review at the offices of IDBC.

#### Lower Gwynns Falls Corridor

A highway alignment through Lower Gwynns Falls Park was first introduced in the "Report to the Commission on the City Plan of the City of Baltimore" in 1942. This report proposed two highways linking U.S. Route 1 to U.S. Route 40. One highway would serve as a through route and the other would serve the Central Business District (CBD). The through route was located in the Franklin/Mulberry Corridor, and included two alternatives. Both alternatives proceeded west from Pulaski Street curving southwestward parallel to and south of the Amtrak tracks until they crossed Gwynns Falls Stream. One alternative continued along the railroad line to Caton Avenue

where it paralleled the east side of Caton Avenue to Wilkens Avenue. The second alternative proceeded through the park on the west side of the stream to Wilkens Avenue where the alignment entered the residential area of Wilkens Avenue.

In 1944, this through alignment reappeared in the "Baltimore Arterial Report," where the alternatives were modified to join the then planned Baltimore-Washington Parkway. The through alignment was removed however in the Baltimore Planning Commission's 1949 "Master Transportation Plan for Baltimore." Upgrading Hilton Parkway was proposed as the method to improve north-south traffic flow in this area.

The Baltimore Metropolitan Area Transit Study was developed in 1964 to coordinate the interstate highways leading into Baltimore City with the intra-City arterials. A proposed highway through the Lower Gwynns Falls Valley replaced the Hilton Parkway option to serve north-south traffic needs. The Lower Gwynns Falls alignment was a portion of a route that connected the Northwest Freeway, I-70N, and I-95. This transportation plan was modified and eventually entitled the 10-D System. One of the modifications was the removal of the Lower Gwynns Falls alignment. Under the 10-D System, I-70N left Leakin Park at Hilton Avenue, proceeded southeasterly through the Rosemont community and entered the Franklin/Mulberry Corridor at Pulaski Street. The proposed I-70N alignment then proceeded downtown to Freemont Avenue and from there southeast to an interchange with I-95 in the vicinity of the Inner Harbor.

Baltimore City approved a new highway plan known as the 3-A System in 1968. The alignments of I-70N and I-95 through the extensively developed areas of the City proposed in the 10-D System were re-evaluated. Due to the substantial potential impacts to residential areas, historic areas, parks, and the Inner Harbor, the concept of an I-70N/I-95 interchange in the downtown area was withdrawn from the 3-A System plan.

Under the original 3-A System, the Lower Gwynns Falls Connector appeared as the lower portion of I-70N rather than a separate segment. Interstate 170 would have extended westward to tie into I-70N.

In the I-70N Gwynns Falls Corridor Study, prepared by the Urban Design Concept Associates, in November 1970, the Lower Gwynns Falls Connector was designated as Segment 13 of the City's Interstate Highway System. The Segment 13 Corridor consisted of the land immediately adjacent to the Gwynns Falls Stream Valley, extending from Baltimore Street on the north to Wilkens Avenue on the south. The northern limit was the interchange with the I-170 spur and the southern limit was the I-70N/I-95 interchange.

The purpose of the Corridor Study was to describe preliminary alternative roadway alignments and initial design concepts. Three alternative alignments, identified as A, B and C, were defined in this Corridor Study. Alternative A was located west of and immediately adjacent to the

mainline of the Western Maryland Railway for the majority of its length. This alternative required the rechannelization of the Gwynns Falls Stream from the existing railroad bridge to Wilkens Avenue, a distance of 2,300 feet. The relocated stream would have been placed west of the highway, adjacent to the park recreational areas. The northbound on-ramp from Frederick Avenue was routed along Ellicott Driveway, and the ramps to and from I-170 would pass over a portion of Ellicott Driveway on an elevated structure.

Alternative B followed essentially the same route as Alternative A, the difference being in the relocation of the stream. With Alternative B, Gwynns Falls Stream would remain in its natural channel to the vicinity of Frederick Avenue, where it would be rechannelized for a distance of approximately 1,300 feet to a point south of Wilkens Avenue. The stream would have been contained between the Interstate and the rail line, isolating it from the public. Maidens Choice Run, which joins the Gwynns Falls Stream south of Wilkens Avenue, would have been culverted under the Interstate to join the relocated Gwynns Falls. Alternative B was shifted farther west than Alternative A, and closer to Southwestern High School, requiring the use of a retaining wall for the southbound ramp of I-170.

Alternative C followed the alignment of Alternative A to a point midway between Baltimore Street and Frederick Avenue. South of this point, Alternative C cut deeply into the eastern side of the valley necessitating retaining wall construction to avoid impacts to residential properties. The major advantage of Alternative C was that it reduced the taking of parkland to a minimum, and permitted the retention of the ball field at Lower Gwynns Falls Recreation Center. Alternative C also offered a straighter roadway configuration. However, this alternative included extensive relocation of the Western Maryland rail line (5,150 feet) and the stream, requiring acquisition of residential property. In addition, the excavation of the eastern slope and the construction of the retaining wall would significantly impair the natural appearance of the valley.

All three alternatives in this 1970 study would have tied into I-70N from the north and I-170 from the east at Baltimore Street. Each alternative was a six-lane facility, with a diamond interchange at Frederick Avenue and a Y-directional interchange at I-95. The reconstruction of bridges at Baltimore Street, Frederick Avenue and Wilkens Avenue and the rechannelization of portions of the Gwynns Falls Stream were required with all of the alternatives. Gwynns Falls would have been placed in a major box culvert under the Amtrak viaduct.

Location Hearings on the three alternatives were held on February 16 and 18, 1971. Pursuant to this, a Location Report for Interstate Route 70N from Baltimore Street to South of Wilkens Avenue was prepared and submitted in February 1974. This study served as a Location Study and updated the previous studies presented at the Location Hearings.

The Location Study focused on the environmental impacts associated with Alternatives A, B, C and the No-Build Alternative. Alternative A was chosen as the recommended alternative since it was determined to be the most efficient and invoked the least amount of damage to the area. With Alternative A, the rechannelized stream was located adjacent to the parkland and accessible to the public. This alignment would not displace any houses, but would take 20 acres of parkland.

Alternative B, situated the stream between the highway and the railroad tracks, making it inaccessible to the public. The relocation of the stream would have resulted in the flood stages being at a slightly higher elevation, with the overbank area being smaller and less efficient than the overbank areas with Alternative A. In addition, Alternative B was closest to Southwestern High School and removed the greatest amount of parkland.

Alternative C, the alternative designed to minimize harm to parkland, was found to be the most disruptive, removing 30 houses, displacing the greatest number of jobs, and requiring a 35-foot high, 2,700-foot long retaining wall.

All of the alternatives required the replacement of the Baltimore Street, Frederick Avenue, and Wilkens Avenue Bridges which would cross over the Interstate. Proposed interchanges were with I-170 at Baltimore Street, Frederick Avenue and I-95.

The Maryland Department of Transportation State Highway Administration's Overview Statement for Interstate 70N and Interstate 170 in West Baltimore (1975) examined partial alternatives, an out-of-the-park alternative and mass transit alternatives in the I-70N/I-170 Corridor, the Lower Gwynns Falls segment, the Leakin Park segment, and the Rosemont segment on the entire alignment. This report analyzed what the potential effects on the transportation system would be if certain sections of I-70N/I-170 were not constructed. The three sections studied were the Lower Gwynns Falls, Leakin Park and Rosemont segments. Removal of the Lower Gwynns Falls segment would result in increased traffic levels in the Caton/Hilton and in the Fulton/Monroe Corridors. The analysis indicated that the removal of the Leakin Park segment would result in an increased traffic load on Edmondson Avenue and the National Pike and that by the 1995 traffic on east-west thoroughfares in western Baltimore would be at a level of service D or worse. If the Rosemont Bypass was deleted, this study predicted that westbound traffic would use Edmondson Avenue, and that traffic destined to I-95 via I-70N would use Hilton Street, Caton Avenue, Fulton and Monroe Streets and Wilkens Avenue.

The Out-of-the Park Alternative was composed of a northern route through Leakin Park and a route along Edmondson Avenue through Rosemont. In the Lower Gwynns Falls area, this alternative followed the Caton/Hilton Corridor and was on structure. The Out-of-the-Park Alternative through

Lower Gwynns Falls from Hilton Street to I-95 displaced 148 residences, numerous industrial and commercial facilities and was very costly.

The mass transit alternatives studied were Commuter Railroad, Rail Rapid Transit and Light Rail. The Commuter Railroad System was not considered a feasible alternative since only 14 to 15 percent of the population was within a reasonable distance of the system. However, in conjunction with the highway system and other forms of rapid and mass transit, the Commuter Railroad System could be used effectively.

A Regional Rail Rapid Transit System is currently being constructed in Baltimore. The system was designed to act in conjunction with the highway system as part of a balanced transportation system. The Rail Rapid Transit System is not a viable alternative to a highway system. Mass transit reaches its effective levels when it serves dense, highly developed corridors of residential areas and employment sites. Those portions of the highway system involving improved port access, removing trucks from local streets, and improving through-City access could not be replaced by this system.

#### I-170 Connector (Rosemont Bypass)

The "I-170 Connector" is defined as the portion of the project between Baltimore Street and the existing segment of I-170 in the Franklin/Mulberry Corridor. Historically, this segment was an extension of I-170 to tie in with the proposed I-70N alignment. The proposed I-70N/I-170 interchange would have been located in the vicinity of Baltimore Street and the Amtrak line.

The alignment of the I-170 Connector between the proposed I-70N/I-170 interchange and Pulaski Street (western end of existing I-170) originated in the 1968 3-A System as an alternative to bypass the Rosemont community, north of Edmondson Avenue and east of Gwynns Falls Stream. Prior to this plan, I-70N proceeded southeasterly through the Rosemont community between Leakin Park and the Franklin/Mulberry Corridor. After severe opposition from the Rosemont neighborhood, alternatives to bypass this community were evaluated.

Four alignments to bypass the Rosemont community were presented in the Rosemont Bypass Study, May 1969. The recommended alternative from this study originated at the proposed I-70N/I-170 interchange (Baltimore Street vicinity) and curved eastward crossing the southern portion of Western Cemetery. Proceeding eastward, the alignment paralleled the north side of the Amtrak line from Gwynns Falls to Bentalou Street where it crossed over the railroad catenary and descended into the Franklin/Mulberry Corridor. The recommended facility consisted of two parallel three-lane bridge structures, ranging in height from 30 to 40 feet above existing grade.



The remaining three alignments covered in the Rosemont Bypass Study differed from each other only in the section between proposed I-70N and Franklinton Road. One alternative interchanged with I-70N north of Edmondson Avenue and turned southeast to tunnel under the northern corner of Western Cemetery. The other two alternatives interchanged with I-70N south of Edmondson Avenue and tunneled through the middle portion of Western Cemetery. There was a 250-foot offset between the centerlines of the cut-and-cover tunnels for these two alternatives through the middle of the cemetery. East of Franklinton Road all three alternatives were located south of and parallel to Franklin Street in a six-lane depressed section.

A preliminary Final Environmental Statement for I-170 from I-70N in the vicinity of Baltimore Street to Pulaski Street was drafted in March 1975. In this report, four additional alternatives were introduced, two freeway alternatives, one boulevard alternative, and one expressway alternative. The freeway alternatives were variations of the bypass study preferred alternative, one shifting the alignment south of the Amtrak tracks and the other splitting the alignment. With the split alignment, the eastbound roadway exited I-70N south of Edmondson Avenue Bridge, crossing over Baltimore Street and the railroad bridge. The eastbound roadway alignment then turned northeast traveling south of and adjacent to the Amtrak line, and joined the westbound roadway at Bentalou Street. From I-70N, traveling east, the westbound roadway alignment paralleled the north side of Edmondson Avenue in a cut-and-cover tunnel to Poplar Grove Street. Swinging southeast, the alignment continued in a tunnel section to Franklinton Road where the roadway became a depressed section crossing under Mulberry Street and the railroad to join existing I-170.

The Boulevard Alternative attempted to fit the highway alignment as close as possible to existing right-of-way. The Boulevard scheme utilized the existing U.S. 40 roadway (three lanes in each direction) between the Edmondson Avenue Bridge and Franklinton Road. East of Franklinton Road, the alignment would have followed U.S. Route 40, with elevated through lanes. The major objective to this Boulevard Alternative was that it provided reduced traffic service and accessibility at a greater cost to the City.

A limited access highway, expressway alternative was evaluated in the Draft Final Environmental Statement. This alternative was developed in an attempt to use the existing Edmondson Avenue Bridge. The alignment followed existing U.S. Route 40 to Franklin Street, then followed the Franklin Street right-of-way between Edmondson Avenue and the Franklin/Mulberry Corridor. The primary reasons for the rejection of the Expressway Alternative were service limitations and excessive costs.

The Draft Final Environmental Statement concluded that the preferred bypass study alignment (passing south of Western Cemetery and running north of and parallel to the Amtrak line to the Franklin/Mulberry Corridor) was the recommended alternative. This alignment was chosen

because it reduced impacts to the cemetery, industrial areas and residential areas, and was the alternative supported by the public.

#### Hilton Parkway/Edmondson Avenue Connector

The Leakin Park segment of I-70N between the West City line and I-170 was withdrawn from the Interstate System based on environmental and funding problems. Although a section of the proposed I-70N ran between Baltimore Street and Edmondson Avenue, there was no connection to Edmondson Avenue or Hilton Parkway. The only significance historical I-70N alternatives would have with respect to this current study is the alignment of the roadway through the corridor.

Historically, I-70N between Baltimore Street and Edmondson Avenue crossed either over or under Baltimore Street at the Western Maryland Railroad line and ran west of and generally parallel to the railroad tracks to Edmondson Avenue. The proposed alternatives passed under Edmondson Avenue at Gwynns Falls Stream and continued northwestward through Leakin Park.



APPENDIX B

JAMES B. COULTER  
SECRETARY  
JES N. PHIPPS, JR.  
DEPUTY SECRETARY

STATE OF MARYLAND  
DEPARTMENT OF NATURAL RESOURCES  
**CAPITAL PROGRAMS ADMINISTRATION**  
TAWES STATE OFFICE BUILDING  
ANNAPOLIS, MARYLAND 21401  
(301) 269-3656

FRED L. ESKEW  
ASSISTANT SECRETARY  
FOR CAPITAL PROGRAMS

July 7, 1982

Mr. William K. Hellmann, Chief  
Interstate Division for  
Baltimore City  
2225 N. Charles Street  
Baltimore, MD 21218

Dear Mr. Hellmann:

Thank you very much for your letters of June 30th and July 2nd, 1982. At this time, we know of no rare, threatened, or endangered species in the I-70 or I-170 areas in west Baltimore. The closest occurrence of a rare species is near Gwynn Oak Park.

We will be glad to respond to all data requests which you have. However, please note my correct name and address. Could you let me know where you learned of my name and our group so that I can correct this error?

Thanks again for contacting the Maryland Natural Heritage Program.

Sincerely,

George H. Fenwick  
Maryland Natural Heritage  
Program

GHF:jgf















