

J. F. Perna, Jr.

**LIBRARY COPY**  
RETURN TO  
OFFICE OF PLANNING AND PROGRAMMING  
DEPT. OF HIGHWAYS AND TRAFFIC  
GOVT. OF THE DISTRICT OF COLUMBIA  
FILE NO: 3152

DEPARTMENT OF  
HIGHWAYS AND TRAFFIC  
THE DISTRICT  
OF COLUMBIA

DESIGN REPORT  
I-266 BRIDGE AND APPROACH ROADWAY

DESIGN REPORT -- I-266 BRIDGE  
AND APPROACH ROADWAY

I.	PROJECT PLANNING PHASES	1
A.	Information Classification	1
B.	Design Hearing Findings	1
II.	ALTERNATIVE PROPOSALS	7
A.	Conceptual Alternatives	7
B.	Other Alternatives	7
III.	ENGINEERING FEATURES	11
A.	Geometrics	11
B.	Traffic Capacity	13
C.	Standards	15
	March, 1971	15
IV.	ENVIRONMENTAL IMPACTS	17
A.	Economic Activity and Employment	17
B.	Government Operations	18
C.	Transportation	18
D.	Public Utilities	19
E.	Project Noise	19
F.	Existing Highway Facilities	20
V.	ENVIRONMENTAL DETAILS	21
A.	Accessories	21
B.	Signage	22
C.	Pollution and Conservation	23
D.	Use of Space	25
E.	Architectural Character	26
VI.	ENVIRONMENTAL IMPACTS	27
A.	Visual and Aesthetic Impacts	27
B.	Historical and Religious Impacts	28
C.	Public Health	29

DEPARTMENT OF HIGHWAYS AND TRAFFIC  
District of Columbia

VII. CONCLUSIONS AND RECOMMENDATIONS  
APPENDIX

REPORT NO. 1 - TRUCK WEIGHT  
AND APPROXIMATE ROADWAY

1971, April

This report was prepared in cooperation  
with the U. S. Department of Transportation,  
Federal Highway Administration

CONTENTS

I.	PROJECT PLANNING PROCESS. . . . .	1
	A. Information Dissemination . . . . .	1
	B. Design Hearing Findings. . . . .	3
II.	ALTERNATIVE PROPOSALS. . . . .	7
	A. Departmental Alternatives . . . . .	7
	B. Other Alternatives . . . . .	8
III.	ENGINEERING FEATURES . . . . .	11
	A. Geometrics . . . . .	11
	B. Traffic Capacity . . . . .	14
	C. Standards . . . . .	16
IV.	ECONOMIC IMPACTS . . . . .	17
	A. Economic Activity and Employment. . . . .	17
	B. Government Operations . . . . .	18
	C. Transportation. . . . .	18
	D. Public Utilities . . . . .	19
	E. Project Costs . . . . .	19
	F. Existing Highway Facilities . . . . .	20
V.	ENVIRONMENTAL IMPACTS. . . . .	21
	A. Recreation . . . . .	21
	B. Aesthetics . . . . .	22
	C. Pollution and Conservation. . . . .	23
	D. Use of Space . . . . .	25
	E. Neighborhood Character . . . . .	26
VI.	SOCIOLOGICAL IMPACTS . . . . .	27
	A. Business and Residence Displacement. . . . .	27
	B. Educational and Religious Institutions. . . . .	27
	C. Public Health . . . . .	27
VII.	CONCLUSIONS AND RECOMMENDATIONS . . . . .	29
	APPENDIX . . . . .	35

established at various locations in Washington, D. C. and Virginia. The public hearing notice reproduced in the Appendix specified when and where the information centers were in operation.

The departments also elected to compile and publish pertinent information in the form of a prehearing information booklet. This booklet is titled I-266 Design Hearing Information. The booklets were distributed by request and were supplemented with other data made available for inspection and copying. Supplemental data made available to the public are contained in a listing included in the Appendix.

#### B. Design Hearing Findings

Over 25 hours of testimony were heard on December 14, 15, and 16, 1970 when a Design Public Hearing was conducted in connection with this I-266 project. The hearing was conducted jointly with the Virginia Department of Highways. It covered the 4,600 foot long portion of I-266 between I-66 in Virginia and a point near the intersection of Canal Road and MacArthur Boulevard in Washington, D. C.

A total of 327 statements were presented for inclusion in the official hearing record. Of these statements, 118 were presented in person and 209 were written in lieu of personal appearance. Over 40 percent of the statements received were submitted in behalf of associations and organizations--the remainder was received from individuals representing themselves only. Table 1 shows the numerical distribution of witnesses.

TABLE 1

#### HEARING WITNESSES

Testimony	Groups	Individuals	Total	
			No.	Percent
In Person	75	43	118	36
By Mail	58	151	209	64
Total	133	194	327	100

The comments submitted by witnesses were categorized in an effort to identify major interests and issues. The categories are:

1. Environmental Impact
2. Social Impact
3. Economic Impact
4. Design Features
5. Other

A review of oral and written statements in the hearing record indicates that a total of 845 identifiable comments were presented by 327 witnesses. A comment, for the purpose of this analysis, is defined as a basis or argument upon which a witness supported his position with respect to the project. Although the same comment was tabulated each time it was stated by different witnesses, single comments repeated by the same witness were counted only once.

It is considered significant that one out of four witnesses specifically supported a bridge design for I-266 at the Three Sisters Islands site. Virtually all of these proponents (95 percent) favored the three-span design which was unanimously approved by the Commission of Fine Arts in September, 1967. The six-span alternative submitted by the Department at the Design Hearing was rejected by the three-span proponents on the grounds of aesthetics and recreational use of the river.

The importance of the I-266 Bridge in the selection of the Chantilly site for Dulles International was cited in testimony by a former Administrator of the Federal Aviation Agency. This testimony indicates that the I-266 Bridge, which was then in the planning stage, was an influencing factor in the final location of the airport.

Comments related to environmental affects of the project outnumbered comments in each of the other categories. Of all comments identified in the transcript, 44 percent are in the environmental impact category. Environmental factors drew the most criticism as well. Eighty-two percent of the environmental comments were to the effect that the project, regardless of how it may be designed, will have adverse impacts on the urban environment. The factors most often cited were the use of parkland, additional air pollution, impact on natural scenery, and effects on neighborhood character in Virginia.

The attention given to social impacts by hearing witnesses was focused primarily on displacement effects of highway construction. In this instance, witnesses addressed the effects of other links in the proposed freeway network. It was contended that I-266 west of the Potomac River Freeway is unusable without completion of the remaining sections of the network and that displacements ascribed to the remainder of the network are, therefore, relevant to design decisions on the project now under consideration.

## II. ALTERNATIVE PROPOSALS

Studies of proposed I-266 west of the Potomac Freeway section have included the investigation of numerous bridge and tunnel possibilities by the Department of Highways and Traffic. Evaluation of these design options indicated two bridge configurations as being the most feasible options to consider in choosing a final design. Other design options were presented to the Department at the I-266 Design Public Hearing for consideration in the selection process.

Each of the alternatives will cross the George Washington Memorial Parkway in Virginia and the Potomac River, C & O Canal and Canal Road in Washington, D. C.

### A. Departmental Alternatives

#### 1. Three-Span Bridge

A prestressed concrete bridge alternative resting on two river piers consists of three arched spans. The center span of 750 feet and end spans of 440 feet each comprise a total bridge length of 1,630 feet. The southern end span extends into the Commonwealth of Virginia for a distance of approximately 420 feet. The height of roadway above mean high water at the pier locations is 73 feet. Maximum clearance above mean high water at the center span is 65 feet.

The visual aspects of the design were reviewed and approved by the Fine Arts Commission. Navigational and flood control interests were considered by the appropriate Federal agencies and found to be satisfactory. These reviews are documented in the Appendix.

More detailed engineering features of the three-span bridge alternative appear on page 6 of I-266 Design Hearing Information.

#### 2. Six-Span Bridge

A six-span bridge alternative employing steel box girders rests on five piers--three of which are located in the Potomac River. Span lengths to either side of a pier in mid river are 375 feet in length--four shorter spans range in length of between 195 and 245 feet. The total bridge length is 1,630 feet. At the south end approximately 420 feet of

the bridge is located in the Commonwealth of Virginia.

Roadway height above mean high water varies from 80 feet at the center pier to 73 feet at the other two river piers. Maximum clearance at mean high water is 66 feet. More detailed information on the engineering features of this bridge alternative is contained on page 7 of I-266 Design Hearing Information.

## B. Other Alternatives

A wide diversity of opinion concerning alternatives was registered at the I-266 Design Public Hearing. Witnesses went on record both endorsing some type of I-266 crossing of the Potomac River as well as rejecting any type of crossing regardless of the design options possible. Analysis of the record reveals the following alternative proposals. Merits of each of the proposals were considered by the Department in its review of design alternatives. The results of this review are included with each description of the following alternatives.

### 1. Tunnel in Combination with Metro Route

Tunneling I-266 under the Potomac River was also investigated by the Department of Highways and Traffic in an earlier feasibility study. Combining Metro and I-266 into one facility was also considered.

Evaluation of a highway tunnel, however, concluded that advantages of such a proposal would require an unacceptable trade off of highway operations capability. This conclusion is recorded in a letter from the U. S. Department of Transportation contained in the appendix.

### 2. Motor Vehicle, Bicycle and Pedestrian Bridge

It was noted that an I-266 Bridge for motorized vehicles exclusively would preclude use of the bridge for bicycling and walking as means of transportation or for recreation. The approved location of I-266 is in proximity to outstanding pedestrian and bicycling areas in both Virginia and the District of Columbia. Connections via the bridge between walkways and cycle paths on either side of the river were considered in response to hearing testimony.

The Department recognizes the potential of river bridges for non-motorist uses--indeed, without such use, non-motorists are deprived of accessibility between shores of the river. In the general vicinity of the I-266 crossing, Key Bridge presently provides for pedestrians via sidewalks and bicyclists on traffic lanes. In view of the proximity to I-266, the Department, therefore, concludes that Key Bridge should



continue serving the non-motorist function and that Key Bridge should be improved to provide an integral link in the system of walkways and cycle paths in both Virginia and the District of Columbia. To attain this end, the Department presents its recommendations in Chapter VII.

### 3. Four-Lane Bridge

A proposal presented for a four-lane I-266 crossing of the Potomac River is based on considerations of service between Maryland and the District of Columbia. It is contended that a four-lane Palisades Parkway and a four-lane I-266 Bridge would provide a better balance of access between Virginia and Maryland suburbs and downtown Washington. This alternative via I-266 has the feature of balanced laneage in that Potomac River Freeway will provide a theoretical capacity equivalent to the combination of the bridge and Parkway capacity with no change in traffic service level.

The Department's traffic analyses indicate need for six-lane capacity on the I-266 Bridge, in order to provide adequate connections between the center city and I-66.

### 4. No Bridge

Proposals for abandoning a highway crossing of the Potomac River via I-266 were advanced on the grounds of irreparable environmental impact, insufficient reliance on public transportation and sufficient highway capacity of existing Potomac River Bridges.

The Design Hearing was conducted to develop an optimal final design of I-266. The review of all information supplied to the Department was to assist in selecting major design features that will provide fast, safe, and efficient transportation and relieve neighborhoods of unnecessary traffic while minimizing adverse environmental, sociological and economic effects on the city and region. The "no bridge" alternative, while certainly avoiding all effects of highway construction, will not serve the transportation function to which the District of Columbia is committed at this location. Moreover, the I-266 project is a product of the urban transportation planning process which took into consideration total transportation needs and the combined capacity of the highway and Metro networks to serve this need.

## 5. Low Profile Bridge

Lowering the height of the I-266 Bridge from the elevation proposed by the Department was presented as a design more befitting to the Potomac Palisades. In this alternative, the height of I-266 was proposed to be at the elevation of Canal Road (45 feet).

Construction of I-266 at the 45 foot elevation would necessitate a relatively shallow depth, multi-span structural design--three arched spans could not be designed to fit this lowered profile. A lower elevation would, therefore, conflict with the objectives of retaining open water areas on the River and streamlining the appearance of the I-266 structure.

## 6. Miscellany

Other proposals contained in the hearing transcript do not address the optional design features of a motor vehicle facility in the vicinity of Three Sisters Islands. The other miscellaneous proposals are:

1. A tourist arch with helicopter landing pad.
2. Circumferential highway bridges outside the District of Columbia.
3. A highway bridge between Virginia and Anacostia.
4. Express buses on the Theodore Roosevelt Bridge.
5. A commuter rail program coupled with suburban parking.
6. More extensive use of piggy-back goods movement.
7. A pedestrian suspension bridge.

In summary, the Department favors pedestrian and bicycle use of Key Bridge in lieu of use of the I-266 Bridge. A six-lane I-266 Bridge is preferred over a four-lane bridge because traffic forecasts indicate the need for six lane capacity. Six lanes will facilitate possible use of an express bus lane in the future and will permit four lane operation of this bridge if this becomes a desirable plan. Tunneling I-266 under the River is not a feasible alternative to a bridge at this location.

The remainder of the design report is devoted to the anticipated environmental, sociological and economic effects of a six-lane bridge and approach roadway.

### III. ENGINEERING FEATURES

Designing modern highway facilities to preserve and protect the urban environment is, of course, an eminently important goal. The design of I-266, therefore, involves a meticulous blending of environmental, architectural and engineering design. This chapter presents the engineering features of I-266 which are applicable to both Departmental alternatives.

#### A. Geometrics

The project is subject to all applicable standards for the design of Interstate and Defense Highways. Being a link in the National System, I-266 is a divided multi-lane highway with provisions for access and egress at interchange locations only--a freeway facility. The particular section of I-266 under consideration in the District of Columbia does not include the interchanges to be considered at a subsequent Design Hearing.

The 1,680 feet of roadway in this section of I-266 in the District of Columbia is comprised of a 768 foot long tangent and 912 foot long five degree curve. Approximately 2,900 feet of I-266 is located in the State of Virginia. The geometrics have been fully coordinated by the D. C. Department of Highways and Traffic and the Virginia Department of Highways.

Maximum grades and vertical clearances applicable to both Departmental alternatives are shown on page 3 of I-266 Design Hearing Information. Curvature and sight and stopping distances are based on a design speed of 50 miles per hour. Typical sections of bridge roadway and approach roadway are shown in Figures 10 and 12, respectively, of I-266 Design Hearing Information on page 10.

The plan view of I-266 is shown in Figure 2. This design report includes that section of roadway between Stations 39+70 and 56+50. The geometrics of both Departmental alternatives are virtually identical.

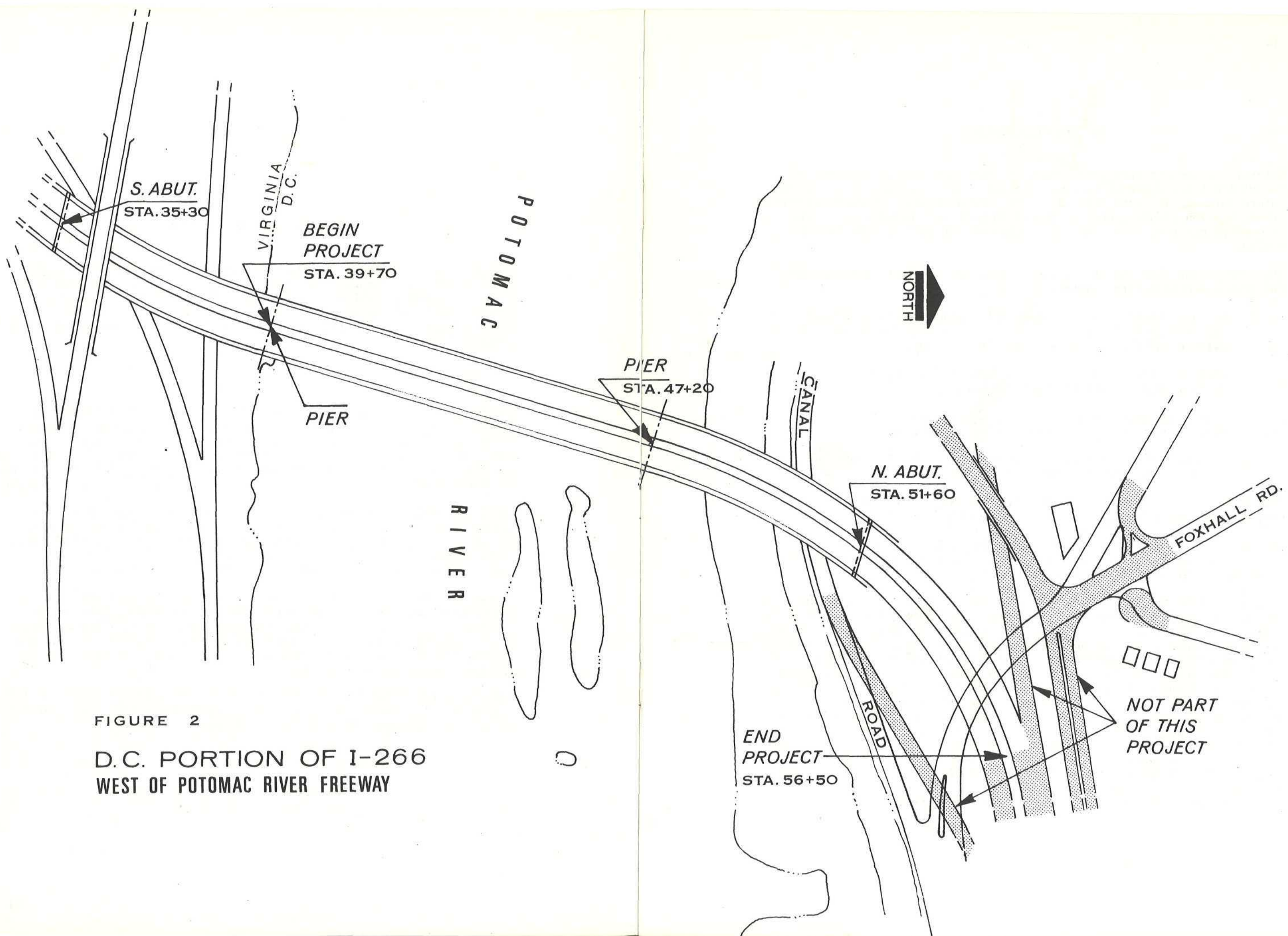


FIGURE 2

D.C. PORTION OF I-266  
WEST OF POTOMAC RIVER FREEWAY

## B. Traffic Capacity

Determining the appropriate capacity of I-266 requires an estimate of future traffic volumes on the one hand and network balance on the other. Future volumes have been forecast at the regional level through the urban transportation planning process funded in part with Federal aid. The network planning reflects the cooperation of all jurisdictions in the region.

The most recent forecast of traffic volumes is a product of a regional analysis based on several factors.

1. A transportation network planned for 1990 that incorporates the 98 mile METRO rail network and connecting feeder bus service and the designated Interstate System.
2. Land use patterns and densities forecast by respective jurisdictions in the metropolitan area.
3. Traffic assignments based on the capacity restraint procedure of the Federal Highway Administration.
4. Automobile occupancy factors that are dependent on land use densities and vary by zone of origin.

Figure 3 shows the daily traffic volumes forecast for I-266 and the proposed Palisades Parkway connecting facility.

The eastbound capacities of I-266 at various traffic service levels are indicated in Table 3. These capacities are based on three continuous lanes in one direction on I-266.

To achieve lane balance between four directional lanes of the Potomac River Freeway and the five lanes from the Palisades Parkway and the I-266 Bridge, a merging of two lanes is required. If the merge is accomplished on the Palisades Parkway, the one lane ramp could be a point of critical capacity in the eastbound direction during periods of peak volume. If traffic on the Parkway were at Service Level C (lane capacity of 1,250 and a total capacity of 2,500 vehicles per hour), the corresponding service level on the one lane ramp would equal a breakdown situation (2,500 vehicles per hour). Two thousand vehicles\* per hour on the ramp is a Service Level E situation. Lighter traffic loads would, of course, operate at higher service levels. Peak traffic anticipated on this ramp in the design year is approximately 2,200 vehicles per hour. Severe congestion on the exit ramp will be eliminated if peak hour directional volumes on the Parkway are limited to a maximum of 2,000 vehicles. Such a limitation will insure a Service Level of C on the Parkway during peak periods.

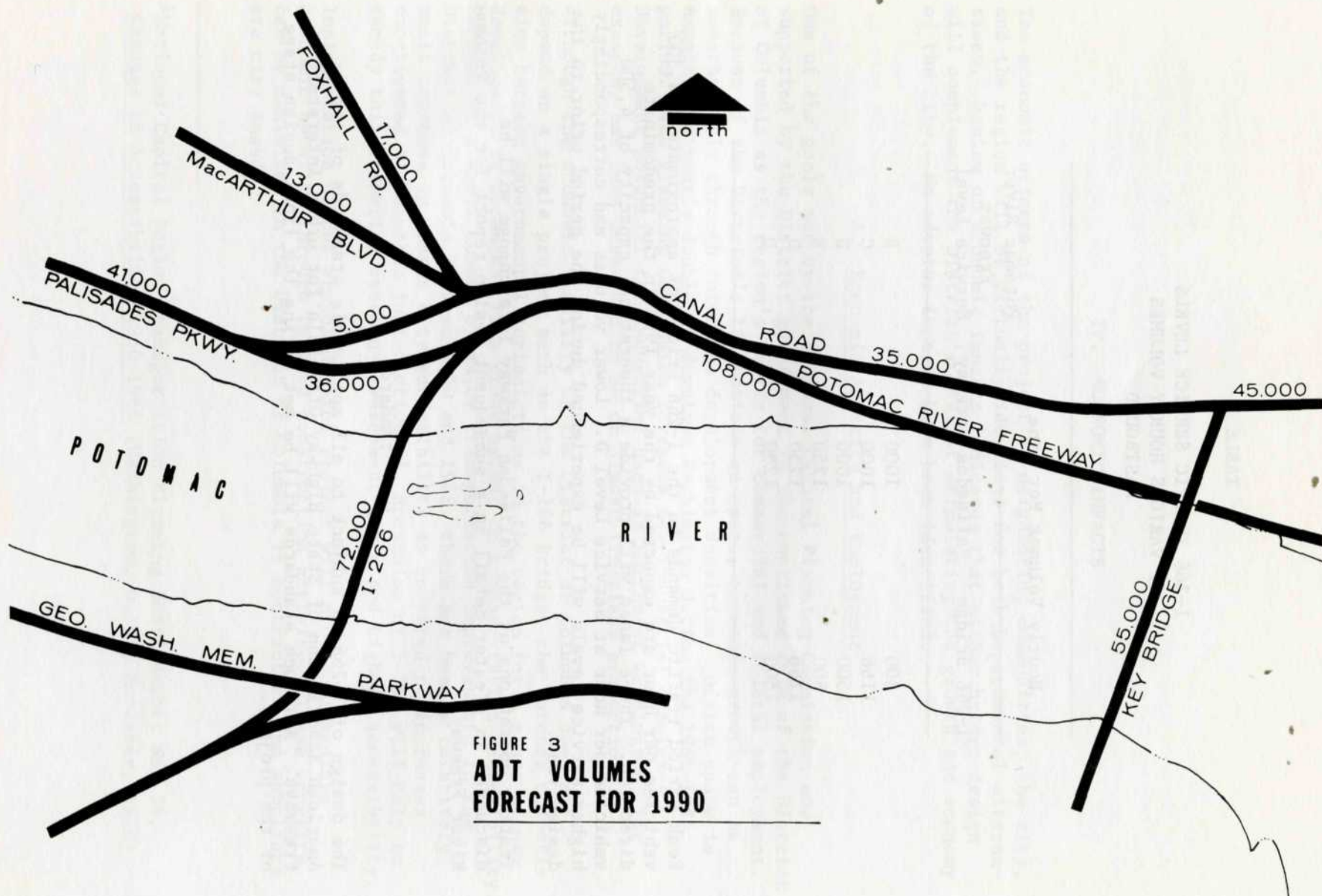


FIGURE 3  
**ADT VOLUMES  
 FORECAST FOR 1990**

TABLE 3

I-266 TRAFFIC SERVICE LEVELS  
AT VARIOUS HOURLY VOLUMES  
EASTBOUND

Hourly Volumes Per Lane		Potomac River Freeway Service Level
I-266 Bridge	Palisades Parkway	
800	1000	B
1166	1000	C
1500	1000	D
800	1250	B
1166	1250	D
1500	1250	D

Peak period traffic demands on the I-266 Bridge of approximately 4,300 vehicles per hour are expected by the year 1990 in the predominate direction. Three lanes will provide a theoretical capacity of 4,500 vehicles per hour at Service Level D. Lower volumes and correspondingly higher service levels will be experienced during the period prior to the design year.

Traffic operations at the Palisades Parkway Interchange will be discussed in greater detail in a subsequent design report for the Potomac River Freeway.

#### C. Standards

The design of I-266 is subject to all applicable standards of the American Association of State Highway Officials for urban Interstate freeways. All such standards will be met during the final design stage of the project.

#### IV. ECONOMIC IMPACTS

The economic effects of the project on neighboring communities, the city, and the region will be virtually identical for both Departmental alternatives. Review of economic impacts indicates that either bridge design will complement the District's goal of stimulating the growth and economy of the city. No adverse impacts have been identified.

##### A. Economic Activity and Employment

One of the goals set by the National Capital Planning Commission and supported by the District government is the continued role of the District of Columbia as the region's center for commercial and Federal employment. Because of the District's limitations on space, economic growth can be absorbed only through intensive development densities. Office space is expected to nearly double in downtown Washington during the 1966-1985 period. The Planning Commission foresees new industrial complexes. Development potential for industrial uses in Northeast Washington, for example, has been described to be of almost limitless proportions.

Although the economic viability of the District of Columbia does not depend on a single project such as the I-266 Bridge, the intense competition between governmental jurisdictions in the region for a share of new development is dependent to a great extent on transportation accessibility. Because of a small number of major transportation improvements in the District of Columbia between 1960 and 1968, there has been a relatively small increase in center city accessibility as compared to increases experienced in suburban jurisdictions.<sup>1</sup> Provision of I-266 will help to remedy this disparity between development goals and highway accessibility.

Implementation of the proposed I-266 project will provide immediate economic benefits through related construction activity. These benefits can be maximized in the District of Columbia if contractors and suppliers are city based.

---

<sup>1</sup>National Capital Region Transportation Planning Board Report No. 34, Changes in Accessibility 1960-1968 (Washington, D. C., November, 1970)



## B. Government Operations

This section of I-266 will neither adversely affect District Government operations nor require taxable property. The project will also provide additional inter-government flexibility in crossing the Potomac River during periods of local or national emergencies.

### 1. Fire Protection

Fire stations serving the vicinity of the I-266 project, under the jurisdiction of the District of Columbia Fire Department, are shown in Figure 15 of the Design Hearing Booklet. None of these facilities or services is affected by the project. This finding has been confirmed by the D. C. Fire Department. Fire services on I-266 will be provided by Engine Co. No. 1 which is located nearest the planned access point to I-266 at K Street, N. W. I-266 will facilitate the movement of emergency vehicles between the District of Columbia and Virginia.

### 2. National Defense

This project will conform to the latest design criteria for the National System of Interstate and Defense Highways. Thus, the highway project will accommodate military and other official vehicles during periods of national emergencies. It will provide a direct connection to I-66 and points to the west including the Dulles International Airport near Chantilly, Virginia.

## C. Transportation

Transportation benefits of freeway usage are manifest in vehicle operating costs, safety performance, and travel time. These benefits are primarily due to uninterrupted traffic flows by virtue of limited access design.

### 1. Time Benefits

Time savings on I-266 are estimated to be 10 minutes during peak periods per auto trip. This estimate is based on a 30 miles per hour greater speed on I-266 than on the closest parallel facility (Lee Highway and Key Bridge). The savings have been calculated over a 2.25 mile section length. Time savings of a lesser magnitude would also be experienced during non-peak periods. These savings will continue throughout the 20 year design period. Time savings in the transport of goods are directly related to consumer costs. Annual time savings to commercial vehicle operations is estimated at an average of \$136,000 annually. Annual operating cost savings for commercial vehicles is estimated at \$131,000 per year.

## 2. Safety Benefits

Compilations of fatal and injury accident rates by the Federal government show the safety payoffs of Interstate highway construction in every state. Accident rates on completed Interstate roadways are consistently lower than rates on all other highway systems. This evidence highlights a major reason for planning networks that will maximize vehicle travel mileage on Interstate facilities.

Statistics from the District of Columbia are similar to the national experience. The fatality rate on D. C. Interstate routes during 1968 was 1.42 deaths per 100 million vehicle miles of Interstate highway travel. The comparable value on all other streets and highways in D. C. was 4.92. Non-fatal injury rates were 99 and 417 injuries per 100 million vehicle miles on Interstate and non-Interstate routes, respectively. These data clearly indicate the safety benefits of Interstate construction in the District of Columbia.

### D. Public Utilities

Public utilities, including the Baltimore and Ohio Railroad spur line, exist within the limits of the project. The railroad will not be disturbed during construction and can continue operations without interference due to the presence of I-266. Relocation of other utilities will be coordinated with appropriate authorities and essential utility services will be maintained throughout the period of construction.

### E. Project Costs

The costs of construction and engineering are presented in Table 4 for each Departmental alternative. These costs would be allocated to Interstate Cost Estimate Sections B1-B2, and B2-B3.

TABLE 4  
ESTIMATED PROJECT COST

Cost Element	Three-Span Bridge and Approach	Six-Span Bridge and Approach
Construction	\$16,500,000	\$11,800,000
Engineering	1,500,000	1,100,000
Total	\$18,000,000	\$12,900,000

The estimates reflect price indexes that prevailed during the third quarter of calendar year 1970.

The land portion of the route involves parkland under the jurisdiction of the National Park Service. The Department will compensate the Park Service with replacement of parkland or park improvements equivalent to the value of highway occupied park space.

F. Existing Highway Facilities

The project site involves only one other highway facility currently in operation--Canal Road, N. W. This two-lane arterial is unaffected by the project--I-266 will overpass Canal Road and permit continued traffic operations. (Relocation of Canal Road will be proposed in conjunction with the remainder of the I-266 design).

## V. ENVIRONMENTAL IMPACTS

Almost half of the comments identified in the Department's analysis of the I-266 Design Public Hearing were focused on the project's relationships with the environment of the region and the Potomac Valley. Implementation of I-266 will impact the local environment, but these effects will be minimized as described in this Chapter. In addition, the Department will continue to encourage greater commuter use of public transportation. Increasing diversion of peak travel loads to higher occupancy vehicles (Metro trains and buses) will insure maximum use and more efficient operation of existing and planned transportation facilities. Moreover, this will offset future demands for extra peak period highway capacity that a doubling population would otherwise create. (A population forecast of 6.8 million in the year 2,000 is generally accepted by local authorities.) This long range approach will offer the additional benefit of environmental and land resource preservation. Ostensibly the most direct environmental impact of Interstate Route 266 is the need for the use of land that could otherwise remain intact. As explained in this chapter, parkland disruption will be minimized and a net change in park acreage will be avoided through a replacement agreement.

### A. Recreation

The project is planned for a part of the metropolitan area that is endowed with unique natural areas including the Potomac Palisades and the Chesapeake and Ohio Canal. The use of all recreational areas in the vicinity of the project, however, will not be affected by the presence of either project alternative.

Space occupied by the proposed approach roadway is under the jurisdiction of the National Park Service. In conformance with the policy regarding the use of parkland for highway purposes, the Department will compensate the Park Service for this loss either with replacement land for park use or with needed improvements in the park system. This compensation is subject to agreement by the National Park Service and the Federal Highway Administration.

Regardless of where I-266 crosses the river, parkland is involved because both sides of the Potomac River are fringed with areas under the jurisdiction of the National Park Service. One of the several criteria used in formulating I-266 designs was to minimize harm to existing parkland. The Department's proposed three-span bridge and approach roadway design will minimize disruption to parkland as supported by findings of the U. S. Department of Transportation in accordance with Section 138 of Title 23, U. S. Code and Section 4(f) of the Department of Transportation Act. In this finding the Department of Transportation referenced the coordination efforts of the Department of Highways and Traffic and the State of Virginia, the U. S. Department of Interior, the National Capital Planning Commission and the Fine Arts Commission.

The three-span alternative was cited in hearing testimony as the design most compatible with courses designated for rowing competition and training. Spokesmen for rowing on the Potomac noted that the six-span alternative would likely require a reduction in the number of rowing lanes presently used by oarsmen. These spokesmen clearly preferred the three-span alternate permitting continued use of all presently designated rowing lanes.

#### B. Aesthetics

The project will, of course, be a visible element of the Potomac River scenery. The impact on the river aesthetics, while a subject of extreme controversy among citizens, involves intangibles. Despite the impossibility of measuring this impact in quantitative terms, the Department has endeavored to minimize change of this natural scenery by seeking a highway design that could be considered a monument of man's aesthetic senses. There are, of course, arguments that claim that no amount of design ingenuity can preserve or enhance the work of natural forces at this river location. The project cannot be and is not an attempt to enhance this natural area--it does represent diligent efforts to develop an urban highway design that harmonizes, to the extent possible and does not eliminate this valuable scenic resource. These efforts are manifest in the relatively high costs of the Departmental alternative.

The \$7 million higher cost of the three-span alternate will not purchase any transportation benefits in addition to those furnished by the less expensive six-span design. This amount is mainly in the interest of better aesthetics. The Department acknowledges that such expenditures are a responsibility of highway users in the interest of minimizing environmental harm.

It is noted from the hearing transcript that the three-span alternate was also recognized by witnesses as being complementary to the river and urban scenery. Witnesses remarked that the bridge "will blend harmoniously with its landscape," "can add to rather than subtract from its physical surrounding beauty," is "a more picturesque entrance worthy of the Nation's Capital," and is the "most aesthetically pleasing and attractive design we have seen."

## C. Pollution and Conservation

### 1. Air Pollution

It is anticipated that this project will lead to a reduction of pollutant emissions on a vehicle mile basis, although vehicle exhaust concentrations will become greater in this area since it is not presently traversable by motor vehicles. The net effect, however, will be less overall vehicle pollution. Attracting traffic from facilities where speeds are lower and where combustion of fuels is less complete is not, however, a satisfactory solution to the abatement of vehicular pollution. In combination with a ninety percent reduction of HC, CO, and NO<sub>x</sub> by engine redesign, by control devices or by both, means the I-266 project and other freeway facilities will be substantially relieved of contaminants in comparison to present day levels. The latest air pollution control legislation (1970 Air Quality Act) requires that by 1975 automobile emission of carbon monoxide and hydrocarbons be reduced by at least ninety percent from the emission levels associated with 1970 model year automobiles. (A similar reduction is required of NO<sub>x</sub> a year later.) Rigid enforcement of these provisions of law will result in virtually pollution free auto engine operation. These engines are due for production at about the same time the I-266 construction is expected to be completed.

Estimates of pollution loads on I-266 indicate that emissions of both hydrocarbons and carbon monoxide will decrease dramatically during the period from 1975 to 1990. Analysis shows that this decrease will occur whether or not traffic service becomes level D. These decreases are attributable to the gradual changeover from pre-1975 auto models. Table 5 shows estimated total CO and HC emissions in peak hours per road mile based on 1975, 1980, 1985 and 1990 auto model profiles. Contingent on pollution abatement programmed in the Air Quality Act, resulting pollution levels will be within acceptable standards.

Pollution loads are overstated in the 1975 and 1980 projections because 1990 traffic volumes were assumed in all three analysis years. The higher estimates, however, allow for the effect of possible delays in achieving the legislative goal of a ninety percent emission reduction by 1975.

TABLE 5

ESTIMATED PEAK HOUR AUTO  
EMISSIONS IN POUNDS PER ROAD MILE

Year	Pollutant	
	HC	CO
1975	66	833
1980	23	289
1985	8	95
1990	5	56

Desired emission in 1975, based on ninety percent reductions of 1970 auto model emissions, are 0.22 grams and 2.30 grams per vehicle mile for hydrocarbons and carbon monoxide, respectively.

Information presented at the I-266 Design Public Hearing included estimates of simulated ambient air conditions in proximity to the proposed project. The simulation was reported as being preliminary because meteorological inputs were not based on local climatological records nor were the results measured or calibrated against actual field conditions. It is noted that the analysis also did not take into consideration the emission abatement requirements of the 1970 Air Quality Act -- assumed emissions are ten times higher than what the Act permits. To effectively abate vehicular emissions, it is imperative to carry out the intent of this significant legislation and to recognize its impact in predicting future emission levels.

The Department recently monitored existing pollution levels on operating freeways under various traffic conditions. These results indicated background levels of carbon monoxide as close as 100 feet from the roadway edge during peak and non-peak periods.

Counts on the roadway median averaged 20 ppm during typical peak traffic and rose to 35 ppm when traffic breakdowns occurred. These tests pointed up the pollution abatement benefits of higher more uniform speeds on wide rights-of-way as opposed to stop and go operations on built up streets.

## 2. Water Pollution

Roadway drainage will be discharged into the Potomac River. Runoffs will not be permitted to drain into the C & O Canal.

Drainage from I-266 will contain trace amounts of vehicle engine drippings and of residues of deicing chemicals used during periods of freezing precipitation. The entry of these materials into relatively large river flows does not jeopardize plans to ultimately cleanup the Potomac River. Roadway runoff will be minimum during dry periods when river flows are also at lower levels.

## 3. Noise

The relatively high elevation of the I-266 roadway with respect to adjoining areas and the absence of nearby homes and buildings substantially reduces human exposure to noises emanating from the project. The building in the District of Columbia closest to the roadway is a private residence on 44th Street, N. W. at a distance of approximately 240 feet.

Persons on the river in pleasure craft and in the C & O National Historical Park can, on the other hand, move to within distances closer than the nearest building. The Department approximated sound levels from the project on the C & O Towpath and the center of the river. Using the estimating procedure described in Highway Noise - A Design Guide for Highway Engineers and published by the National Cooperative Highway Research Program, the Department selected the most conservative values of input parameters to produce the worst condition. Maximum noise levels were estimated at 59 and 61dBa on the River and towpath, respectively, during peak traffic periods.

## D. Use of Space

This project is significant in multiple usage of urban space. Elevation of the route above the Potomac River, the C & O Canal, Canal Road and the Baltimore and Ohio Railroad tracks permits continued and essentially unrestricted use of existing urban land and water. In hearing testimony, river sportsmen favored the Department's three-span bridge alternative as being clearly superior to the six-span alternative. The center pier of a six-span bridge would reportedly eliminate an entire lane for rowing competitions and increase the likelihood of collisions.



E. Neighborhood Character

The presence of the I-266 Bridge will not impact nearby property values either positively or negatively. The character of the closest neighborhood (north of the intersection of MacArthur Boulevard and Foxhall Road) is, therefore, not subject to change as a result of I-266 Bridge construction. Protection of this neighborhood would be assured by the Department's proposal to deny access from streets in this neighborhood to the I-266 facility. Moreover, the approach to the bridge has been aligned to avoid displacement of homes by a design which follows the River edge.

## VI. SOCIOLOGICAL IMPACTS

Sociological effects of the proposed I-266 bridge and approach roadway appear to be beneficial or neutral rather than adverse.

Recreational opportunities are preserved, for example, by insuring that access to and use of the Chesapeake and Ohio Canal will continue. No new traffic access is proposed from the project to neighborhood streets. Hence, additional traffic in residential areas will not be a side effect. On the other hand, the project will provide a bypass for through traffic which is otherwise restricted to local streets. This change in local street traffic loads will also permit the implementation of traffic measures to enhance neighborhood livability. These measures include such things as lower speed limits, non-progressive signalization, peak hour street parking for residents, the deemphasis of one way operations and the like. In brief, the project retains essential societal functions while offering potential benefits to nearby neighborhood societies.

### A. Business and Residence Displacement

The location of the project avoids displacement of persons, businesses, organizations and institutions. Availability of replacement homes and commercial space is, therefore, not a consideration in the design of this facility.

### B. Educational and Religious Institutions

Locations of religious and educational institutions in the vicinity of proposed I-266 are shown in Figures 17 and 18 of I-266 Design Hearing Information.

Operation of these facilities will not be hampered by the project. Street access to each facility will continue exactly as in the past. No adverse effects were anticipated by witnesses attending the Design Public Hearing.

### C. Public Health

Medical assistance to citizens of the District of Columbia is unaffected by the project. Private and public medical facilities are not located near or within the project limits and all streets serving them will remain in operation.

## VII. CONCLUSIONS AND RECOMMENDATIONS

In arriving at a choice of final design for I-266, the Department has evaluated and weighed the importance of information from a wide variety of sources. Comments received at the I-266 Design Hearing in December, 1970 are an important source because they represent independent views from the public at large. These views were invited to allow public participation in the highway design process and to make available information on anticipated effects that may not have been already considered.

The complete findings of the Department are presented in the foregoing chapters of the report. Evaluation of these findings is the basis for the following conclusions.

- The project will contribute to the long-range economic development goals of the District of Columbia.
- Construction will provide immediate economic benefits through construction employment and purchases.
- The project will not diminish the city tax base.
- Highway transportation between Virginia and the District of Columbia will be faster, safer and more efficient.
- Disruption of parkland will be minimized and all existing recreation attractions will be preserved.
- Improved means for cycling and walking between Virginia and the District of Columbia is in the public interest.
- Two bridge piers will have no effect on water sports activity.
- Enforcement of the 1970 Quality Act in combination with more efficient fuel combustion in vehicles operating under freeway conditions will abate motor vehicle pollution to satisfactory levels.
- Institutional, government and other social services will not be interrupted or discontinued by the construction or operation of the project.
- The project is one element in the comprehensive program of balanced transportation in the Washington area.

Two other issues of paramount concern are the consumption of park and recreation land for transportation facilities and the growing number of private vehicles entering high density areas of the District of Columbia during commuting hours.

All parkland occupied by I-266 will either be replaced with space suitable for recreation purposes or be compensated by improvements made to existing parks. The quid pro quo will be developed jointly by the Department and the National Park Service in accordance with a standing policy. No part of the Glover-Archbold Parkway will be affected by the bridge approach or the Potomac River Freeway.

With respect to private vehicle usage by commuters, the Department submits that the abatement of traffic volumes during these relatively short time periods is dependent on a comprehensive program involving METRO, feeder bus service to METRO stations, enforced parking controls in the District, better parking interface with public transportation in suburban jurisdictions, high quality distribution and collection by public transportation in downtown, and metering of traffic on freeways. The objective of such a program is, of course, to reduce future demands for freeway peak hour capacity -- it could also be complemented by traffic controls on residential and semi-residential streets that would favor the use of freeway facilities for through trips throughout a 24-hour period. The Department intends to pursue this approach toward optimizing the use of public transportation services and highway facilities.

If the program is successful in abating automobile commuting, higher service levels will be experienced on I-266 during those hours when traffic operations would otherwise be at Service Level D. During non-commuting hours, the facility is expected to serve at least 65 percent of the traffic forecast for a 24-hour period. It is improbable that this traffic can be diverted to other modes -- indeed, this component of total travel may be underestimated because it includes travel that is subject to future changes such as in disposable income, recreation habits, and the like.

After a lengthy and careful analysis of evidence from the Hearing and from all other sources, the foremost conclusion reached in the evaluation of all alternatives is that the three-span prestressed concrete arched bridge is the most desirable design conceived by the Department. This finding reinforces the favorable evaluation of this bridge design made in 1967 by the Commission of Fine Arts.

In view of the results of this design study, the Department recommends:

- *Design approval for an I-266 Bridge of the alignment, geometrics, and shape depicted in the three-span alternate presented at the Design Public Hearing.*
  
- *Improvement of Key Bridge for walking and cycling including suitable connections to pedestrian and cycling routes in the District and Virginia. After evaluation of all feasible proposals, the Department will apply for Federal-aid funds to assist in the fulfillment of this improvement.*

In conclusion, the Department stresses that the recommendations and any approval of the approach to the river bridge are subject to revision subsequent to a Design Hearing on the Potomac River Freeway portion of I-266. The specific location of the I-266 Bridge permits various design possibilities for Potomac River Freeway and Palisades Parkway connections.

APPENDIX

The appendix contains documents received in the course of the  
Major Report. The documents include orders of approval, certification,  
and other materials received from the District of Columbia. A  
listing of the documents follows:

1. Letter from the U. S. Department of Transportation to the  
Department of District, May 4, 1967.
2. Letter from Commission of Highways to the U. S. Department of  
Highways and Traffic, September 10, 1967.
3. Letter from Council of Governments to U. S. Department of  
Highways and Traffic, November 19, 1967.
4. Section 23, 1967 Federal-aid Highway Act.
5. Resolution No. 29-67 of the Council of Governments.
6. Letter from United States Coast Guard to U. S. Department of  
Highways and Traffic, March 18, 1968.
7. Letter from U. S. Army Corps of Engineers to U. S. Department  
of Highways and Traffic, October 9, 1968.
8. Finding in accordance with Section 4121 of the Department of  
Transportation Act, October 13, 1967.
9. Memorandum from U. S. Department of Military Engineering to  
U. S. Department of Highways and Traffic, January 3, 1971.
10. Memorandum from U. S. Army Corps of Engineers to U. S. Department of  
Highways and Traffic, January 5, 1971.
11. Various information available for public inspection and  
copying - especially the design hearing.
12. Plans of Lane Bridge, etc. Hearing transcript for public use.

THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D. C. 20590

The Appendix contains documents that are referenced in the text of the Design Report. The documents include letters of approval, legislation and other materials regarding I-266 in the District of Columbia. A listing of the documents follows:

1. Letter from the U. S. Department of Transportation to U. S. Department of Interior, May 4, 1967.
2. Letter from Commission of Fine Arts to D. C. Department of Highways and Traffic, September 20, 1967.
3. Letter from Council of Governments to D. C. Department of Highways and Traffic, December 29, 1967.
4. Section 23, 1968 Federal-Aid Highway Act.
5. Resolution No. 69-67 of the District of Columbia City Council.
6. Letter from United States Coast Guard to D. C. Department of Highways and Traffic, March 12, 1969.
7. Letter from U. S. Army Corps of Engineers to D. C. Department of Highways and Traffic, October 8, 1969.
8. Finding in accordance with Section 4(f) of the Department of Transportation Act, October 15, 1969.
9. Memorandum from D. C. Department of Sanitary Engineering to D. C. Department of Highways and Traffic, January 5, 1971.
10. Memorandum from D. C. Fire Department to D. C. Department of Highways and Traffic, January 8, 1971.
11. Pertinent Information Available for Public Inspection and Copying -- Interstate 266 Design Hearing.
12. Notice of Joint Design Public Hearing Proposed Interstate 266.

THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

MAY 4 1967

Honorable Stewart L. Udall  
Secretary of the Interior  
Washington, D. C.

Dear Mr. Secretary:

As agreed to in our earlier exchange of correspondence, a feasibility study of a Potomac River tunnel crossing in the Key Bridge to Spout Run area has been completed by the District of Columbia's Department of Highway and Traffic with the cooperation of the Bureau of Public Roads. You suggested that the study be completed in 60 days. However, the National Capital Planning Commission voted on April 6 to request that the report be furnished to the Commission staff by April 19, 1967, in order that it could be considered as an agenda item at the May meeting of the Commission.

Attached for your information is a summary report of the feasibility study. During the review, the staffs of your National Park Service and the National Capital Planning Commission were kept fully advised of its progress and have been presented the completed study.

I have received a detailed briefing of all proposed tunnel alternatives as well as the bridge design and believe that within the minimum time frame available to make the study, it was carried forward with professional thoroughness and objectivity.

Within the narrow context of the question posed by your letter (i.e., an evaluation of desirable alternatives for a bridge or tunnel at the selected site), I concur with the conclusions of the feasibility study that a bridge is the better alternative. In particular, the operational advantages of an open highway over those of a confined and extended tunnel are of extreme importance. A significant advantage of the bridge is the prospect view provided to visitors approaching the Nation's capital from Interstate Route 66.

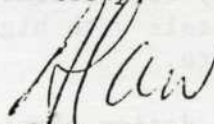
A copy of this letter is being transmitted to the Chairman, National Capital Planning Commission for its information along with certain comments concerning the obligations of law placed on the Department to review feasible alternatives to any such project.



THE COMMISSION OF FINE ARTS  
ESTABLISHED BY CONGRESS MARCH 3, 1907  
2000 PENNSYLVANIA AVENUE, N.W. WASHINGTON, D.C. 20004  
2

Your interest and action in bringing this question to my attention is greatly appreciated.

Sincerely,



Alan S. Boyd

Enclosure

Summary of Tunnel Feasibility  
Study for Potomac River Crossing

A study has been completed by the District of Columbia Highway Department, in cooperation with the Bureau of Public Roads, to explore the costs and engineering feasibility of a Potomac River tunnel crossing in the Key Bridge to Spout Run area.

The District of Columbia Department of Highways and Traffic, and the Bureau of Public Roads both assigned staffs of specialists in highway, bridge and tunnel design, as well as traffic operation experts and maintenance engineers to the study. They also were assisted by some of this country's foremost tunnel consultants who applied the most advanced tunnel design principles and latest tunnel costs to the study.

A total of four alternate tunnel locations were studied. Great emphasis was directed toward the aesthetic and social values and as well as the operational features of each design. Common termini were selected in the District of Columbia and Virginia in order to make the estimated costs of all alternates comparable.

Several of the tunnel proposals include distances where weaving traffic operation will occur. Experience has shown that weaving areas present a safety problem and should always be avoided in situations such as this where high traffic volumes are to be accommodated.

The extended sections of steep grades included in each tunnel design will result in an undesirable traffic operation. The speed of commercial vehicles will be reduced to a crawl operation which will result in leaving only two traffic lanes available for directional traffic.

Each of the tunnel designs will require massive ventilation buildings which most certainly will detract from the appearance of the area. In addition tunnel portals with high-walled approaches always present a depressive atmosphere.

The proposed bridge design permits the maximum flexibility in both traffic operation and further development along the Georgetown Waterfront. The design is such that any selected plan for the improvement of the waterfront in the Georgetown area can be accomplished and attained through stages.

# THE COMMISSION OF FINE ARTS

ESTABLISHED BY CONGRESS MAY 17, 1910

INTERIOR DEPARTMENT BUILDING  
WASHINGTON

20 September 1967

Dear Tom:

It was a pleasure to be able to tell you at our September 20th meeting of the Commission of Fine Arts that we approved unanimously the newest design for a Potomac bridge near Three Sisters.

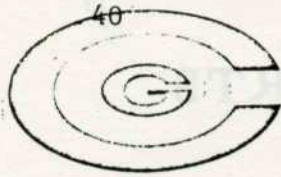
As you could gather from the comments made by various members, we felt that your designer had performed brilliantly in creating a design for one of the most important scenic sites around the Capital. Its simplicity and its daring both are very commendable characteristics. I am sure you will remember our exhortations to make the railings equally attractive and not to interfere with the motorists' enjoyment of the great view when they are crossing the bridge. And one last word -- almost a warning -- remember that the hardware of lighting engineers can either ruin or enhance your beautiful structure. Be careful!

With best wishes,



William Walton  
Chairman

Mr. Thomas F. Airis  
Director  
D.C. Department of Highways and Traffic  
District Building  
Washington, D.C. 20004



metropolitan washington  
**COUNCIL OF GOVERNMENTS**  
1250 Connecticut Avenue, N.W., Washington, D. C. 20036 223-6800

COPY

December 29, 1967

Mr. T. F. Airis  
Director of Highways and Traffic  
Government of the District of Columbia  
Washington, D. C. 20004

Dear Mr. Airis:

Re: Three Sisters Bridge

It is a pleasure to inform you of the favorable action by the Metropolitan Washington Council of Governments/Transportation Planning Board on the District of Columbia Department of Highways and Traffic's application for Federal funds designated project - the Three Sisters Bridge, Interstate Route I-266 from the Virginia line to the area near Canal Road in the District of Columbia.

The Council determined that this project is consistent with comprehensive planning in the region and Council of Governments' adopted policies. Staff comments concerning this determination are enclosed. The application was reviewed both by the Transportation Board and the Land Use Committee. In the Land Use Committee's review, it requested consideration of the following eight items:

1. Lee Highway should be constructed to six lanes from North Kenmore Street to Rosslyn.
2. An additional lane should be constructed in each direction along the George Washington Memorial Parkway from Spout Run to below Key Bridge; and the loop connection up to the Rosslyn area should be reconstructed and joined to the off ramp from Route I-66 into Rosslyn.
3. An upstream connection from Rosslyn to the Parkway should be provided either by underpassing the southbound approach to Key Bridge or by some other appropriate design.
4. An additional ramp from the eastbound Parkway to Rosslyn should be constructed immediately adjacent to the existing down ramp from Key Bridge to carry traffic up to the Rosslyn area.
5. Downstream connections from Rosslyn Plaza to the Parkway should be eliminated.

6. The hiking trails in this area should be preserved and expanded to tie into Arlington County's existing network of hiking trails.


7. The Virginia Department of Highways should replace on an acre-by-acre basis the 35 acres of parkland contained in Spout Run.

8. All structures on Route 66 and the proposed bridge construction be faced with stone in an attractive manner that will help preserve the park amenity of that area.

The submission of these comments constitutes the formal metropolitan planning agency review required under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966.

It has been a pleasure to be of assistance to you in the processing of this application. The completion of the project will help to make the Metropolitan Washington region a better place to live.

Sincerely,

  
Walter A. Scheiber  
Executive Director

Enclosure:

Six copies staff comments

## DISTRICT OF COLUMBIA

Sec. 23. (a) Notwithstanding any other provision of law, or any court decision or administrative action to the contrary, the Secretary of Transportation and the government of the District of Columbia shall, in addition to those routes already under construction, construct all routes on the Interstate System within the District of Columbia as set forth in the document entitled "1968 Estimate of the Cost of Completion of the National System of Interstate and Defense Highways in the District of Columbia" submitted to Congress by the Secretary of Transportation with, and as a part of, "The 1968 Interstate System Cost Estimate" printed as House Document Numbered 199, Ninetieth Congress. Such construction shall be undertaken as soon as possible after the date of enactment of this Act, except as otherwise provided in this section, and shall be carried out in accordance with all applicable provisions of title 23 of the United States Code.

(b) Not later than 30 days after the date of enactment of this section the government of the District of Columbia shall commence work on the following projects:

- (1) Three Sisters Bridge, I-266 (Section B1 to B2).
- (2) Potomac River Freeway I-266 (Section B2 to B4).
- (3) Center Leg of the Inner Loop, I-95 (Section A6 to C4), terminating at New York Avenue.
- (4) East Leg of the Inner Loop, I-295 (Section C1 to C4), terminating at Bladensburg Road.

(c) The government of the District of Columbia and the Secretary of Transportation shall study those projects on the Interstate System set forth in "The 1968 Interstate System Cost Estimate", House Document Numbered 199, Ninetieth Congress, within the District of Columbia which are not specified in subsection (b) and shall report to Congress not later than 18 months after the date of enactment of this section their recommendations with respect to such projects including any recommended alternative routes or plans, and if no such recommendations are submitted within such 18-month period then the Secretary of Transportation and the government of the District of Columbia shall construct such routes, as soon as possible thereafter, as required by subsection (a) of this section.

(d) For the purpose of enabling the District of Columbia to have its Federal-aid highway projects approved under section 106 or 117 of title 23, United States Code, the Commissioner of the District of Columbia may, in connection with the acquisition of real property in the District of Columbia for any Federal-aid highway project, provide the payments and services described in sections 505, 506, 507, and 508 of title 23, United States Code.

(e) The Commissioner of the District of Columbia is authorized to acquire by purchase, donation, condemnation or otherwise, real property for transfer to the Secretary of the Interior in exchange or as replacement for park, parkway, and playground lands transferred to the District of Columbia for a public purpose pursuant to section 1 of the Act of May 20, 1932 (47 Stat. 161; D.C. Code, sec. 8-115) and the Commissioner is further authorized to transfer to the United States title to property so acquired.

(f) Payments are authorized to be made by the Commissioner, and received by the Secretary of the Interior, in lieu of property transferred pursuant to subsection (e) of this section. The amount of such payment shall represent the cost to the Secretary of the Interior of acquiring real property suitable for replacement of the property so transferred as agreed upon between the Commissioner and the head of said agency and shall be available for the acquiring of the replacement property.

RESOLUTION NO. 69-67



August 9 1969

Date Adopted

**Resolution**  
of the  
**District of Columbia City Council**

TITLE : - Resolution Concerning D. C. Compliance With the Federal-Aid Highway Act of 1968

Rev. Jerry A. Moore, Jr. Presents the following Resolution:

BE IT RESOLVED by the District of Columbia Council that:

Section 1. The D. C. Government comply with the provisions of Section 23 of the Federal-Aid Highway Act of 1968.

Section 2. This resolution shall take effect immediately.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27



DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

Address reply to:  
COMMANDANT (OAN-5)  
U.S. COAST GUARD  
WASHINGTON, D.C.  
20591

.3271

MAR 2 1960

Mr. E. D. Burke  
Assistant Deputy Director  
Bureau of Design, Engineering  
and Research  
415 12th Street, N. W.  
Washington, D. C. 20004

Dear Mr. Burke:

This is in reply to your request for information as to whether or not a permit would be required for a proposed bridge across the Potomac River.

In the course of the transfer from the Corps of Engineers to the Coast Guard of the responsibility for approving the plans and location of bridges across navigable waterways of the United States, the Commandant reaffirmed all actions relating thereto previously taken by the Corps of Engineers. A search of the records which accompanied the transfer of jurisdiction produced a copy of a Public Notice, dated 12 April 1957, in which the District Engineer, Washington Engineer District, designated that portion of the Potomac River upstream of the Key Bridge as having "advance approval" for the construction of bridges.

Such "advance approval" designation having been made, bridges providing adequate clearances for the passage of flood water are considered also to provide for the reasonable needs of navigation. Permits therefor are not required and application for such need not be submitted.

Sincerely yours,

H. F. OLSON  
Commander, U. S. Coast Guard  
Chief, Bridge Branch  
By direction of the Commandant

Encl: (1) Corps of Engineers Public Notice 536 of 12 April 1957





DEPARTMENT OF THE ARMY  
BALTIMORE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 1715  
BALTIMORE, MARYLAND 21203

NABOP-P (Govt., District of Columbia) 16

8 October 1969

Government of the District of Columbia  
Department of Highways and Traffic  
Washington, D. C. 20004

Gentlemen:

Referring to your written request of 28 August 1969, I am pleased to inform you that upon the recommendation of the Chief of Engineers and under the provisions of Section 10 of the River and Harbor Act of 3 March 1899, entitled "An act making appropriations for the construction, repair and preservation of certain public works on rivers and harbors, and for other purposes," you are hereby authorized by the Secretary of the Army to excavate 5900 cubic yards of clay, sand and rock from two (2) bridge pier sites, the excavated material to be deposited and retained shoreward of the mean high water shoreline, and to construct two (2) cofferdams in the Potomac River at the site of the proposed Three Sisters Bridge at Washington, D. C., all in accordance with the plans and description submitted with your request.

The grantee shall comply promptly with any regulations, conditions, or instructions affecting the work hereby authorized if and when issued by the Federal Water Pollution Control Administration and/or the State water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Federal Water Pollution Control Administration or State agency are hereby made a condition of this permit.

If the work herein authorized is not completed on or before the 31st day of December 1972, this authorization, if not previously revoked or specifically extended, shall cease and be null and void.

Attention is invited to the law under which this authorization is issued, which requires that the work must be in accordance with the plans. Accordingly, no changes in the location or plans of the work shall be made, unless the prior approval of the District Engineer is obtained.

DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

OFFICE OF THE DISTRICT ENGINEER  
WASHINGTON, D. C.

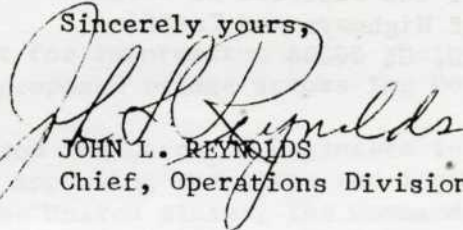
NABOP-P (Govt., District of Columbia) 16  
Government of the District of Columbia

8 October 1969

It is to be understood that this authorization does not give any property rights either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State or local laws or regulations; nor does it obviate the necessity of obtaining State assent to the work authorized. (See Cummings v. Chicago, 188 U. S. 410.)

By authority of the Secretary of the Army:

Sincerely yours,



JOHN L. REYNOLDS  
Chief, Operations Division

Issued for & in behalf of  
Colonel W. J. Love  
District Engineer

Attachment: Obstruction Light Regs.

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

U.S. GOVERNMENT  
Miscellaneous

The U. S. Code of Federal Regulations, Title 33, Subpart 67.30-5 (c) states that all structures erected in navigable waters in depths in excess of three feet at mean low water require obstruction lights unless the applicant is advised to the contrary by the Coast Guard District Commander. If the structures authorized by this permit are to be built in water depths in excess of three feet at mean low water, you must contact the Commander (O-2), Fifth Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23705, to ascertain the need for the placement of obstruction lights.

of Transportation Act of 1966 (P.L. 89-670) in providing for the construction of bridges over navigable waters, you are advised that there are no limitations on the number of bridges which may be constructed over navigable waters. The following information is being provided to you for your information and coordination with the appropriate Federal agencies. The following information is being provided to you for your information and coordination with the appropriate Federal agencies.

There have been several studies during the past 10 years at Portsmouth, Virginia, and the District of Columbia's Transportation Area, such as a 1973 study by the Virginia State Highway Department, the 1977 Transportation Study by the Virginia State Highway Department, and 1981 and 1982 studies by the Virginia State Highway Department. These studies demonstrate that there is a need for an additional bridge over the highway bridge between Key Bridge and Chain Bridge.

The studies for such a river crossing, the earliest of which was 1977, have found that regardless of where the highway crosses the river, there will be an investment with parking. The studies also state that of the alternatives, the three bridge location is the least desirable of the community goals and the preferred location with respect to the highway design and construction. The studies have considered the traffic, engineering, aesthetic, social-economic, community values and the goals and objectives of the transportation area. The studies were developed with the assistance of or were coordinated with highway officials of the State of Virginia, and the District of Columbia and representatives of the Department of Interior, National Capital Planning Commission, and the Joint Commission.

These studies and coordination efforts established that there is no aesthetic and physical alternative to the use of park, recreation area, wildlife and waterfowl refuge or historic site.

UNITED STATES GOVERNMENT

*Memorandum*U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

TO : Mr. John A. Volpe, Secretary  
Department of Transportation

FROM : *E. H. Holmes*  
E. H. Holmes, Acting  
Federal Highway Administrator

DATE: October 15, 1969

In reply refer to:

34-30

SUBJECT: ACTION - Three Sisters Bridge over the Potomac River

This memorandum summarizes the basis of your action in approving the construction of the Three Sisters Bridge, I-266, on August 12, 1969, with Section 138 of Title 23 U.S.C. and Section 4(f) of the Department of Transportation Act, 49 U.S.C. 1653(f). In approving this project under these sections, you too determined that there were no feasible alternatives for the use of parks, recreation, waterfowl, wildlife, or historic lands and that the proposed plans (which were commented upon by the officials having jurisdiction over these lands) minimized harm to such lands. The following paragraphs briefly outline the planning history and coordination upon which you based your determination that the requirements of the above sections of law were met.

There have been several studies during the past 20 years of transportation needs of the District of Columbia Metropolitan area, such as a 1953 Virginia Study by Wilbur Smith and Associates, the 1959 Transportation Plan - National Capital Region, and 1961 Plan for the Year 2000. These studies demonstrate that there is a need for an additional Potomac River highway bridge between Key Bridge and Chain Bridge.

The studies for such a river crossing, the earliest of which was 1953, have found that regardless of where the highway crosses the river, there will be an involvement with parkland. The studies agree that, of the alternatives, the Three Sisters location is the least disruptive of the community goals and the preferable location with respect to the highway design and construction. The studies have considered the traffic, engineering, aesthetics, social-economic, community values and the goals and objectives of the metropolitan area. The studies were developed with the assistance of or were coordinated with highway officials of the State of Virginia, and the District of Columbia; and representatives of the Department of Interior, National Capital Planning Commission, and the Fine Arts Commission.

These studies and coordination efforts established that there is no feasible and prudent alternative to the use of park, recreation area, wildlife and waterfowl refuge or Historic Site.

Design alternatives were also given careful consideration throughout the development of the project. The concept of tunneling under the river was thoroughly explored but was considered unfeasible. This view was shared by former Secretary Boyd in his enclosed May 4, 1967, letter to former Secretary Udall. It expresses positively that a bridge at this location is the only acceptable solution. Of particular note is the observation that the operational advantages of an open highway (a bridge in this case) over a confined and extended tunnel is of extreme importance. One significant advantage of the bridge is the view it will provide to visitors to the Nation's Capital and in particular the beauty of the palisades of the Potomac River. The proposed bridge design has received the approval of the Fine Arts Commission, evidencing, I believe, that all possible planning to minimize harm to the area is being performed and that such actions meet the requirements of Section 4(f).

Enclosure

Secretary's Action

Concurrence                     

Nonconcurrence                     

*John W. ...*

10/15/69

D.C. - 44  
May 1967

# Memorandum • Government of the District of Columbia

**TO:** Mr. T. F. Airis, Director  
Department of Highways and Traffic

**Department,** Sanitary Engineering  
**Agency, Office:** Director

**FROM:** Norman E. Jackson, P.E. *[Signature]*  
Director of Sanitary Engineering

**Date:** JAN 5 1971

**SUBJECT:** Proposed Interstate Route I-266 (Three Sisters Bridge)

In reply to your memorandum of December 23, 1970, this Department has no comments concerning subject project between the vicinity of Canal Road and MacArthur Boulevard in Washington and Route 66 near Lorcom Lane in Arlington County, Virginia.

Existing sanitary facilities that are affected and require adjustment will be included in the Department of Highways and Traffic contracts. Such work will be coordinated with this Department and essential services to the public will be maintained at all times.

*[Handwritten initials]*  
LGS/vdm

D.C. - 44  
May 1967

# Memorandum • Government of the District of Columbia

TO: Leonard A. DeGast  
Assistant Director  
Office of Planning and Program

Department,  
Agency, Office: Fire

FROM: Hugh A. Groves *H. A. G.*  
Fire Chief

Date: January 8, 1971

SUBJECT: Proposed Interstate Route I-266  
(Three Sisters Bridge)

At this time it is felt that the Three Sisters Bridge will not interfere with the operations of the D. C. Fire Department. However, during the construction period, some difficulties might arise which could hamper the response of units in the area west of the Key Bridge on K Street extended and in the vicinity of Prospect Street extended.

I would appreciate it if your office would keep the Fire Department informed of the progress of the construction of the bridge.

## INTERSTATE 266

PERTINENT INFORMATION AVAILABLE  
FOR PUBLIC INSPECTION AND COPYINGBrochures

1. I-266 Design Hearing Information. D. C. Department of Highways and Traffic and Virginia Department of Highways, 1970.
2. Relocation Information for Residents located on Highway Projects in the District of Columbia. D. C. Department of Highways and Traffic and Redevelopment Land Agency, 1970.
3. Relocation Information for Business and Non-Profit Organizations located on Highway Projects in the District of Columbia. D. C. Department of Highways and Traffic and Redevelopment Land Agency, 1970.

Reports

4. A Recommended Highway Improvement Program for the Washington Metropolitan Area. Regional Highway Planning Committee, 1952.
5. Report on Potomac River Bridges; Washington, D. C. Board of Commissioners, District of Columbia, 1952.
6. Highway Transportation in the Washington Metropolitan Area of Virginia. Virginia State Highway Commission, 1953.
7. Report on Inner Loop Freeway System. Board of Commissioners, Washington, D. C., 1955.
8. A Report on the Study of Interstate U. S. Route 240. D. C. Department of Highways and Traffic, 1957.
9. A Policies Plan for the Year 2000, the Nation's Capital. National Capital Planning Commission, 1961.
10. Recommendations for Transportation in the National Capital Region. National Capital Transportation Agency, 1962.



11. Transcripts of Joint Public Hearing on Proposed Interstate Highway Project Route 266. Government of the District of Columbia and the Commonwealth of Virginia, 1964.
12. Rush-Hour Commuting from Virginia to Washington; Past, Present and Future. Committee of 100 on the Federal City, 1964.
13. Supplemental Report on Proposed I-266 (Three Sisters Bridge). Committee of 100 on the Federal City, 1964.
14. Location Studies Interstate Route 266. D. C. Department of Highways and Traffic, 1964.
15. The Proposed Comprehensive Plan for the Nation's Capital. National Capital Planning Commission, 1967.
16. Measuring Present Travel Demands. National Capital Region Transportation Planning Board, 1967.
17. Calculating Future Carbon Monoxide Emissions and Concentrations from Urban Traffic Data. U. S. Department of Health, Education, and Welfare, 1967.
18. Type, Size and Location Report on Proposed Three Sisters Bridge. D. C. Department of Highways and Traffic, 1967.
19. Engineering Analysis and Recommendations on Alternative Proposals for the District of Columbia Comprehensive Transportation Plan. D. C. Department of Highways and Traffic, 1968.
20. Action in Downtown Progress. Annual Report Downtown Progress, 1969.
21. Elements of the Comprehensive Plan for the National Capital. National Capital Planning Commission, 1969.
22. The Economy of Metropolitan Washington. Metropolitan Washington Council of Governments, 1969.
23. Report on the City Council Approval of the Mass Transportation and Major Thoroughfare Plans for the District of Columbia. Government of the District of Columbia, City Council, 1969.
24. The National Register of Historic Places. U. S. Department of the Interior, 1969
25. "Washington Area is Seventh Largest in the Nation." Council of Governments Regional Report, 1970.
26. Travel to Work. National Capital Region Transportation Planning Board, 1970.

27. Benefits of Interstate Highways. U. S. Department of Transportation and Federal Highway Administration, 1970.
28. Interstate Cost Estimate, 1968. D. C. Department of Highways and Traffic, 1967.
29. Effect of Highway Landscape Development on Nearby Property. National Cooperative Highway Research Program Report 75, 1969.

Letters, Memoranda, Statements  
and Transcripts

30. Bridge vs. tunnel alternative letter. Department of Transportation to Department of Interior, May 4, 1967.
31. Approval of the Commission of Fine Arts. Fine Arts Commission to D. C. Highway Department, September 20, 1967.
32. Section 204 Review Letter. Metropolitan Council of Governments to D. C. Department of Highways and Traffic, December 29, 1967.
33. Court Injunction Halting Four Freeway Projects. U. S. Court of Appeals, February 9, 1968.
34. Resolution 69-67 to comply with Section 23 of the Federal-Aid Highway Act of 1968. D. C. City Council, August 9, 1969.
35. Designation of D. C. Interstate System to comply with 1968 Federal Highway Act. Federal Highway Administration to D. C. Department of Highways and Traffic, August 13, 1969.
36. Authorization for Construction of Three Sisters Bridge River Piers dated August 27, 1969.
37. Designation of Hearing Officer and Order to hold Public Hearing, October 19, 1970.
38. Final Judgment Halting Construction of Three Sisters Bridge. U. S. District Court August 7, 1970.

Guidelines

39. A Policy on Arterial Highways in Urban Areas. American Association of State Highway Officials, 1957.
40. A Policy on Geometric Design of Rural Highways. American Association of State Highway Officials, 1967.

41. Air Quality Act of 1967, Public law 90-148. 90th Congress, 1967.
42. Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines. Department of Health, Education, and Welfare, 1968.
43. Relocation Assistance and Payments (IM 80-1-68). U. S. Department of Transportation and Federal Highway Administration, 1968.
44. Public Hearings and Location Approval (PPM 20-8). U. S. Department of Transportation and Federal Highway Administration, 1969.
45. Federal Laws, Regulations, and Material Relating to the Federal Highway Administration. U. S. Department of Transportation and Federal Highway Administration, 1970.

#### Displays for Public Inspection

46. I-266 Model (3 span alternative bridge)
47. I-266 Model (Potomac River Freeway)
48. Air photo mosaic of project area
49. Rendering - 3 span alternate bridge
50. Rendering - 6 span alternate
51. Type, size and location drawing for 3 span alternate
52. Type, size and location drawing for 6 span alternate

## NOTICE OF JOINT DESIGN PUBLIC HEARING

## PROPOSED INTERSTATE 266

The District of Columbia and the State Highway Commission of the Commonwealth of Virginia will hold a joint DESIGN PUBLIC HEARING in the Department of Commerce Auditorium on 14th Street, N. W. between Constitution Avenue and E Street, N. W., Washington, D. C., on Monday December 14, 1970, beginning at 10:00 A.M. and continuing into the evening. The hearing will be conducted to consider alternative designs for proposed Interstate Route 266 between a point near the intersection of Canal Road and MacArthur Boulevard in Washington, D. C., and a connection with the proposed Interstate Route 66 near Lorcom Lane in Arlington County, Virginia, including a proposed bridge across the Potomac River in the vicinity of the Three Sisters Islands. Additional sessions of the Design Public Hearing will be held on December 15 and 16 if necessitated by a larger number of witnesses than can appear on December 14, 1970.

This Design Public Hearing will be held in accordance with Title 23, U. S. Code, Section 128 and U. S. Department of Transportation Policy and Procedure Memorandum 20-8 dated January 14, 1969.

Interested parties are invited to present statements concerning any alternative design including the social, economic, and environmental effects. Consistency with local planning objectives and tentative schedules for right-of-way acquisitions and construction of alternative design proposals will be discussed. Information regarding relocation assistance for persons or businesses will also be discussed at this hearing.

Maps, drawings, written statements of coordination, and other pertinent information will be available for public inspection and copying. Information relative to the District of Columbia portion of the proposed project is available in Room 16 of the District Building, 14th and E Streets, N. W., Washington, D. C., between the hours of 8:15 A.M. and 7:00 P.M., Monday through Friday except on Thursday, November 26, when the office will be closed; and at Hardy Recreation Center, 4500 Q Street, N. W., from 1:00 P.M. to 8:00 P.M. on November 30 and December 1 and 2. Information relative to the Virginia portion of the project is available in the Virginia Department of Highways District Office, Culpeper, Virginia, located on Route 15 just south of Route 3 between the hours of 8:15 A.M. and 5:00 P.M., Monday through Friday except November 26, when the office will be closed; in the Department of Highways Residency Office, Fairfax, Virginia, located at 3555 Chain Bridge Road between the hours of 8:15 A.M. and 7:00 P.M., Monday through Friday except November 26, when the office will be closed; in the Office of the Director of Transportation for Arlington County between the hours of 8:00 A.M. and 5:00 P.M. Monday through Friday except November 26, when the office will be closed; and in the Arlington County Central Library

located at 1015 N. Quincy Street between the hours of 9:00 A.M. and 9:00 P.M., Monday through Friday except November 26, when the Library will be closed, and between the hours of 9:00 A.M. and 6:00 P.M., on Saturdays. A representative of the Virginia Department of Highways will also have this information available in the Arlington County Court House in the Board Room on Thursday, December 3 between the hours of 5:00 P.M. and 10:00 P.M. for a prehearing plan review.

So that names may be placed on a witness list, individuals and representatives of organizations in the District of Columbia who wish to be heard at this Design Public Hearing are requested to furnish in writing name, address, telephone number, organization affiliation, if any, and approximate amount of time required to testify to Mr. Martin K. Schaller, Executive Secretary, Office of the Mayor-Commissioner, Room 528, District Building, not later than 5:00 P.M., on Thursday, December 10. Virginia residents who wish to be heard at this Design Public Hearing should submit the same information in writing to Mr. D. B. Hope, District Engineer, Virginia Department of Highways, Culpeper, Virginia, not later than 5:00 P.M. on Thursday, December 10. Others present at the hearing who wish to be heard may do so after those on the witness list have been called and heard.

Persons may make oral statements and/or file written statements which will be made part of the hearing record. Written statements may be filed for inclusion in the record as late as ten days following the final adjournment of the Design Hearing. The Executive Secretary, District of Columbia and the District Engineer, Virginia Department of Highways, will receive written statements during the ten day period.

A verbatim record will be made at all sessions of this Design Hearing. Copies of the transcript may be purchased from the official recorder. The name and address of the recorder will be furnished upon request by either the D. C. Department of Highways and Traffic or the Virginia Department of Highways.

Douglas B. Fugate, Commissioner  
 G. L. Baughan  
 Douglas G. Janney  
 W. Fred Duckworth  
 Earl A. Fitzpatrick  
 Thomas R. Glass  
 Rufus T. Hairston  
 Le Roy Eakin, Jr.  
 Robert S. Weaver, Jr.

T. F. Airis, Director  
 District of Columbia  
 Department of Highways and Traffic

State Highway Commission of Virginia