

**Minutes of the Meeting of the
State Highway Commission of Virginia
Held in Richmond October 19, 1954.**

At 9:00 A. M., Tuesday, October 19, the Commission met in the Central Office Building, Richmond. Present - Messrs. Barrow, Flythe, Nelson, Rawls, Rogers, Watkins, Wright and Anderson. The meeting was called to order by the Chairman.

On motion by General Anderson and seconded by Mr. Rawls, the following resolution was unanimously adopted.

**Resolution on the Death of
John Franklin Wycor**

Whereas on October 8, 1954, the death of John Franklin Wycor ended his nineteen years of service as a Member of the State Highway Commission of Virginia,

Whereas his passing has deprived the State of an outstanding public servant and the Highway Commission of one of its most valuable members and advisors, and whereas his service was ever marked by the highest ability and character, therefore

Be it Resolved, that the State Highway Commission go on record as deploring the loss of this faithful public servant whose services brought him recognition as one of Virginia's leading citizens;

Be it Further Resolved, that the Commission feels that his death is an irreparable loss to Virginia, to the Highway Commission and to the people of the Commonwealth whom he so ably served;

Be it Further Resolved, that in his death the Commission has lost a wise counsellor and true friend;

Be it Further Resolved, that a copy of this Resolution be spread upon the official minutes of the State Highway Commission and that a copy be transmitted to the family of the late John Franklin Wycor as a tribute of respect and love and as an expression of the deepest sympathy of this Commission.

Mr. S. S. Flythe, successor to Mr. Wycor, requested that he be permitted to add his personal expression of sympathy.

Moved by Mr. Rawls, seconded by Senator Nelson, that the permits issued from October 7 to date, inclusive, be approved, as recorded in the Auditing Division. Motion carried.

Moved by Senator Nelson, seconded by Mr. Rogers, that the permits cancelled by the Commissioner from October 7 to date, as recorded in the Auditing Division and authorized June 25, 1947, be approved. Motion carried.

The Members of the Commission were each given a copy of the Notice of Sale and Bid Form of the \$85,000,000 State of Virginia Revenue Bonds (Series 1954).

Mr. Wm. E. Glidden, Assistant Chief Engineer, having been made President of the American Society of Civil Engineers at a meeting in New York, was sent a telegraphic message of congratulations from the Commissioner, extending congratulations and best wishes of the Commission and the Department personnel, such action being approved by the Commission. Senator Wright suggested that a letter of congratulations be prepared to Mr. Glidden for the signature of the Members of the Commission.

A delay in the transfer of mileage on Route 102 from the Primary System to the Secondary System of Floyd and Montgomery Counties having been granted in 1951, in order that additional funds could be expended over a period of several years to bring the road to reasonable standard, it was moved and seconded that the transfer be effective upon completion of the work which was 83% finished on September 24, 1954. Motion carried.

On motion made and seconded the Chairman was instructed to forward to the Governor the Annual Report of the Commission for the fiscal year July 1, 1953-June 30, 1954, a copy of which will be mailed to each Member of the Commission.

Moved by Mr. Rawls, seconded by Mr. Barrow, that whereas, under authority of Section 35-115.2 of the Code of Virginia, Amended, request is made by City of Fredericksburg for payment at the basic rate of \$500 per mile annually on additional streets meeting the required standards; now, therefore, be it resolved, that quarterly payments at the basic rate of \$500 per mile annually be made to the City of Fredericksburg on additional streets totaling 1.55 miles, effective beginning the second quarter, October 1, 1954. Motion carried.

Moved by Mr. Barrow, seconded by Mr. Watkins, that whereas, in connection with the alteration and reconstruction of a section of Route 480 in Giles County, the Commonwealth acquired portions of two certain lots and all of another certain lot in Edgewood Development, as shown on Plan Sheet 5 for Project 1935-06, as follows: (a) portions of lots 62 and 71 from Paul D. Bostic and G. Arnold Bostic and their wives, and (b) all of lot 70 from Harry B. Smith, et ux, by deeds dated August 7, 1952, and July 15, 1952, and recorded in the Clerk's Office of said County in Deed Book 86, Pages 255 and 548; lot 70 being situate between lots 62 and 71, and a residue portion thereof lying outside of and along the northwest side of the project 110-foot right of way; and whereas, option-agreement dated July 2, 1952, pursuant to which the said deed dated August 7, 1952, was executed, provides that the Commonwealth will quitclaim to Paul D. and G. Arnold Bostic and their wives, Mary P. Bostic and Beulah W. Bostic, that portion of lot 70 lying northwest of the new right of way line; and the State Highway Commissioner

has certified in writing that this portion, which lies outside of the 110-foot right of way, does not constitute a section of the public road and is no longer necessary for the uses of the State Highway System; now, therefore, since the said Paul D. and G. Arnold Bostic and their wives are the owners of the remaining portions of lots 62 and 71 lying on the northwest side of said 110-foot right of way, as provided for by Section 55-78.6 of the Code of Virginia as amended, the State Highway Commissioner is hereby authorized to execute a deed quitclaiming the said residus portion of lot 70, lying outside of the said 110-foot right of way, in accordance with said option-agreement. Motion carried.

Moved by Mr. Watkins, seconded by Mr. Rogers, that whereas, there is a certain section of the old Lynchburg-Salem Turnpike and 60-foot right of way, in Bedford County, situate South of the latest alteration and reconstruction of Route 297, as shown on Sheet 5 of plans for Project 5909-05 - 5915-08-05, and the Southerly side of said section and right of way abuts upon lands owned by Robert C. Gordon and Helen H. Gordon, husband and wife, and lies between the connection of Route 711 with Route 297 and Bedford-Campbell County Line; and whereas, option-agreement dated September 24, 1954, executed by the said Robert C. and Helen H. Gordon provides that they will convey to the Commonwealth the additional right of way needed along their lands for said connection, in exchange for the Commonwealth's quitclaim to them of the Southerly one-half, or 50-foot portion, of said section of Turnpike and 60-foot right of way; and whereas, the latest alteration and reconstruction of Route 297, as per plans for said project, serves the same citizens as the said section of old Turnpike and 60-foot right of way; and the Commissioner has certified in writing that this section is deemed no longer necessary for the uses of the State Highway System; now, therefore, as provided for by Section 55-78.5 of the Code of Virginia, as amended, the said section of old Turnpike and 60-foot right of way is hereby declared abandoned; and as provided for by Section 55-78.6 of said Code, as amended, the Commissioner is authorized to execute a deed quitclaiming to the said Robert C. and Helen H. Gordon, jointly, any and all right, title and interest which the Commonwealth may have in and to the Southerly one-half, or 50-foot portion, of said section abandoned, in exchange for their conveyance of the said additional right of way. Motion carried.

Moved by Mr. Barrow, seconded by Mr. Rawls, that whereas, request is made by Dr. Joseph E. Barrett for addition to the Primary System of new driveways constructed in the developing Elko Site of the Petersburg Training School and Hospital, and whereas, these driveways have been constructed to meet required standards and are recommended by our Engineers; now, therefore, be it resolved, that the recently constructed driveways totaling 2,649 miles in the Elko area of the Petersburg Training School and Hospital, be added to the Primary System of Highways, as provided under Section 55-58 of the 1952 Code of Virginia, Amended. Motion carried.

Mr. John Pershing, of Mitchell and Pershing, Bond Counsel, appeared before the Commission. He asked that the Commission rescind the resolutions adopted at its meeting October 7 and adopt new resolutions to reduce the Bond Issue by \$5,000,000, on account of the bids received.

It was moved by Mr. Rawls, seconded by Mr. Watkins, that the following resolution be adopted.

**A RESOLUTION REPEALING CERTAIN RESOLUTIONS
HERETOFORE ADOPTED BY THE STATE HIGHWAY
COMMISSION RELATING TO THE ISSUANCE OF
\$100,000,000 STATE OF VIRGINIA TOLL REVENUE
BONDS (SERIES 1954).**

WHEREAS, at a regular meeting of the State Highway Commission (herein called the "Commission") duly held at the Hotel Robert E. Lee, in Lexington, Virginia, on October 7, 1954, the Commission adopted (a) a resolution authorizing the issuance of \$100,000,000 State of Virginia Toll Revenue Bonds (Series 1954) and the execution and delivery of a trust indenture securing said bonds, (b) a resolution directing publication of notice of sale of said bonds and (c) a resolution approving the form of the proposed official statement in relation to said bonds; and

WHEREAS, subsequent to said date the Commission received bids for the construction of a substantial portion of the Hampton Roads Crossing and the Rappahannock River Bridge (referred to in said trust indenture) and as a result of such bids and the advice of the Commission's Consulting Engineers (referred to in said trust Indenture) after examination thereof, it appears proper and advisable for the Commission to reduce the aggregate principal amount of toll revenue bonds to be authorized and sold by the Commission and the Commission has determined to adopt resolutions necessary for such purpose; now, therefore,

BE IT RESOLVED by the State Highway Commission of Virginia:

Section 1. The resolution heretofore adopted by the Commission on October 7, 1954 entitled

**"A RESOLUTION AUTHORIZING THE ISSUANCE
OF \$100,000,000 STATE OF VIRGINIA TOLL
REVENUE BONDS (SERIES 1954) AND THE
EXECUTION AND DELIVERY OF A TRUST
INDENTURE SECURING SAID BONDS; AND PRO-
VIDING FOR THE AUTHENTICATION AND
DELIVERY OF SAID BONDS"**

be and the same is hereby repealed.

Section 2. The resolution heretofore adopted by the Commission on October 7, 1954 entitled

"A RESOLUTION DIRECTING PUBLICATION OF NOTICE OF SALE OF \$100,000,000 STATE OF VIRGINIA TOLL REVENUE BONDS (SERIES 1954)"

be and the same is hereby repealed.

Section 3. The resolution heretofore adopted by the Commission on October 7, 1954 entitled

"A RESOLUTION APPROVING THE FORM OF THE PROPOSED OFFICIAL STATEMENT IN RELATION TO \$100,000,000 STATE OF VIRGINIA TOLL REVENUE BONDS (SERIES 1954) AND AUTHORIZING THE SIGNING THEREOF"

be and the same is hereby repealed.

Motion carried.

It was moved by Mr. Watkins, and seconded by Mr. Barrow, that the following resolution be adopted authorizing the sale of the State of Virginia Toll Revenue Bonds amounting to \$95,000,000., including the Trust Indenture.

A RESOLUTION AUTHORIZING THE ISSUANCE OF \$95,000,000 STATE OF VIRGINIA TOLL REVENUE BONDS (SERIES 1954) AND THE EXECUTION AND DELIVERY OF A TRUST INDENTURE SECURING SAID BONDS; AND PROVIDING FOR THE AUTHENTICATION AND DELIVERY OF SAID BONDS

BE IT RESOLVED by the State Highway Commission:

Section 1. The State Highway Commission (hereinafter sometimes called the "Commission"), an agency of the State of Virginia, has found and determined and does hereby declare that:

(a) by virtue of Chapter 599 of the Acts of Virginia of 1940 (known and cited as the "State Revenue Bond Act"), the Commission was authorized and empowered

(1) to acquire by purchase or by condemnation and to construct, improve, operate and maintain any one or more of the bridge and ferry projects mentioned in said Chapter 599 including, among others,

(1) the ferry properties (hereinafter sometimes collectively called the "Chesapeake Ferries"), consisting of the properties commonly known as the "Newport News Ferry", operating across Hampton Roads from the City of Newport News to Pina Beach in the City of Norfolk, and as the "Old Point Ferry", operating from Old Point in Elizabeth City County across Hampton Roads to Willoughby in the City of Norfolk,

(ii) the bridge properties (hereinafter sometimes collectively called the "James River Bridges"), owned by the James River Bridge System, a Virginia corporation, comprising the existing bridges across the James, Chuckatuck and Nansemond Rivers, together with connecting roads, in the counties of Warwick, Isle of Wight and Nansemond,

(iii) a bridge across the York River (hereinafter sometimes called the "York River Bridge"), extending from a point within the Town of Yorktown, in York County, or within York County to Gloucester Point or to some point in Gloucester County, and approaches thereto, and

(iv) a bridge across the Rappahannock River (hereinafter sometimes called the "Rappahannock River Bridge"), extending from Grays Point, or its vicinity, in Middlesex County, to a point in the vicinity of White Stone, in Lancaster County, or at some other feasible points in the general vicinity of said two points, and approaches thereto;

(2) to issue revenue bonds of the State of Virginia, payable solely from earnings, to pay the cost of such projects;

(3) to fix and collect tolls and other charges for the use of such projects; and

(4) to couple or unite into one unit for financing purposes any two or more of such projects;

(b) by resolutions duly adopted, the Commission determined (i) to advance temporarily from highway funds available for such purpose the sum necessary to pay the condemnation award theretofore rendered in condemnation proceedings brought to acquire the Chesapeake Ferries, (ii) to issue a toll revenue bond of the State of Virginia to reimburse the highway funds for such advance, (iii) to acquire the James River Bridges, (iv) to construct immediately the York River Bridge, (v) to construct at a later date the Rappahannock River Bridge, and (vi) to unite such projects into one unit for financing purposes;

(c) as authorized by said resolutions, the Commission caused a toll revenue bond of the State of Virginia in the principal amount of \$2,700,000, designated "State of Virginia Toll Revenue Bond", dated May 1, 1948, to be executed, sold and delivered, and the proceeds thereof applied to reimburse the highway funds for the amount so advanced on account of the acquisition of the Chesapeake Ferries;

(d) the Commission accepted a proposal for the sale to the Commonwealth of Virginia of the James River Bridges, and adopted and approved plans for the construction of the York River Bridge, and the location and plans for said bridge were approved by the Chief of Engineers and the Secretary of the Army as required by the General Bridge Act of 1945 (60 Stat. 847);

(e) for the purpose of providing funds, with other funds available for such purposes, for (i) refunding the outstanding State of Virginia Toll Revenue Bond issued on account of the Chesapeake Ferries, including the payment of the interest accrued thereon to the date of payment thereof, (ii) paying the cost of improvements of such Ferries, (iii) paying the cost of the James River Bridges, (iv) paying the cost of the York River Bridge, and (v) paying expenses necessary and incident to the financing, the Commission duly issued revenue bonds of the State of Virginia in the aggregate principal amount of Nineteen Million Dollars (\$19,000,000), designated "State of Virginia Toll Revenue Bonds (Series 1949)" (hereinafter sometimes called the "Series 1949 Bonds"), dated as of the 1st day of September, 1949, \$8,000,000 of said bonds, consisting of bonds numbered 1 to 8,000, inclusive, being serial bonds stated to mature (in numerical order, lowest numbers first) on the 1st day of September in the following years and in the following amounts and bearing interest at the following rates, respectively:

<u>Year of Maturity</u>	<u>Principal Amount</u>	<u>Rate of Interest</u>	<u>Year of Maturity</u>	<u>Principal Amount</u>	<u>Rate of Interest</u>
1953	\$200,000	5.00%	1961	\$400,000	2.25%
1954	200,000	5.00%	1962	400,000	2.25%
1955	250,000	2.25%	1963	450,000	2.50%
1956	250,000	2.25%	1964	450,000	2.50%
1957	300,000	2.25%	1965	\$00,000	2.50%
1958	300,000	2.25%	1966	500,000	2.50%
1959	350,000	2.25%	1967	550,000	2.50%
1960	350,000	2.25%	1968	550,000	2.50%

and the remaining \$11,000,000 bonds, consisting of bonds numbered 8,001 to 18,000, inclusive, being term bonds stated to mature on the 1st day of September, 1975, and bearing interest at the rate of 2.70% per annum, such interest being payable semi-annually on the 1st days of March and September in each year, and both the principal of and the interest on said bonds being payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or at the option of the holder or registered owner, at The Chase National Bank of the City of New York, in the Borough of Manhattan, City and State of New York;

(f) the Series 1949 Bonds which are stated to mature after September 1, 1957, are subject to the right of prior redemption in whole on any date not earlier than September 1, 1954, at the option of the Commission, from any moneys that may be available for such purpose, upon at least thirty (30) days' prior notice by publication and otherwise as provided in the trust indenture securing such bonds, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus the following premiums;

(1) in the case of the term bonds, a premium of 4% of such principal amount if redeemed on or prior to March 1, 1955, 3% if redeemed thereafter and on or prior to March 1, 1959, 2% if redeemed thereafter and on or prior to March 1, 1961, 1% if redeemed thereafter and on or prior to March 1, 1964, and without premium if redeemed thereafter and

(2) in the case of the serial bonds, a premium of 1/4 of 1% of the principal amount of the bonds to be redeemed for each twelve (12) months' period or fraction thereof between the date of redemption of each such bond and the maturity thereof, but not to exceed a premium of 8% of such principal amount;

(g) the serial bonds of said issue which became due and payable in the years 1953 and 1954, in the aggregate principal amount of \$400,000, were promptly paid at their respective maturities, and term bonds of said issue in the aggregate principal amount of \$2,805,000, have been retired by purchase or redemption, leaving a balance of \$15,997,000 bonds of said issue outstanding, consisting of \$5,600,000 serial bonds maturing in the years 1955 to 1958, inclusive, and \$10,397,000 term bonds maturing in the year 1975 (said outstanding bonds, exclusive of the serial bonds in the aggregate principal amount of \$800,000 maturing in the years 1955 to 1957, inclusive, being hereinafter sometimes called the "Callable Bonds");

(h) funds are available in the Reserve Account in the State of Virginia Toll Revenue Bonds Interest and Sinking Fund (a special fund created under the provisions of the trust indenture securing the Series 1949 Bonds) sufficient to pay at their stated maturities the serial bonds of said issue which mature in the years 1955 to 1957, inclusive, including the interest on said bonds which will become due and payable until their respective maturities;

(i) by virtue of the State Revenue Bond Act (Code of Virginia, Sections 53-227 to 53-255, inclusive), as amended by Chapter 519 of the Acts of Virginia of 1954, the Commission is authorized and empowered to provide by resolution for the issuance of a single issue or revenue bonds of the State for the combined purpose of providing funds (1) to pay the cost of the Rappahannock River Bridge, and the cost of a combined bridge and tunnel system extending from a point or points in the

City of Newport News or in the County of Elizabeth City on the northeast shore of Hampton Roads across Hampton Roads to a point or points in the City of Norfolk or in the County of Norfolk on the southeast shore of Hampton Roads, including approaches and approach highways thereto, and (ii) to refund revenue bonds of the State theretofore issued under the provisions of the State Revenue Bond Act and then outstanding, including interest to the earliest call date of such outstanding bonds and premiums, if any, payable on such call date;

(j) by said Chapter 518, the Commission is authorized to include in the project constituting such combined bridge and tunnel system, bus facilities for the transportation of passengers through or over such project (such bus facilities being hereinafter sometimes called the "bus facilities"), and to provide a sum, deemed by the Commission to be sufficient for such purpose, to be utilized by the Commission for the payment of employment severance benefits to employees of the Commission rendering services in connection with the Chesapeake Ferries (hereinafter sometimes called "severance benefits"), and the Commission has determined to provide the sum of \$15,000 for bus facilities and the sum of \$500,000 for severance benefits, and to include the same as a part of the cost of such combined bridge and tunnel system;

(k) the Commission has determined to construct the Rappahannock River Bridge and to construct a combined bridge and tunnel system consisting of a tunnel, bridges and a causeway under and across Hampton Roads extending from a point in the County of Elizabeth City (now the City of Hampton, Virginia) on the northeast shore of Hampton Roads to a point in the City of Norfolk on the southeast shore of Hampton Roads, including approaches and approach highways thereto, more particularly described in the report of the Consulting Engineers hereinafter mentioned (such combined bridge and tunnel system, approaches and approach highways thereto, and bus facilities, being hereinafter sometimes collectively called the "Hampton Roads Crossing");

(l) the Commission has adopted and approved plans for the construction of the Rappahannock River Bridge and for the construction of the Hampton Roads Crossing and the location and plans for the bridges in each project have been approved by the Chief of Engineers and the Secretary of the Army, as required by the General Bridge Act of 1946 (50 Stat. 847) and the plans for constructing the tunnel and causeway included in the Hampton Roads Crossing have been recommended by the Chief of Engineers and authorized by the Secretary of the Army, as required by Section 10 of the Rivers and Harbors Appropriation Act of March 3, 1899 (30 Stat. 1121); and

(m) the Consulting Engineers employed by the Commission have made investigations and studies and have prepared and filed with the Commission their engineering report dated August 16, 1954, setting forth their estimates of the cost of the Rappahannock River Bridge and the

cost of the combined bridge and tunnel system, approaches and approach highways thereto, included in the Hampton Roads Crossing, according to the above mentioned plans and at the locations approved therefor, and since said date have prepared and filed with the Commission revised estimates of such cost.

Section 2. For the purpose of (a) providing funds for refunding the Callable Bonds then outstanding, including the payment of the redemption premium thereon, (b) paying the cost of the Rappahannock River Bridge, and (c) paying the cost (including bus facilities and severance benefits) of the Hampton Roads Crossing (the James River Bridge, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing, and the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, being herein collectively called the "Projects"), the issuance of toll revenue bonds of the State of Virginia in the aggregate principal amount of Ninety-five Million Dollars (\$95,000,000) is hereby authorized. Said toll revenue bonds shall be designated "State of Virginia Toll Revenue Bonds (Series 1954). All of said bonds shall be dated as of the 1st day of September, 1954, shall be stated to mature on the 1st day of September, 1964, subject to the right of redemption prior to their maturity at the prices and dates and upon the terms and conditions which are set forth in the Indenture (hereinafter mentioned), and shall bear interest at the rate of three per centum (3%) per annum, such interest to the maturity thereof being payable semi-annually on the 1st days of March and September in each year.

Section 3. The definitive bonds are issuable as coupon bonds, registrable as to principal, in the denomination of \$1,000 each, and as registered bonds without coupons in denominations of \$1,000 or any multiple thereof. At the principal office of the trustee under the Indenture, in the manner, subject to the limitations, and upon payment of the charges provided in the Indenture, registered bonds without coupons may be exchanged for an equal aggregate principal amount of coupon bonds, bearing interest at the same rate and having attached thereto coupons representing all unpaid interest due or to become due thereon, or of registered bonds without coupons, bearing interest at the same rate, of authorized denominations, and coupon bonds bearing coupons representing all unpaid interest due or to become due thereon may in like manner be exchanged for an equal aggregate principal amount of registered bonds without coupons and bearing interest at the same rate, of authorized denominations.

The bonds shall be signed by the State Highway Commissioner who is Chairman of the Commission, and the official seal of the Commission shall be affixed to the bonds and attested by the Secretary of the Commission. The coupons to be attached to the coupon bonds shall be executed with the requisite signature of the State Highway Commissioner.

The coupon bonds to be issued hereunder and the interest coupons to be attached thereto and the provisions for registration to be endorsed thereon, the registered bonds without coupons to be issued hereunder, and the certificate of authentication by the Trustee to be endorsed on all bonds issued hereunder shall be, respectively, substantially in the forms set forth in the Indenture.

Section 4. Both the principal of and the interest on the bonds shall be payable in any coin or currency of the United States of America which, at the respective dates of payment thereof, is legal tender for the payment of public and private debts. The principal of the coupon bonds (unless registered) and the interest thereon shall be payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or, at the option of the holder, at the principal office of Chemical Bank and Trust Company, in the Borough of Manhattan, City and State of New York. The principal of all registered bonds without coupons and of all coupon bonds registered as to principal alone shall be payable at the principal office of the Trustee, and payment of the interest on each registered bond without coupons shall be made on each interest payment date to the person appearing on the registration books of the Commission as the registered owner thereof, by check or draft mailed to such registered owner at his address as it appears on such registration books, all as provided in the Indenture. Payment of the principal of all bonds shall be made upon the presentation and surrender of such bonds as the same become due and payable. Payment of the interest on the coupon bonds shall be made upon the presentation and surrender of the coupons, if any, representing such interest as the same respectively become due and payable.

Section 5. Tolls shall be fixed, revised, charged and collected by the Commission as provided in the Indenture for the use of the Projects in order that such tolls and other revenues of the Projects shall be sufficient to provide funds to pay the cost of maintaining, repairing and operating the Projects and to pay the principal of and the interest on all bonds issued under the Indenture as the same shall become due and payable, and to create reserves for such purposes. All such tolls and other revenues shall be deposited and held for the purposes specified in the Indenture.

Section 6. In order to secure the payment of the principal of and the interest on the bonds herein authorized, including any redemption premium thereon, and any additional bonds that may be issued under the provisions of the Indenture, according to their tenor, purport and effect, and in order to secure the performance and observance of all the covenants, agreements and conditions in said bonds, the execution and delivery of a trust indenture by and between the Commission and the National Bank of Commerce of Norfolk, as Trustee, is hereby authorized and said trust indenture (herein called the "Indenture") shall be substantially in the form of the proof of the trust indenture

under date of October 14, 1954, which is on file with the Secretary of the Commission and has the following notation endorsed thereon:

"Form of Trust Indenture authorized by the State Highway Commission by resolution adopted on October 7, 1954.

(Signed) Sol W. Rawls
Secretary of the
State Highway Commission",

subject to such minor changes, variations, omissions and insertions as may be approved by the State Highway Commissioner and the Secretary of the Commission and by said Trustee, and the execution of the Indenture by the State Highway Commissioner and the Secretary of the Commission and by said Trustee shall be conclusive evidence of any such approval. The Indenture shall be executed in the manner therein set forth.

Section 7. The bonds herein authorized shall be executed in the form and manner hereinabove provided and shall be deposited with the Trustee for authentication and delivery in accordance with the provisions of Section 208 of the Indenture.

Section 8. The State Highway Commissioner, who is Chairman of the Commission, is hereby authorized to sign said bonds and the Secretary of the Commission is hereby authorized and directed to cause the official seal of the Commission to be affixed to said bonds and to attest the same.

Section 9. The officers of the Commission, the Consulting Engineers, the Traffic Engineers and the officers and agents of the Trustee are hereby authorized and directed to do all acts and things required of them by the provisions of the bonds and of the Indenture, for the full, punctual and complete performance of all the covenants, agreements and conditions of the bonds and of the Indenture, and also to do all acts and things required of them by the provisions of this resolution.

Section 10. National Bank of Commerce of Norfolk, Norfolk, Virginia, be and hereby is appointed to act as Trustee under the Indenture, and said Trustee shall be entitled to such estates, powers, rights, authorities, benefits, privileges, immunities and exemptions as are set forth in the Indenture executed and delivered under the provisions of this resolution.

Proof of October 14, 1954

VIRGINIA STATE HIGHWAY COMMISSION
to
NATIONAL BANK OF COMMERCE OF NORFOLK
As Trustee

Trust Indenture

Dated as of September 1, 1954

212 - 324

Form of Trust Indenture authorized by the
State Highway Commission by resolution
adopted on October 19, 1954.
..... *Wm. B. Smith*
Secretary of the
State Highway Commission

212-324

This Indenture, dated for convenience of reference as of the first day of September, 1954, by and between the

STATE HIGHWAY COMMISSION

(hereinafter sometimes called the "Commission"), an agency of the State of Virginia (also known as the "Commonwealth of Virginia"), and

NATIONAL BANK OF COMMERCE OF NORFOLK

a national banking association duly organized and existing under the laws of the United States of America and having its principal office in the City of Norfolk, Virginia, which is authorized under such laws to exercise corporate trust powers and is subject to examination by federal authority (said banking association and any bank or trust company appointed as successor trustee under this Indenture being hereinafter sometimes called the "Trustee"), WITNESSETH:

WHEREAS, by virtue of Chapter 399 of the Acts of Virginia of 1940 (known and cited as the "State Revenue Bond Act"), the Commission was authorized and empowered

(a) to acquire by purchase or by condemnation and to construct, improve, operate and maintain any one or more of the bridge and ferry projects mentioned in said Chapter 399 including, among others,

(i) the ferry properties (hereinafter sometimes collectively called the "Chesapeake Ferries"), consisting of the properties commonly known as the "Newport News Ferry", operating across Hampton Roads from the City of Newport News to Pine Beach in the City of Norfolk, and as the "Old Point Ferry", operating from Old Point in Elizabeth City County across Hampton Roads to Willoughby in the City of Norfolk,

(ii) the bridge properties (hereinafter sometimes collectively called the "James River Bridges"), owned by the James River Bridge System, a Virginia corporation, comprising the existing bridges across the

James, Chuckatuck and Nansemond rivers, together with connecting roads, in the counties of Warwick, Isle of Wight and Nansemond,

(iii) a bridge across the York River (hereinafter sometimes called the "York River Bridge"), extending from a point within the Town of Yorktown, in York County, or within York County, to Gloucester Point or to some point in Gloucester County, and approaches thereto, and

(iv) a bridge across the Rappahannock River (hereinafter sometimes called the "Rappahannock River Bridge"), extending from Greys Point, or its vicinity, in Middlesex County, to a point in the vicinity of White Stone, in Lancaster County, or at some other feasible points in the general vicinity of said two points, and approaches thereto;

(b) to issue revenue bonds of the State of Virginia, payable solely from earnings, to pay the cost of such projects;

(c) to fix and collect tolls and other charges for the use of such projects; and

(d) to couple or unite into one unit for financing purposes any two or more of such projects; and

WHEREAS, by resolutions duly adopted, the Commission determined (a) to advance temporarily from highway funds available for such purpose the sum necessary to pay the condemnation award theretofore rendered in condemnation proceedings brought to acquire the Chesapeake Ferries, (b) to issue a toll revenue bond of the State of Virginia to reimburse the highway funds for such advances, (c) to acquire the James River Bridges, (d) to construct immediately the York River Bridge, (e) to construct at a later date the Rappahannock River Bridge, and (f) to unite such projects into one unit for financing purposes; and

WHEREAS, as authorized by said resolutions, the Commission caused a toll revenue bond of the State of Virginia in the principal amount of \$2,700,000, designated "State of Virginia Toll Revenue Bond", dated May 1, 1948, to be executed, sold and delivered, and the proceeds thereof applied to reimburse the highway funds for the amount so advanced on account of the acquisition of the Chesapeake Ferries; and

WHEREAS, the Commission accepted a proposal for the sale to the Commonwealth of Virginia of the James River Bridges, and adopted and approved plans for the construction of the York River Bridge, and the location and plans for said bridge were approved by the Chief of Engineers and the Secretary of the Army as required by the General Bridge Act of 1946 (60 Stat. 847); and

WHEREAS, for the purpose of providing funds, with other funds available for such purposes, for (a) refunding the outstanding State of Virginia Toll Revenue Bond issued on account of the Chesapeake Ferries, including the payment of the interest accrued thereon to the date of payment thereof, (b) paying the cost of improvements of such Ferries, (c) paying the cost of the James River Bridges, (d) paying the cost of the York River Bridge, and (e) paying expenses necessary and incident to the financing, the Commission duly issued revenue bonds of the State of Virginia in the aggregate principal amount of Nineteen Million Dollars (\$19,000,000), designated "State of Virginia Toll Revenue Bonds (Series 1949)" (hereinafter sometimes called the "Series 1949 Bonds"), dated as of the 1st day of September, 1949, \$6,000,000 of said bonds, consisting of bonds numbered 1 to 6,000, inclusive, being serial bonds stated to mature (in numerical order, lowest numbers first) on the 1st day of September in the following years and in the following amounts and bearing interest at the following rates, respectively:

<i>Year of Maturity</i>	<i>Principal Amount</i>	<i>Rate of Interest</i>	<i>Year of Maturity</i>	<i>Principal Amount</i>	<i>Rate of Interest</i>
1953	\$200,000	5.00%	1961	\$400,000	2.25%
1954	200,000	5.00%	1962	400,000	2.25%
1955	250,000	2.25%	1963	450,000	2.50%
1956	250,000	2.25%	1964	450,000	2.50%
1957	300,000	2.25%	1965	500,000	2.50%
1958	300,000	2.25%	1966	500,000	2.50%
1959	350,000	2.25%	1967	550,000	2.50%
1960	350,000	2.25%	1968	550,000	2.50%

and the remaining \$13,000,000 bonds, consisting of bonds numbered 6,001 to 19,000, inclusive, being term bonds stated to mature on the 1st day of September, 1973, and bearing interest at the rate of 2.70% per annum, such interest being payable semi-annually on the 1st days of March and September in each year, and both the principal of and the interest on said bonds being payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or, at the option of the holder or registered owner, at The Chase National Bank of the City of New York, in the Borough of Manhattan, City and State of New York; and

WHEREAS, the Series 1949 Bonds which are stated to mature after September 1, 1957, are subject to the right of prior redemption in whole on any date not earlier than September 1, 1954, at the option of the Commission, from any moneys that may be available for such purpose, upon at least thirty (30) days' prior notice by publication and otherwise as provided in the trust indenture securing such bonds, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus the following premiums:

(1) in the case of the term bonds, a premium of 4% of such principal amount if redeemed on or prior to March 1, 1955, 3% if redeemed thereafter and on or prior to March 1, 1958, 2% if redeemed thereafter and on or prior to March 1, 1961, 1% if redeemed thereafter and on or prior to March 1, 1964, and without premium if redeemed thereafter; and

(2) in the case of the serial bonds, a premium of $\frac{1}{4}$ of 1% of the principal amount of the bonds to be redeemed for each twelve (12) months' period or fraction thereof between the date of redemption of each such bond and the maturity thereof, but not to exceed a premium of 8% of such principal amount; and

WHEREAS, the serial bonds of said issue which became due and payable in the years 1953 and 1954, in the aggregate principal amount of \$400,000, were promptly paid at their respective maturities, and term bonds of said issue in the aggregate principal amount of \$2,603,000, have, prior to the authorization of this Indenture, been retired by purchase or redemption, leaving a balance of \$15,997,000 bonds of said issue outstanding, consisting of \$5,600,000 serial bonds maturing in the years 1955 to 1968, inclusive, and \$10,397,000 term bonds maturing in the year 1978 (said outstanding bonds, exclusive of the serial bonds in the aggregate principal amount of \$800,000 maturing in the years 1955 to 1957, inclusive, being hereinafter sometimes called the "Callable Bonds"); and

WHEREAS, funds are available in the Reserve Account in the State of Virginia Toll Revenue Bonds Interest and Sinking Fund (a special fund created under the provisions of the trust indenture securing the Series 1949 Bonds) sufficient to pay at their stated maturities the serial bonds of said issue which mature in the years 1955 to 1957, inclusive, including the interest on said bonds which will become due and payable until their respective maturities; and

WHEREAS, by virtue of the State Revenue Bond Act (Code of Virginia, Sections 33-227 to 33-255, inclusive), as amended by Chapter 819 of the Acts of Virginia of 1954, the Commission is authorized and empowered to provide by resolution for the issuance of a single issue of revenue bonds of the State for the combined purpose of providing funds (a) to pay the cost of the Rappahannock River Bridge, and the cost of a combined bridge and tunnel system extending from a point or

points in the City of Newport News or in the County of Elizabeth City on the northwest shore of Hampton Roads across Hampton Roads to a point or points in the City of Norfolk or in the County of Norfolk on the southeast shore of Hampton Roads, including approaches and approach highways thereto, and (b) to refund revenue bonds of the State theretofore issued under the provisions of the State Revenue Bond Act and then outstanding, including interest to the earliest call date of such outstanding bonds and premiums, if any, payable on such call date; and

WHEREAS, by said Chapter 819, the Commission is authorized to include in the project constituting such combined bridge and tunnel system, bus facilities for the transportation of passengers through or over such project (such bus facilities being hereinafter sometimes called the "bus facilities"), and to provide a sum, deemed by the Commission to be sufficient for such purpose, to be utilized by the Commission for the payment of employment severance benefits to employees of the Commission rendering services in connection with the Chesapeake Ferries (hereinafter sometimes called "severance benefits"), and the Commission has determined to provide the sum of \$315,000 for bus facilities and the sum of \$300,000 for severance benefits, and to include the same as a part of the cost of such combined bridge and tunnel system; and

WHEREAS, the Commission has determined to construct the Rappahannock River Bridge and to construct a combined bridge and tunnel system consisting of a tunnel, bridges and a causeway under and across Hampton Roads extending from a point in the County of Elizabeth City (now the City of Hampton, Virginia) on the northwest shore of Hampton Roads to a point in the City of Norfolk on the southeast shore of Hampton Roads, including approaches and approach highways thereto, more particularly described in the report of the Consulting Engineers hereinafter mentioned (such combined bridge and tunnel system, approaches and approach highways thereto, and bus facilities, being hereinafter sometimes collectively called the "Hampton Roads Crossing"); and

WHEREAS, the Commission has adopted and approved plans for the construction of the Rappahannock River Bridge and for the construction of the Hampton Roads Crossing and the location and plans for the bridges in each project have been approved by the Chief of Engineers and the Secretary of the Army, as required by the General Bridge Act of 1946 (60 Stat. 847) and the plans for constructing the tunnel and causeway included in the Hampton Roads Crossing have been recommended by the Chief of Engineers and authorized by the Secretary of the Army, as required by Sec. 10 of the Rivers and Harbors Appropriation Act of March 3, 1899 (30 Stat. 1121); and

WHEREAS, the Consulting Engineers (hereinafter defined) have made investigations and studies and have prepared and filed with the Commission their engineering report dated August 16, 1954, setting forth their estimates of the cost of the Rappahannock River Bridge and the cost of the combined bridge and tunnel system, approaches and approach highways thereto, included in the Hampton Roads Crossing, according to the above mentioned plans and at the locations approved therefor, and since said date have prepared and filed with the Commission revised estimates of such cost; and

WHEREAS, the Commission has determined to provide by resolution for the issuance of a single issue of revenue bonds of the State for the combined purpose of (a) providing funds for refunding the Callable Bonds then outstanding, including the payment of the redemption premium thereon, (b) paying the cost of the Rappahannock River Bridge, and (c) paying the cost (including bus facilities and severance benefits) of the Hampton Roads Crossing (the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing, and the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, being herein collectively called the "Projects"); and

WHEREAS, for the purpose of providing funds for such purposes, the Commission has by resolution duly authorized the issuance of toll revenue bonds of the State of Virginia in the aggregate principal amount of Ninety-five Million Dollars (\$95,000,000), designated "State of Virginia Toll Revenue Bonds (Series 1954)", dated as of the 1st day of September, 1954, and bearing interest and maturing, subject to the right of prior redemption, all as hereinafter set forth (said bonds and all additional bonds at any time issued under this Indenture being hereinafter sometimes called the "bonds"); and

WHEREAS, the Commission has determined that the coupon bonds to be issued hereunder and the interest coupons to be attached thereto and the provisions for registration to be endorsed thereon, the registered bonds without coupons to be issued hereunder, and the certificate of authentication by the Trustee to be endorsed on all such bonds shall be, respectively, substantially in the following forms, with such variations, omissions and insertions as are required or permitted by this Indenture:

(Form of Coupon Bonds)

No..... \$1,000

UNITED STATES OF AMERICA

STATE OF VIRGINIA

TOLL REVENUE BOND

(SERIES 1954)

Due September 1, 1994

The State of Virginia (also known as the "Commonwealth of Virginia"), by the State Highway Commission as an agency thereof, for value received, hereby promises to pay, solely

from the special fund provided therefor as hereinafter set forth, to the bearer or, if this bond be registered, to the registered owner hereof, on the 1st day of September, 1994 (or earlier as hereinafter referred to), upon the presentation and surrender hereof, the principal sum of

ONE THOUSAND DOLLARS

and to pay, solely from said special fund, interest thereon from the date hereof at the rate of per centum (....%) per annum until payment of such principal sum, such interest to the maturity hereof being payable semi-annually on the 1st days of March and September in each year upon the presentation and surrender of the attached interest coupons representing such interest as the same respectively become due. Both the principal of and interest on this bond are payable in any coin or currency of the United States of America which, at the respective dates of payment thereof, is legal tender for the payment of public and private debts. The principal of this bond (unless registered) and the interest hereon are payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or, at the option of the holder, at the principal office of Chemical Bank & Trust Company, in the Borough of Manhattan, City and State of New York. The principal of this bond if registered is payable at the principal office of the Trustee (hereinafter mentioned).

The State of Virginia is not obligated to pay this bond or the interest hereon except from the special fund provided therefor from tolls and revenues of the Projects hereinafter mentioned, and the faith and credit of the State are not pledged to the payment of the principal hereof or the interest hereon, and the State is not, directly or indirectly or contingently, obligated to levy or to pledge any form of taxation whatever therefor, or to make any appropriation for their payment except from such special fund.

This bond is one of a duly authorized issue of revenue bonds known as "State of Virginia Toll Revenue Bonds (Series 1954)", and issued or to be issued for the purpose of

(a) providing funds, with other funds available for such purpose, for refunding or for paying at their respective maturities all outstanding bonds of an issue known as "State of Virginia Toll Revenue Bonds (Series 1949)" heretofore issued and for the payment of which there were pledged revenues of (i) certain ferry properties commonly known as the "Chesapeake Ferries", (ii) certain bridge properties known as the "James River Bridges", and (iii) a bridge over the York River between Yorktown, in York County, and Gloucester Point, in Gloucester County, and approaches thereto, known as the "York River Bridge", (b) for paying the cost of a bridge across the Rappahannock River, extending from Greys Point in Middlesex County, to a point in the vicinity of White Stone in Lancaster County, known as the "Rappahannock River Bridge", and (c) for paying the cost of a combined bridge and tunnel project extending from a point in the County of Elizabeth City (now the City of Hampton, Virginia) on the northwest shore of Hampton Roads to a point in the City of Norfolk on the southeast shore of Hampton Roads, including approaches and approach highways thereto, known as the "Hampton Roads Crossing", including the cost of bus facilities for the transportation of passengers through or over said project and provision of a sum for the payment of employment severance benefits (the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing, and the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, being herein collectively called the "Projects"). The bonds of this issue initially authorized aggregate Ninety-five Million Dollars (\$95,000,000) in principal amount, the proceeds of which bonds were estimated at the time of their authorization to be sufficient for such purposes. The Indenture (hereinafter mentioned) provides that, if and to the extent necessary to provide additional funds for completing payment of the cost of the Rappahannock River Bridge or the Hampton Roads Crossing (exclusive of bus facilities) additional bonds may be issued under the Indenture for such purposes.

All of the bonds are issued or are to be issued under and pursuant to a trust indenture (said indenture, together with all indentures supplemental thereto as therein permitted, being herein called the "Indenture") dated as of the 1st day of September, 1954, by and between the State Highway Commission (herein sometimes called the "Commission") and National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, as trustee (said banking association and any bank or trust company appointed as successor trustee under the Indenture being herein called the "Trustee"), an executed counterpart of which Indenture is on file at the principal office of the Trustee. Reference is hereby made to the Indenture for the provisions, among others, with respect to the custody and application of the proceeds of bonds issued under the Indenture, the collection and disposition of revenues, the fund charged with and pledged to the payment of the interest on and the principal of the bonds, the nature and extent of the security, the terms and conditions on which the bonds are or may be issued, the rights, duties and obligations of the Commission and of the Trustee and the rights of the holders of the bonds, and, by the acceptance of this bond, the holder hereof assents to all of the provisions of the Indenture.

This bond is issued and the Indenture was made and entered into under and pursuant to the Constitution and laws of the State of Virginia, particularly the State Revenue Bond Act (Sections 33-227 to 33-255, inclusive, Code of Virginia of 1950), as amended, and under and pursuant to resolutions duly adopted by the Commission. The Indenture provides for the fixing, revising, charging and collecting by the Commission of tolls for the use of the Projects and for revising such tolls from time to time in order that such tolls and other revenues of the Projects will be sufficient to provide funds to pay the cost of maintaining, repairing and operating the Projects and to pay the principal of and the interest on all bonds issued under the Indenture as the same shall become due and payable, and to create reserves for such purposes. The Indenture also provides for the deposit of all such tolls and other revenues, over and above such cost of maintenance,

repair and operation and reserves for such purposes, to the credit of a special fund, designated "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund", which fund is pledged to and charged with the payment of the principal of and the interest on all bonds issued under the Indenture.

The bonds are issuable as coupon bonds, registrable as to principal, in the denomination of \$1,000 each, and as registered bonds without coupons in denominations of \$1,000 or any multiple thereof. At the principal office of the Trustee, in the manner and subject to the limitations and conditions provided in the Indenture, registered bonds without coupons may be exchanged for an equal aggregate principal amount of coupon bonds bearing interest at the same rate and having attached thereto coupons representing all unpaid interest due or to become due thereon, or of registered bonds without coupons bearing interest at the same rate, of authorized denominations, and coupon bonds bearing coupons representing all unpaid interest due or to become due thereon may in like manner be exchanged for an equal aggregate principal amount of registered bonds without coupons bearing interest at the same rate, of authorized denominations.

The bonds at the time outstanding may be redeemed prior to their maturity either

(a) in whole, on any date not earlier than September 1, 1959, at the option of the Commission, from any moneys that may be made available for such purpose, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 5% of such principal amount if redeemed on or prior to August 31, 1964, 4% if redeemed thereafter and on or prior to August 31, 1969, 3% if redeemed thereafter and on or prior to August 31, 1974, 2% if redeemed thereafter and on or prior to August 31, 1979, 1% if redeemed thereafter and on or prior to August 31, 1984, and without premium if redeemed thereafter, or

(b) in part, on any interest payment date not earlier than September 1, 1959, from moneys in the State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 3% of such principal amount if redeemed on or prior to March 1, 1964, 2½% if redeemed thereafter and on or prior to March 1, 1969, 2% if redeemed thereafter and on or prior to March 1, 1974, 1½% if redeemed thereafter and on or prior to March 1, 1979, 1% if redeemed thereafter and on or prior to March 1, 1984, and without premium if redeemed thereafter.

If less than all of the bonds shall be called for redemption, the particular bonds or portions of registered bonds without coupons to be redeemed shall be selected by lot as provided in the Indenture.

Any such redemption, either in whole or in part, shall be made upon at least thirty (30) days' prior notice by publication and otherwise as provided in the Indenture, and shall be made in the manner and under the terms and conditions provided in the Indenture. On the date designated for redemption, notice having been published and filed and moneys for payment of the redemption price being held by the Trustee or by the paying agents, all as provided in the Indenture, the bonds or portions of registered bonds without coupons so called for redemption shall become and be due and payable at the redemption price provided for redemption of such bonds or such portions thereof on such date, interest on such bonds or such portions thereof so called for redemption shall cease to accrue, the coupons for any such interest payable subsequent to the redemption date shall be void, such bonds or such portions thereof so called for redemption shall cease to be entitled to any lien, benefit or security under the Indenture, and the holders or registered owners thereof shall have no rights in respect of such bonds or such portions thereof so called for redemption except to receive payment of the redemption price thereof so held by the Trustee or by the paying agents.

The holder of this bond shall have no right to enforce the provisions of the Indenture or to institute action to enforce the covenants therein, or to take any action with respect to any event of default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect thereto, except as provided in the Indenture.

Modifications or alterations of the Indenture or of any indenture supplemental thereto may be made by the Commission and the Trustee only to the extent and in the circumstances permitted by the Indenture.

This bond may be registered as to principal alone in accordance with the provisions endorsed hereon and subject to the terms and conditions set forth in the Indenture.

As declared by the State Revenue Bond Act, this bond shall have, as between successive holders, all the qualities and incidents of negotiable instruments under the negotiable instruments law of the State of Virginia, subject to the provisions for registration endorsed hereon and contained in the Indenture, and, subject to such provisions, nothing contained in this bond or in the Indenture shall affect or impair the negotiability of this bond. This bond is issued with the intent that the laws of the State of Virginia shall govern its construction.

All acts, conditions and things required by the Constitution and laws of the State of Virginia and the rules and regulations of the Commission to happen, exist and be performed precedent to and in the issuance of this bond and the execution of the Indenture have happened, exist and have been performed as so required.

This bond shall not be valid or become obligatory for any purpose or be entitled to any security or benefit under the Indenture until it shall have been authenticated by the execution by the Trustee of the certificate endorsed hereon.

IN WITNESS WHEREOF, the State of Virginia, by the State Highway Commission as an agency thereof, has caused this bond to be signed by the State Highway Commissioner, who

is the Chairman of said Commission, and the official seal of said Commission to be affixed hereto and attested by the Secretary of said Commission, and the attached interest coupons to be executed with the facsimile signature of said State Highway Commissioner, all as of September 1, 1954.

.....
State Highway Commissioner

Attest:

.....
Secretary of the State Highway Commission

PROVISIONS FOR REGISTRATION

This bond may be registered as to principal alone on books of the Commission kept by the Trustee under the within mentioned Indenture, as Bond Registrar, upon presentation hereof to the Bond Registrar which shall make notation of such registration in the registration blank below, and this bond may thereafter be transferred only upon an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Bond Registrar, such transfer to be made on such books and endorsed hereon by the Bond Registrar. Such transfer may be to bearer and thereby transferability by delivery shall be restored, but this bond shall again be subject to successive registrations and transfers as before. The principal of this bond, if registered, unless registered to bearer, shall be payable only to or upon the order of the registered owner or his legal representative. Notwithstanding the registration of this bond as to principal alone, the coupons shall remain payable to bearer and shall continue to be transferable by delivery.

<i>Date of Registration</i>	<i>Name of Registered Owner</i>	<i>Signature of Bond Registrar</i>
.....
.....
.....

(Form of Coupons)

No. \$.....

On 1, 19.....
the State of Virginia, by the State Highway Commission as an agency thereof, will pay to bearer, unless the bond mentioned below shall previously have become payable as provided in the Indenture referred to in said bond and provision for payment thereof shall have been duly made, at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or, at the option of the bearer, at the principal office of Chemical Bank & Trust Company, in the Borough of Manhattan, City and State of New York, upon the presentation and surrender hereof, the sum of Dollars in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, solely from the special fund referred to in, and for the semi-annual interest then due upon, its Toll Revenue Bond (Series 1954), dated as of September 1, 1954, No.....

.....
State Highway Commissioner

(Form of Registered Bonds without Coupons)

Same as Form of Coupon Bonds except as follows:

- 1. *Substitute the following for the caption and the first paragraph:*

No. B \$.....

UNITED STATES OF AMERICA

STATE OF VIRGINIA

TOLL REVENUE BOND
(SERIES 1954)

Due September 1, 1994

The State of Virginia (also known as the "Commonwealth of Virginia"), by the State Highway Commission as an agency

thereof, for value received, hereby promises to pay, solely from the special fund provided therefor as hereinafter set forth, to or registered assigns or legal representative, on the 1st day of September, 1994 (or earlier as hereinafter referred to), upon the presentation and surrender hereof at the principal office of the Trustee (hereinafter mentioned), the principal sum of DOLLARS

in any coin or currency of the United States of America which, at the date of payment thereof, is legal tender for the payment of public and private debts, and to pay, solely from said special fund, to the registered owner hereof by check or draft mailed to the registered owner at his address as it appears on the bond registration books of the State Highway Commission, interest on said principal sum from the date hereof at the rate of per centum (.....%) per annum until payment of such principal sum, such interest to the maturity hereof being payable semi-annually on the 1st days of March and September in each year in like coin or currency.

2. *Substitute the following for the paragraph concerning the notice of redemption and the effect thereof:*

Any such redemption, either in whole or in part, shall be made upon at least thirty (30) days' prior notice by publication and otherwise as provided in the Indenture, and shall be made in the manner and under the terms and conditions provided in the Indenture. On the date designated for redemption, notice having been published and filed and moneys for payment of the redemption price being held by the Trustee or by the paying agents, all as provided in the Indenture, the bonds or portions of registered bonds without coupons so called for redemption shall become and be due and payable at the redemption price provided for redemption of such bonds or such portions thereof on such date, interest on such bonds or such portions thereof so called for redemption shall cease to accrue, such bonds or such portions thereof so called for re-

demption shall cease to be entitled to any lien, benefit or security under the Indenture, and the holders or registered owners thereof shall have no rights in respect of such bonds or such portions thereof so called for redemption except to receive payment of the redemption price thereof so held by the Trustee or by the paying agents. If a portion of this bond shall be called for redemption, a new bond or bonds in principal amount equal to the unredeemed portion hereof will be issued to the registered owner upon the surrender hereof.

3. *Substitute the following for the paragraphs concerning registration and negotiability:*

This bond is transferable by the registered owner hereof in person or by his attorney or legal representative at the principal office of the Trustee but only in the manner and subject to the limitations and conditions provided in the Indenture, and upon surrender and cancellation of this bond. Upon any such transfer the Commission shall execute in the name of the transferee, and the Trustee shall authenticate and deliver in exchange for this bond, a new registered bond or bonds without coupons, of authorized denominations, or, at the option of the transferee, coupon bonds with coupons attached representing all unpaid interest due or to become due thereon, in aggregate principal amount equal to the principal amount of this bond and bearing interest at the same rate.

As declared by the State Revenue Bond Act, this bond shall have, as between successive holders, all the qualities and incidents of negotiable instruments under the negotiable instruments law of the State of Virginia, subject to the provisions for transfer stated herein and contained in the Indenture, and, subject to such provisions, nothing contained in this bond or in the Indenture shall affect or impair the negotiability of this bond. This bond is issued with the intent that the laws of the State of Virginia shall govern its construction.

4. *Substitute the following for the witnessing clause:*

IN WITNESS WHEREOF, the State of Virginia, by the State Highway Commission as an agency thereof, has caused this bond to be signed by the State Highway Commissioner, who is the Chairman of said Commission, and the official seal of said Commission to be affixed hereto and attested by the Secretary of said Commission, all as of

5. *Omit the Provisions for Registration and the Form of Coupons.*

(To be endorsed on all bonds)

CERTIFICATE OF AUTHENTICATION

This bond is one of the bonds issued under the provisions of the within mentioned Indenture.

NATIONAL BANK OF COMMERCE OF NORFOLK,
Trustee

By
Authorized Officer

and

WHEREAS, by virtue of the State Revenue Bond Act, the Commission is authorized to issue revenue bonds of the State as hereinafter provided, to enter into this Indenture and to do or cause to be done all the acts and things herein provided or required to be done as hereinafter covenanted; and

WHEREAS, the execution and delivery of this Indenture have been duly authorized by resolution of the Commission; and

WHEREAS, all acts, conditions and things required by the Constitution and laws of the State of Virginia and by the rules and regulations of the Commission to happen, exist and be performed precedent to and in the execution and delivery

of this Indenture have happened, exist and have been performed as so required, in order to make this Indenture a valid, binding and legal trust indenture for the security of the bonds in accordance with its terms; and

WHEREAS, the Trustee has accepted the trusts created by this Indenture and in evidence thereof has joined in the execution hereof;

NOW, THEREFORE, THIS INDENTURE WITNESSETH, that in consideration of the premises, of the acceptance by the Trustee of the trusts hereby created, and of the purchase and acceptance of the bonds by the holders thereof, and also for and in consideration of the sum of One Dollar to the Commission in hand paid by the Trustee at or before the execution and delivery of this Indenture, the receipt of which is hereby acknowledged, and for the purpose of fixing and declaring the terms and conditions upon which the bonds are to be issued, authenticated, delivered, secured and accepted by all persons who shall from time to time be or become holders thereof, and in order to secure the payment of all the bonds at any time issued and outstanding hereunder and the interest thereon according to their tenor, purport and effect, and in order to secure the performance and observance of all the covenants, agreements and conditions therein and herein contained, the Commission has pledged and does hereby pledge to the Trustee the tolls and other revenues of the Projects to the extent provided in this Indenture as security for the payment of the bonds and the interest thereon and as security for the satisfaction of any other obligation assumed by it in connection with such bonds, and it is mutually agreed and covenanted by and between the parties hereto, for the equal and proportionate benefit and security of all and singular the present and future holders of the bonds and interest coupons issued and to be issued under this Indenture, without preference, priority or distinction as to lien or otherwise, except as otherwise hereinafter provided, of any one bond over any other bond, by reason of priority in the issue, sale or negotiation thereof, or otherwise, as follows:

ARTICLE I.

DEFINITIONS.

SECTION 101. In addition to words and terms elsewhere defined in this Indenture, the following words and terms as used in this Indenture shall have the following meanings, unless some other meaning is plainly intended:

The term "bus facilities" shall mean and include buses, terminal facilities, shops and equipment, together with all property, rights, easements, interests and franchises deemed necessary for the acquisition or operation of such buses in order to provide passenger transportation service through or over the Hampton Roads Crossing.

The term "Chief Engineer" shall mean the Chief Engineer for the State Highway Commission, or such other employee or officer as may be lawfully employed or designated to perform the functions of the Chief Engineer.

The term "Consulting Engineers" shall mean the engineer or engineering firm or corporation at the time employed by the Commission under the provisions of Section 706 of this Indenture to perform and carry out the duties imposed on the Consulting Engineers by this Indenture.

The word "cost", as applied to the Rappahannock River Bridge and to the Hampton Roads Crossing, shall embrace, without intending thereby to limit or restrict any proper definition of such word under the provisions of the State Revenue Bond Act, the cost of construction and all obligations and expenses and all items of cost which are set forth in Section 408 of this Indenture, and as applied to the Hampton Roads Crossing shall include the cost of bus facilities and provision for severance benefits.

The term "Current Expenses" shall mean the Commission's reasonable and necessary current expenses of maintenance, repair and operation of the Projects, and shall include, without limiting the generality of the fore-

going, all ordinary and usual expenses of maintenance, repair and operation, which may include expenses not annually recurring, premiums for insurance, all administrative and engineering expenses relating to maintenance, repair and operation, fees and expenses of the Trustee and the Paying Agents (hereinafter referred to), legal expenses, any reasonable payments to pension or retirement funds, and any other expenses required or permitted to be paid by the Commission under the provisions of this Indenture or by law, but shall not include any reserves for extraordinary maintenance or repair, or any allowance for depreciation, or any deposits or transfers to the credit of the special funds hereinafter created and designated "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund" (hereinafter sometimes called the "Sinking Fund") and "State of Virginia Toll Projects Reserve Maintenance Fund" (hereinafter sometimes called the "Reserve Maintenance Fund").

The term "fiscal year" shall mean the period commencing on the first day of September and ending on the last day of August of the following year.

The term "Hampton Roads Crossing" shall mean the combined bridge and tunnel system extending from a point in the County of Elizabeth City (now the City of Hampton, Virginia) on the northwest shore of Hampton Roads to a point in the City of Norfolk, on the southeast shore of Hampton Roads, including approaches and approach highways thereto, as more fully described in the report of the Consulting Engineers referred to in the preambles of this Indenture, and shall include bus facilities.

The term "principal underwriters" shall mean the firms or corporations or the firm or corporation named as the principal underwriters in the resolution mentioned in clause (a) of Section 208 of this Indenture. In the event two or more firms or corporations shall be named as the principal underwriters and any such firm or corporation shall retire from active business leaving no successor, the term shall thereafter mean the remaining underwriter

or underwriters. In the event only one firm or corporation shall be named or shall remain as the principal underwriters and such firm or corporation shall retire from active business leaving no successor, the provisions of this Indenture which relate to the principal underwriters shall no longer be in force. For the purposes of this paragraph any firm or corporation succeeding to the business of any such underwriter by assignment, merger or otherwise shall be deemed to be a principal underwriter.

The word "Project" shall mean either the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing or, until the Hampton Roads Crossing shall have been opened for traffic, the Chesapeake Ferries.

The word "Projects" shall mean, collectively, the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing and, until the Hampton Roads Crossing shall have been opened for traffic, the Chesapeake Ferries.

The term "Rappahannock River Bridge" shall mean the bridge across the Rappahannock River, extending from Greys Point in Middlesex County to a point in the vicinity of Whitestone, in Lancaster County, as more fully described in the report of the Consulting Engineers referred to in the preambles of this Indenture.

The term "Traffic Engineers" shall mean the engineer or engineering firm or corporation at the time employed by the Commission under the provisions of Section 706 of this Indenture to perform and carry out the duties imposed on the Traffic Engineers by this Indenture.

The word "Trustee" shall mean the Trustee for the time being, whether original or successor.

SECTION 102. Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders. Unless the context shall other-

wise indicate, the words "bond", "coupon", "owner", "holder" and "person" shall include the plural as well as the singular number, the word "person" shall include corporations and associations, including public bodies, as well as natural persons, and the word "holder" or "bondholder" when used herein with respect to bonds issued hereunder shall mean the holder or registered owner, as the case may be, of bonds at the time issued and outstanding hereunder. The word "Indenture" shall include this Indenture and each indenture supplemental hereto.

ARTICLE II.

FORM, EXECUTION, AUTHENTICATION, DELIVERY AND REGISTRATION OF BONDS.

SECTION 201. No bonds may be issued under the provisions of this Indenture except in accordance with the provisions of this Article.

SECTION 202. The definitive bonds are issuable as coupon bonds, registrable as to principal, in the denomination of \$1,000 each, and as registered bonds without coupons in denominations of \$1,000 or any multiple thereof. The definitive bonds shall be substantially in the forms hereinabove set forth, with such appropriate variations, omissions and insertions as are permitted or required by this Indenture, and may have endorsed thereon such legends or text as may be necessary or appropriate to conform to the rules and regulations of any governmental authority or any usage or requirement of law with respect thereto.

SECTION 203. The bonds shall be dated, shall bear interest from their date until their payment, such interest to the maturity thereof being payable semi-annually on the 1st days of March and September in each year, and shall be stated to mature (subject to the right of prior redemption), all as hereinafter provided.

Each registered bond without coupons shall bear interest from its date and shall be dated as of the interest payment date next preceding the date of its authentication, unless authenticated upon an interest payment date, in which case it shall be dated as of the date of its authentication or as of the same date as the coupon bonds if authenticated prior to the first interest payment date of such bonds; provided, however, that if at the time of authentication of any registered bond without coupons, interest is in default, such bond shall be dated as of the date to which interest has been paid.

The bonds shall be signed by the State Highway Commissioner, who is the Chairman of the Commission, and the official seal of the Commission shall be affixed to the bonds and attested by the Secretary of the Commission; provided, however, that the bonds may be executed in such other manner as may then be authorized by law.

The coupons attached to the coupon bonds shall be substantially in the form hereinabove set forth and shall be executed with the facsimile signature of the State Highway Commissioner.

In case any officer whose signature or a facsimile of whose signature shall appear on any bonds or coupons shall cease to be such officer before the delivery of such bonds, such signature or such facsimile shall nevertheless be valid and sufficient for all purposes the same as if he had remained in office until such delivery, and also any bond may bear the facsimile signature of, or may be signed by, such persons as at the actual time of the execution of such bond shall be the proper officers to sign such bond although at the date of such bond such persons may not have been such officers.

Both the principal of and the interest on the bonds shall be payable in any coin or currency of the United States of America which, at the respective dates of payment thereof, is legal tender for the payment of public and private debts. The principal of coupon bonds (unless registered) and the interest thereon shall be payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Vir-

gins, or, at the option of the holder, at the principal office of Chemical Bank & Trust Company, in the Borough of Manhattan, City and State of New York (herein sometimes called the "Paying Agents"). The principal of all registered bonds without coupons and of all coupon bonds registered as to principal alone shall be payable at the principal office of the Trustee, and payment of the interest on each registered bond without coupons shall be made on each interest payment date to the person appearing on the registration books of the Commission hereinafter provided for as the registered owner thereof, by check or draft mailed to such registered owner at his address as it appears on such registration books. Payment of the principal of all bonds shall be made upon the presentation and surrender of such bonds as the same become due and payable. Payment of the interest on the coupon bonds shall be made upon the presentation and surrender of the coupons, if any, representing such interest as the same respectively become due and payable.

SECTION 204. Only such of the bonds as shall have endorsed thereon a certificate of authentication substantially in the form hereinabove set forth, duly executed by the Trustee, shall be entitled to any right or benefit under this Indenture. No bond and no coupon appertaining to any coupon bond shall be valid or obligatory for any purpose unless and until such certificate of authentication shall have been duly executed by the Trustee, and such certificate of the Trustee upon any such bond shall be conclusive evidence that such bond has been duly authenticated and delivered under this Indenture. The Trustee's certificate of authentication on any bond shall be deemed to have been duly executed if signed by an authorized officer of the Trustee, but it shall not be necessary that the same officer sign the certificate of authentication on all of the bonds that may be issued hereunder at any one time. Before authenticating or delivering any coupon bonds the Trustee shall detach and cancel all matured coupons, if any, appertaining thereto, except any coupons which represent unpaid interest.

SECTION 205. Coupon bonds, upon surrender thereof at the principal office of the Trustee with all unmatured coupons and all matured coupons in default, if any, appertaining thereto may, at the option of the holder or registered owner thereof, be exchanged for an equal aggregate principal amount of registered bonds without coupons, of any denomination or denominations authorized by this Indenture, and bearing interest at the same rate. If such coupon bonds shall be registered as to principal alone, unless registered to bearer, they shall be accompanied by an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Trustee.

Registered bonds without coupons, upon surrender thereof at the principal office of the Trustee, together with an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Trustee, may, at the option of the registered owner thereof, be exchanged for an equal aggregate principal amount of coupon bonds, bearing interest at the same rate and having attached thereto coupons representing all unpaid interest due or to become due thereon, or of registered bonds without coupons, of any denomination or denominations authorized by this Indenture and bearing interest at the same rate.

The Commission shall make provision for the exchange of bonds at the principal office of the Trustee.

SECTION 206. Title to any coupon bond, unless such bond is registered in the manner hereinafter provided, and to any interest coupon shall pass by delivery in the same manner as a negotiable instrument payable to bearer. The Trustee as Bond Registrar shall keep books of the Commission for the registration and for the transfer of bonds as provided in this Indenture. At the option of the bearer, any coupon bond (but not any temporary bond unless the Commission shall so provide) may be registered as to principal alone on such books upon presentation thereof to the Bond Registrar which shall make notation of such registration thereon. Any such bond registered as to principal alone may thereafter be transferred

only upon an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Bond Registrar, such transfer to be made on such books and endorsed on the bond by the Bond Registrar. Such transfer may be to bearer and thereby transferability by delivery shall be restored, subject, however, to successive registrations and transfers as before. The principal of any coupon bond registered as to principal alone, unless registered to bearer, and the principal of any registered bond without coupons shall be payable only to or upon the order of the registered owner or his legal representative, but the coupons appertaining to any coupon bond registered as to principal alone shall remain payable to bearer notwithstanding such registration.

Any registered bond without coupons may be transferred only upon the books kept for the registration and transfer of bonds, upon surrender thereof to the Bond Registrar together with an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Bond Registrar. Upon any such transfer the Commission shall execute in the name of the transferee, and the Trustee shall authenticate and deliver in exchange for such bond, a new registered bond or bonds without coupons, of any denomination or denominations authorized by this Indenture, or, at the option of the transferee, coupon bonds with coupons attached representing all unpaid interest due or to become due thereon, in an aggregate principal amount equal to the principal amount of such registered bond and bearing interest at the same rate.

In all cases in which bonds shall be exchanged or registered bonds without coupons shall be transferred hereunder, the Commission shall execute and the Trustee shall authenticate and deliver bonds in accordance with the provisions of this Indenture. All bonds and coupons surrendered in any such exchange or transfer shall forthwith be cancelled by the Trustee. The Commission or the Trustee may make a charge for every such exchange or transfer of bonds sufficient to reimburse it for any tax, fee or other governmental charge

required to be paid with respect to such exchange or transfer, but no other charge shall be made to any bondholder for the privilege of registering or of exchanging or transferring bonds under the provisions of this Indenture. Neither the Commission nor the Trustee shall be required to make any such exchange or transfer of bonds during the ten (10) days next preceding an interest payment date on the bonds or, in the case of any proposed redemption of bonds, after such bond or any portion thereof has been selected for redemption.

SECTION 207. As to any coupon bond registered as to principal alone or any registered bond without coupons, the person in whose name the same shall be registered shall be deemed and regarded as the absolute owner thereof for all purposes, and payment of or on account of the principal of any such bond and the interest on any such registered bond without coupons shall be made only to or upon the order of the registered owner thereof or his legal representative. All such payments shall be valid and effectual to satisfy and discharge the liability upon such bond including the interest thereon to the extent of the sum or sums so paid. The Commission, the Trustee, the Bond Registrar and the Paying Agents may deem and treat the bearer of any coupon bond which shall not at the time be registered as to principal, and the bearer of any coupon appertaining to any coupon bond whether such bond shall be registered as to principal or not, as the absolute owner of such bond or coupon, as the case may be, whether such bond or coupon shall be overdue or not, for the purpose of receiving payment thereof and for all other purposes whatsoever, and neither the Commission, the Trustee, the Bond Registrar nor the Paying Agents shall be affected by any notice to the contrary.

SECTION 208. There shall be initially issued under and secured by this Indenture revenue bonds of the State of Virginia in the aggregate principal amount of Ninety-five Million Dollars (\$95,000,000) for the purpose of (a) providing funds for refunding all the Callable Bonds then outstanding, including the payment of the redemption premium

thereon, (b) paying the cost of the Rappahannock River Bridge and (c) paying the cost of the Hampton Roads Crossing, including the cost of bus facilities and provision of a sum for severance benefits. Said bonds shall be designated "State of Virginia Toll Revenue Bonds (Series 1954)", shall be dated as of the 1st day of September, 1954, and shall be stated to mature, subject to the right of prior redemption as hereinafter set forth, on the 1st day of September, 1994.

Said bonds shall be executed in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before said bonds shall be authenticated and delivered by the Trustee there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary of the Commission, of the resolution adopted by the Commission awarding said bonds, specifying the interest rate of said bonds and directing the authentication and delivery of said bonds to or upon the order of the principal underwriters therein named upon payment of the purchase price therein set forth;

(b) a copy, certified by the Secretary of the Commission, of the resolution adopted by the Commission

(i) providing for the redemption at the earliest practicable date of all of the Callable Bonds then outstanding,

(ii) fixing the form of the notice calling said bonds for redemption, and

(iii) irrevocably instructing and directing National Bank of Commerce of Norfolk, the trustee under the trust indenture securing the Series 1949 Bonds,

(A) to sign such notice calling said bonds for redemption as such trustee and (I) to publish the same once a week for two successive weeks, the first publication to be at least thirty (30) days before the redemption date, in a daily newspaper of general circulation published in the City of Richmond, Vir-

ginia, and in a financial journal or in a daily newspaper of general circulation published in the Borough of Manhattan, City and State of New York, (II) to file signed copies of such notice at the principal office of said National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, and at The Chase National Bank of the City of New York, in the Borough of Manhattan, City and State of New York, the places at which the principal of and the interest on the Series 1949 Bonds are payable, and (III) to mail signed copies of such notice, postage prepaid, to each registered owner of Callable Bonds at the address of such owner as shown on the books for the registration of said bonds,

(B) to withdraw from the Bond Service Account in the State of Virginia Toll Revenue Bonds Interest and Sinking Fund the amount required for paying the interest which will accrue on the Callable Bonds from the last interest payment date of said bonds to the date designated for the redemption of said bonds and deposit such amount to the credit of a special fund, designated "Series 1949 Callable Bonds Redemption Fund", to be held in trust for the sole and exclusive purpose of paying such interest,

(C) to withdraw from the Reserve Account in the State of Virginia Toll Revenue Bonds Interest and Sinking Fund the sum of Eight Hundred Thirty-seven Thousand One Hundred Twenty-five Dollars (\$837,125), being the amount required for paying the Series 1949 Bonds which mature on the 1st day of September in the years 1955 to 1957, inclusive, in the aggregate principal amount of \$800,000, and the interest on said bonds which will become due and payable until their respective maturities, and deposit said sum to the credit of a special fund, designated "Series 1949 Maturing Bonds Fund", to be held in trust for the sole and exclusive purpose of paying such bonds and the

interest thereon as the same become due and payable, and

(D) to withdraw the balance remaining in said State of Virginia Toll Revenue Bonds Interest and Sinking Fund, including the Bond Service Account, the Reserve Account and the Redemption Account therein, after the withdrawals and deposits mentioned in items (B) and (C) above, and all obligations held as an investment of moneys in said Accounts, and deposit such balance and obligations with the Trustee under this Indenture to the credit of the special account hereinafter created in the Sinking Fund and designated "Reserve Account";

(c) a statement, signed by the Consulting Engineers and approved by the Chief Engineer, giving their estimates of

(i) the dates, respectively, on which the Rappahannock River Bridge and the Hampton Roads Crossing will be opened for traffic,

(ii) the dates, respectively, on which the construction of the Rappahannock River Bridge and the Hampton Roads Crossing will be completed,

(iii) the costs, respectively, of the Rappahannock River Bridge and the Hampton Roads Crossing, including an amount for contingencies but excluding financing charges and interest during construction, and

(iv) the amount of funds required each month following the delivery of said bonds and during the estimated period of construction of each such Project to meet such cost, accompanied by a progress schedule in each case for such construction;

(d) vouchers, signed by the State Highway Commissioner or by such other officer or employee of the Commission as may be designated by the Commission by resolution for such purpose, directing the issuance of

warrants by the State Comptroller for disbursements by the State Treasurer from the proceeds of said bonds of the amounts and for the purposes hereinafter set forth in this Section; and

(e) an opinion of the Attorney General or an Assistant Attorney General of the Commonwealth stating that the signer is of the opinion that the issuance of said State of Virginia Toll Revenue Bonds (Series 1954) and the execution of this Indenture have been duly authorized and that all conditions precedent to the delivery of said bonds have been fulfilled.

When the documents and vouchers mentioned above in this Section shall have been filed with the Trustee and when the State of Virginia Toll Revenue Bonds (Series 1954) shall have been executed and authenticated as required by this Indenture, the Trustee shall deliver (i) said vouchers to the State Comptroller and (ii) said bonds at one time to or upon the order of the principal underwriters named in the resolution mentioned in clause (a) of this Section, but only upon payment to the State Treasurer of the purchase price of said bonds, and the State Treasurer shall simultaneously therewith deposit the proceeds of said bonds (including accrued interest) with the Trustee, as depositary thereof, for the credit of a special account in the State Treasury designated "1954 Toll Projects Bond Proceeds Account". The State Treasurer and the Trustee shall be entitled to rely upon such resolution as to the names of the principal underwriters and the amount of such purchase price.

The proceeds (including accrued interest) of the bonds issued under the provisions of this Section shall be applied simultaneously with the delivery of the bonds as follows:

(1) The amount required for paying the principal of and the redemption premium on the Callable Bonds then outstanding shall be paid to the National Bank of Commerce of Norfolk, the trustee under the trust indenture securing the Series 1949 Bonds, for deposit to the credit

of the Series 1949 Callable Bonds Redemption Fund and held in trust for the sole and exclusive purpose of paying such principal and redemption premium.

(2) The amount paid as accrued interest on Fifty-five Million Dollars (\$55,000,000) principal amount of said State of Virginia Toll Revenue Bonds (Series 1954) shall be paid to the Trustee for deposit to the credit of the special account hereinafter created in the Sinking Fund and designated "Bond Interest Account".

(3) The sum of \$300,000 shall be paid to the Trustee for deposit to the credit of a special account in its commercial department in the name of the Commission, to be used by the Commission as a checking account for the payment of expenses incident to the financing. The Trustee shall be under no duty or obligation with respect to the disbursements by the Commission of such sum or any part thereof. The Commission shall pay such expenses by check drawn on said account and signed by such officer or officers or by such employee or employees of the Commission as shall be designated by the Commission by resolution for such purpose. Any balance of said sum not expended within ninety (90) days from the date of delivery of said bonds shall be paid by the Commission to the Trustee for deposit to the credit of the special fund hereinafter created and designated "State of Virginia 1954 Toll Projects Construction Fund" (hereinafter sometimes called the "Construction Fund").

(4) The sum of \$315,000 shall be paid to the Trustee for deposit to the credit of a special account in its commercial department in the name of the Commission, which is hereby created and designated "Bus Facilities Account", to be used by the Commission as a checking account for paying the cost of the bus facilities.

(5) The sum of \$300,000 shall be paid to the Trustee for deposit to the credit of a special account in its commercial department in the name of the Commission, which is hereby created and designated the "Severance

Benefits Account", to be used by the Commission as a checking account for the payment of employment severance benefits to employees of the Commission rendering services in connection with the Chesapeake Ferries.

(6) The balance of said proceeds shall be paid to the Trustee for the credit of the Construction Fund.

All disbursements from the Bus Facilities Account and from the Severance Benefits Account shall be by check drawn on such Account and signed by such officer or officers or by such employee or employees of the Commission as shall be designated by the Commission by resolution for such purpose. Any balance remaining on deposit to the credit of the Bus Facilities Account or the Severance Benefits Account which is not required for the purpose for which such Account is created shall be paid by the Commission to the Trustee for deposit to the credit of the Construction Fund.

Simultaneously with the delivery of bonds under the provisions of this Section, the State Highway Commissioner or such other officer or employee of the Commission as shall be designated by the Commission by resolution for such purpose shall issue a voucher directing the issuance of a warrant by the State Comptroller for payment by check of the State Treasurer of all moneys then held by the State Treasurer for the credit of the State of Virginia Toll Projects Revenue Fund (a special fund created in the State Treasury under the provisions of the trust indenture securing the Series 1949 Bonds) to the Trustee for deposit to the credit of the special fund hereinafter created and designated "1954 Revenue Fund-Trustee Account".

The balance in the Revenue Fund-Trustee Account and in the Reserve Maintenance Fund (special funds created under the provisions of the trust indenture securing the Series 1949 Bonds) shall be withdrawn by the trustee under said trust indenture and deposited with the Trustee for deposit to the credit of the special funds hereinafter created and designated "1954 Revenue Fund-Trustee Account" and "State of Virginia Toll Projects Reserve Maintenance Fund", respectively.

SECTION 209. If and to the extent necessary (as shown by the documents mentioned in clauses (a) and (c) of this Section) to provide additional funds for completing payment of the cost of the Rappahannock River Bridge or the Hampton Roads Crossing (exclusive of bus facilities), revenue bonds may be issued under and secured by this Indenture, at one time or from time to time, in addition to the bonds issued under the provisions of Section 208 of this Article. Such additional bonds shall be designated "State of Virginia Toll Revenue Bonds (Series 1954)", shall be dated as of the 1st day of September, 1954, and shall be stated to mature, subject to the right of prior redemption as hereinafter set forth, on the 1st day of September, 1994.

Such additional bonds shall be executed in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before such bonds shall be authenticated and delivered by the Trustee, there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary of the Commission, of the resolution adopted by the Commission authorizing the issuance of such additional bonds in the amount specified therein;

(b) a copy, certified by the Secretary of the Commission, of the resolution adopted by the Commission awarding such bonds, specifying the interest rate of such bonds and directing the authentication and delivery of such bonds to or upon the order of the purchasers therein named upon payment of the purchase price therein set forth;

(c) a statement, signed by the Consulting Engineers, giving their estimates of (i) the date on which the Project on account of which such additional bonds are to be issued will be opened for traffic and (ii) the date on which the construction of such Project will be completed, and certifying that, according to their estimate of the total amount required for paying the balance of the cost of such Project, the proceeds of the additional bonds issued on account of

such Project will be required and will be sufficient for paying such balance;

(d) vouchers, signed by the State Highway Commissioner or by such other officer or employee of the Commission as may be designated by the Commission by resolution for such purpose, directing the issuance of warrants by the State Comptroller for payment by the State Treasurer of the proceeds of said bonds (including accrued interest) to the Trustee for the credit of the Construction Fund; and

(e) an opinion of the Attorney General or an Assistant Attorney General of the Commonwealth stating that the signer is of the opinion that the issuance of such bonds has been duly authorized and that all conditions precedent to the delivery of such bonds have been fulfilled.

When the documents and vouchers mentioned above in this Section shall have been filed with the Trustee and when the bonds described in the resolutions mentioned in clauses (a) and (b) of this Section shall have been executed and authenticated as required by this Indenture, the Trustee shall deliver (i) said vouchers to the State Comptroller and (ii) said bonds at one time to or upon the order of the purchasers named in the resolution mentioned in said clause (b), but only upon payment to the State Treasurer of the purchase price of such bonds, and the State Treasurer shall simultaneously therewith deposit the proceeds of said bonds (including accrued interest) with the Trustee, as Depositary thereof, for the credit of the 1954 Toll Projects Bond Proceeds Account. The State Treasurer and the Trustee shall be entitled to rely upon such resolution as to the names of the purchasers and the amount of such purchase price.

The proceeds (including accrued interest) of the bonds issued under the provisions of this Section shall be paid by the State Treasurer simultaneously with the delivery of the bonds to the Trustee for the credit of the Construction Fund.

SECTION 210. Until definitive bonds are ready for delivery, there may be executed, and upon request of the Commission the Trustee shall authenticate and deliver, in lieu of definitive bonds and subject to the same limitations and conditions, temporary printed, engraved or lithographed bonds, in the form of either coupon bonds in the denomination of \$1,000 or any multiple thereof, with or without coupons and with or without the privilege of registration as to principal alone, or registered bonds without coupons in denominations of \$1,000 or any multiple thereof, or both, as the Commission by resolution may provide, substantially of the tenor hereinabove set forth and with appropriate omissions, insertions and variations as may be required.

Until definitive bonds are ready for delivery, any temporary bond may, if so provided by the Commission by resolution, be exchanged by the Trustee, without expense to the holder thereof, for an equal aggregate principal amount of temporary coupon bonds or of temporary registered bonds without coupons, or both, of like tenor and bearing interest at the same rate.

The Commission shall cause the definitive bonds to be prepared and to be executed and delivered to the Trustee, and the Trustee, upon presentation to it of any temporary bond accompanied by all unpaid coupons, if any, shall cancel the same and authenticate and deliver in exchange therefor at the place designated by the holder, without expense to the holder thereof, a definitive bond or bonds of an equal aggregate principal amount and bearing interest at the same rate as the temporary bond surrendered. Upon any such exchange all coupons appertaining to definitive coupon bonds and representing interest theretofore paid shall be detached and cancelled by the Trustee. Until so exchanged the temporary bonds shall in all respects be entitled to the same benefit of this Indenture as the definitive bonds to be issued and authenticated hereunder, except that temporary coupon bonds shall not be entitled to the privilege of registration as to principal alone unless so provided by the Commission by resolution. Interest on temporary coupon bonds, when due and payable,

if the definitive bonds shall not be ready for exchange, shall be paid on presentation of such temporary coupon bonds and notation of such payment shall be endorsed thereon, or such interest shall be paid upon the surrender of the appropriate coupons if coupons representing such interest shall be attached to such temporary bonds.

SECTION 211. In case any bond secured hereby shall become mutilated or be destroyed or lost, the Commission may cause to be executed, and the Trustee may authenticate and deliver, a new bond of like date and tenor in exchange and substitution for and upon the cancellation of such mutilated bond and its interest coupons, if any, or in lieu of and in substitution for such bond and its coupons, if any, destroyed or lost, upon the holder's paying the reasonable expenses and charges of the Commission and the Trustee in connection therewith and, in the case of a bond destroyed or lost, his filing with the Trustee evidence satisfactory to it and to the Commission that such bond and coupons, if any, were destroyed or lost, and of his ownership thereof, and furnishing the Commission and the Trustee with indemnity satisfactory to them.

ARTICLE III.

REDEMPTION OF BONDS.

SECTION 301. The bonds issued under the provisions of this Indenture at the time outstanding may be redeemed prior to their maturity either

(a) in whole, on any date not earlier than September 1, 1959, at the option of the Commission, from any moneys that may be made available for such purpose, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 5% of such principal amount if redeemed on or prior to August 31, 1964, 4% if redeemed

thereafter and on or prior to August 31, 1969, 3% if redeemed thereafter and on or prior to August 31, 1974, 2% if redeemed thereafter and on or prior to August 31, 1979, 1% if redeemed thereafter and on or prior to August 31, 1984, and without premium if redeemed thereafter, or

(b) in part, on any interest payment date not earlier than September 1, 1959, from moneys in the State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 3% of such principal amount if redeemed on or prior to March 1, 1964, 2½% if redeemed thereafter and on or prior to March 1, 1969, 2% if redeemed thereafter and on or prior to March 1, 1974, 1½% if redeemed thereafter and on or prior to March 1, 1979, 1% if redeemed thereafter and on or prior to March 1, 1984, and without premium if redeemed thereafter.

If less than all of the bonds shall be called for redemption, the particular bonds or portions of registered bonds without coupons to be redeemed shall be selected by lot by the Trustee in such manner as the Trustee in its discretion may determine; provided, however, that the portion of any registered bond without coupons to be redeemed shall be in the principal amount of \$1,000 or some multiple thereof, and that, in selecting bonds for redemption, the Trustee shall treat each registered bond without coupons as representing that number of coupon bonds which is obtained by dividing the principal amount of such registered bond by \$1,000.

SECTION 302. At least thirty (30) days before the redemption date, the Trustee shall cause a notice of any such redemption, either in whole or in part, signed by the Trustee, (a) to be published once in a daily newspaper of general circulation published in the City of Richmond, Virginia, and in a financial journal published in the Borough of Manhattan, City and State of New York, or a daily newspaper of general

circulation published in said Borough, (b) to be filed with the Paying Agents, and (c) to be mailed, postage prepaid, to all registered owners of bonds or portions of bonds to be redeemed at their addresses as they appear on the registration books hereinabove provided for; but failure so to mail any such notice shall not affect the validity of the proceedings for such redemption. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the bonds then outstanding shall be called for redemption, the distinctive numbers and letters, if any, of such bonds to be redeemed and, in the case of registered bonds without coupons to be redeemed in part only, the portion of the principal amount thereof to be redeemed. In case any registered bond without coupons is to be redeemed in part only, the notice of redemption which relates to such bond shall state also that on or after the redemption date, upon surrender of such bond, a new bond or bonds in principal amount equal to the unredeemed portion of such bond will be issued.

SECTION 303. Notice having been published and filed in the manner and under the conditions hereinabove provided, the bonds or portions of registered bonds without coupons so called for redemption shall, on the redemption date designated in such notice, become and be due and payable at the redemption price provided for redemption of such bonds or portions of bonds on such date. On the date so designated for redemption, notice having been published and filed and moneys for payment of the redemption price being held in separate accounts by the Trustee or by the Paying Agents in trust for the holders of the bonds or portions thereof to be redeemed, all as provided in this Indenture, interest on the bonds or portions of bonds so called for redemption shall cease to accrue, the coupons for interest on any coupon bonds so called for redemption payable subsequent to the redemption date shall be void, such bonds or portions of bonds shall cease to be entitled to any lien, benefit or security under this Indenture, and the holders or registered owners of such bonds or

portions of bonds shall have no rights in respect thereof except to receive payment of the redemption price thereof and, to the extent provided in Section 305 of this Article, to receive bonds for any unredeemed portions of registered bonds without coupons.

SECTION 304. All unpaid interest coupons which appertain to coupon bonds so called for redemption and which shall have become due and payable on or prior to the date of redemption designated in such notice shall continue to be payable to the bearers severally and respectively upon the presentation and surrender of such coupons.

SECTION 305. In case part but not all of an outstanding registered bond without coupons shall be selected for redemption, the registered owner thereof or his attorney or legal representative shall present and surrender such bond to the Trustee for payment of the principal amount thereof so called for redemption, and the Commission shall execute and the Trustee shall authenticate and deliver to or upon the order of such registered owner or his legal representative, without charge therefor, for the unredeemed balance of the principal amount of the registered bond so surrendered, either coupon bonds or a registered bond or bonds without coupons, at the option of such registered owner or his attorney or legal representative, of any denomination or denominations authorized by this Indenture and bearing interest at the same rate.

SECTION 306. Coupon bonds so redeemed and all unmatured coupons appertaining thereto, and registered bonds without coupons so presented and surrendered, shall be cancelled upon the surrender thereof.

SECTION 307. Bonds and portions of bonds which have been duly called for redemption under the provisions of this Article, or with respect to which irrevocable instructions to call for redemption at the earliest redemption date have been given to the Trustee, in form satisfactory to it, and for the payment of the redemption price of which and accrued interest

to the date fixed for redemption moneys shall be held by the Trustee or by the Paying Agents, in trust for the holders of the bonds or portions thereof to be redeemed, all as provided in this Indenture, shall not be deemed to be outstanding under the provisions of this Indenture.

ARTICLE IV.

CUSTODY AND APPLICATION OF PROCEEDS OF BONDS.

SECTION 401. A special fund is hereby created and designated "State of Virginia 1954 Toll Projects Construction Fund" (herein sometimes called the "Construction Fund"), to the credit of which such deposits shall be made as are required by the provisions of Sections 208 and 209 of this Indenture.

The moneys in the Construction Fund shall be held by the Trustee in trust and, subject to the provisions of Section 410 of this Article, shall be applied as herein provided to the payment of the cost of the Rappahannock River Bridge and the Hampton Roads Crossing and, pending such application, such moneys shall be subject to a lien and charge in favor of the holders of the bonds issued and outstanding under this Indenture and shall be held for the further security of such holders until paid out or transferred as hereinafter provided.

SECTION 402. Payment of the cost of the Rappahannock River Bridge and the Hampton Roads Crossing shall be made from the Construction Fund as herein provided. All payments from the Construction Fund shall be subject to the provisions and restrictions set forth in this Article and the Commission covenants that it will not cause or permit to be paid from the Construction Fund any sums except in accordance with such provisions and restrictions.

SECTION 403. For the purposes of this Indenture the cost of the Rappahannock River Bridge and the Hampton Roads

Crossing (excluding bus facilities and severance benefits) shall include the cost of constructing the same and, without intending thereby to limit or restrict any proper definition of such cost under the provisions of the State Revenue Bond Act, shall include the following:

(a) obligations incurred for labor and materials and to contractors, builders and materialmen in connection with the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, for machinery, equipment and appropriate spare parts, for the restoration or relocation of property damaged or destroyed in connection with such construction, for the removal or relocation of structures and for grade separations and any road relocations deemed necessary by the Commission;

(b) the cost of acquiring by purchase, if such purchase shall be deemed expedient, and the amount of any award or final judgment in or any settlement or compromise of any proceeding to acquire by condemnation, such lands, property, rights, rights of way, franchises, easements and other interests as may be deemed necessary or convenient by the Commission for the construction and operation of the Rappahannock River Bridge and the Hampton Roads Crossing, options and partial payments thereon, the cost of demolishing or removing any buildings or structures on land so acquired, including the cost of acquiring any lands to which such structures or buildings may be moved, and the amount of any damages incident to or consequent upon such construction and operation;

(c) interest accruing upon the bonds issued under the provisions of Section 208 of this Indenture in the principal amount of Fifteen Million Five Hundred Thousand Dollars (\$15,500,000) during the construction of the Rappahannock River Bridge and in the principal amount of Fifty-eight Million Five Hundred Thousand Dollars (\$58,500,000) during the construction of the Hampton Roads Crossing and for one year after completion of such construction in each case, and upon all bonds issued under the provisions of Section 209 of this Indenture during the

construction and for one year after completion of construction of the Project for which such bonds shall be issued, and the fees of the Paying Agents for the payment of such interest;

(d) the fees and expenses of the Trustee for its services under this Article during construction, taxes or other municipal or governmental charges lawfully levied or assessed during construction upon the Rappahannock River Bridge or the Hampton Roads Crossing or any property acquired therefor, and premiums on insurance (if any) in connection therewith during construction;

(e) the cost of borings and other preliminary investigations to determine foundation or other conditions, expenses necessary or incident to determining the feasibility or practicability of constructing the Rappahannock River Bridge and the Hampton Roads Crossing and the financing of the Projects, and fees and expenses of engineers for making traffic studies, surveys and estimates of costs and of revenues and other estimates and for preparing plans and specifications and supervising construction, as well as for the performance of all other duties of engineers set forth herein in relation to such construction or the issuance of bonds therefor;

(f) expenses of administration properly chargeable to the Rappahannock River Bridge and the Hampton Roads Crossing, legal expenses and fees, financing charges, cost of audits and of preparing and issuing the bonds, and all other items of expense not elsewhere in this Section specified incident to the construction and equipment of such Projects, the financing thereof, the placing of the same in operation (including the initial premiums on any insurance required or obtained under the provisions of this Indenture), and the acquisition of lands, property, rights, rights of way, franchises, easements and interests therefor, including abstracts of title, title insurance, cost of surveys and other expenses in connection with such construction; and

(g) any obligation or expense heretofore or hereafter incurred by the Commission or any member or officer thereof for any of the foregoing purposes.

SECTION 404. It shall be the duty of the Trustee, without requisition from the Commission or other or further authority than is contained herein, to transfer to the Bond Interest Account in the Sinking Fund from any moneys on deposit to the credit of the Construction Fund, the following amounts at the following times:

(a) promptly after the delivery of the bonds issued under the provisions of Section 208 of this Indenture and within ten (10) days after each of the next four (4) interest payment dates following such delivery (being the estimated period of construction of the Rappahannock River Bridge) an amount equal to the interest which will become payable on Ten Million Dollars (\$10,000,000) principal amount of such bonds on the next succeeding interest payment date; and

(b) promptly after the delivery of the bonds issued under the provisions of Section 208 of this Indenture and within ten (10) days after each of the next five (5) interest payment dates following such delivery (being the estimated period of construction of the Hampton Roads Crossing) an amount equal to the interest which will become payable on Thirty Million Dollars (\$30,000,000) principal amount of such bonds on the next succeeding interest payment date.

In the case of any bonds issued under the provisions of Section 209 of this Indenture, it shall be the duty of the Trustee, without requisition from the Commission or other or further authority than is contained herein, to transfer to the Bond Interest Account in the Sinking Fund from any moneys on deposit to the credit of the Construction Fund promptly after the delivery of such bonds and within ten (10) days after each interest payment date following such delivery until and including the first interest payment date

after the opening for traffic of the Project for which such bonds shall be issued, an amount equal to the interest which will become payable on such bonds on the next succeeding interest payment date.

SECTION 405. Payments from the Construction Fund, except the transfers which the Trustee is authorized to make under the provisions of Section 404 of this Article, shall be made in accordance with the provisions of this Section. Before any such payment shall be made the Commission shall file with the Trustee:

(a) a requisition, signed by the State Highway Commissioner or by such other officer or employee of the Commission as may be designated by the Commission by resolution for such purpose, stating in respect of each payment to be made:

(i) the Project on account of which such payment is to be made,

(ii) the item number of the payment,

(iii) the name of the person, firm or corporation to whom payment is due,

(iv) the amount to be paid, and

(v) the purpose by general classification for which the obligation to be paid was incurred;

(b) a certificate, signed by the State Highway Commissioner or the Chief Engineer and attached to the requisition, certifying:

(i) that obligations in the stated amounts have been incurred by the Commission and that each item thereof is a proper charge against the Construction Fund and has not been paid,

(ii) that there has not been filed with or served upon the Commission notice of any lien, right to lien, or attachment upon, or claim affecting the right to re-

ceive payment of, any of the moneys payable to any of the persons, firms or corporations named in such requisition, which has not been released or will not be released simultaneously with the payment of such obligation, and

(iii) that such requisition contains no item representing payment on account of any retained percentage which the Commission is at the date of such certificate entitled to retain, unless payment of such retained percentage shall be approved by the Consulting Engineers; and

(c) a certificate, signed by the Consulting Engineers and attached to such requisition, certifying their approval thereof.

Upon receipt of each requisition and accompanying certificates the Trustee shall transfer from the Construction Fund to the credit of a special account in its commercial department in the name of the State Treasurer an amount equal to the total of the amounts to be paid as set forth in such requisition. In making each such transfer the Trustee may rely upon such requisition and accompanying certificates. The Commission shall thereupon file with the State Comptroller a duplicate of each such requisition and accompanying certificates and a voucher, signed by the State Highway Commissioner or by such other officer or employee of the Commission as may be designated by the Commission by resolution for such purpose, covering each item set forth in such requisition, and thereupon the State Comptroller shall issue warrants for the payment by the State Treasurer of each such item, and each such payment shall be made by the State Treasurer by checks on such special account.

In addition to such payments, the Trustee shall pay from the Construction Fund to the Commission upon its requisitions therefor, signed by the State Highway Commissioner or the Chief Engineer and by the Secretary of the Commission, at one time or from time to time, a sum or sums aggregating not more than Fifty Thousand Dollars (\$50,000)

exclusive of reimbursements as hereinafter in this Section authorized, such sums and such reimbursements to be used by the Commission as a revolving fund for the payment of items of cost and expenses referred to in Section 403 of this Article which can not conveniently be paid as herein otherwise provided. Such moneys shall be deemed to be a part of the Construction Fund until paid out. The revolving fund shall be reimbursed by the Trustee from time to time for such expenses so paid by payments from the Construction Fund upon requisition of the Commission, filed with the Trustee and similarly signed, specifying the payee, the amount and the particular purpose by general classification of each payment from the revolving fund for which such reimbursement is requested, accompanied by a certificate, similarly signed, certifying that each such expense so paid was a necessary item of cost or expense within said Section 403 and that such cost or expense could not conveniently be paid except from such revolving fund, and also accompanied by a certificate, signed by the Consulting Engineers, certifying their approval thereof. In making such payments and reimbursements the Trustee may rely upon such requisitions and certificates.

SECTION 406. If any requisition contains any item for the payment of the purchase price or cost of any lands, easements, or rights or interests in or relating to lands, there shall be attached to such requisition, in addition to the certificates mentioned in the preceding Section of this Article,

(a) a certificate, signed by the State Highway Commissioner or the Chief Engineer, stating that such lands, easements, rights or interests are being acquired in furtherance of the acquisition of the right of way for the Rappahannock River Bridge or the Hampton Roads Crossing, as the case may be, or in furtherance of the construction or operation of either of such Projects, and

(b) a written opinion of the Attorney General or an Assistant Attorney General of the Commonwealth stating that the signer is of the opinion that the Commission is authorized to acquire such lands, easements, rights or

interests, and that the State will have upon the payment of such item title in fee simple to, or perpetual easements for the purposes of the Project in question over or under, such lands, free from all liens or encumbrances except liens, charges, encumbrances or other defects of title which do not have a materially adverse effect upon the Commission's right to use such lands or properties for the purposes intended or which have been adequately guarded against by a bond or other form of indemnity, or, if such payment be a payment for an option to purchase or for a quitclaim deed or a lease or a release or on a contract to purchase or is otherwise for the acquisition of a right or interest in lands less than a fee simple or a perpetual easement, or if such payment be a part payment for any such purpose, the written approval of the acquisition of such lesser right or interest signed by the Attorney General or Assistant Attorney General, or, in lieu of the opinion required by this clause, a firm undertaking by a reputable title insurance company to issue its title insurance policy and a written opinion of the Attorney General or Assistant Attorney General that, in the opinion of the signer, any objections or exceptions to be noted therein are not of a material nature.

SECTION 407. The Commission covenants that the Rappahannock River Bridge and the Hampton Roads Crossing will be constructed on or under lands good and marketable title to which is owned or can be acquired by the Commission in fee simple in the name of the State or over or under which perpetual easements for the purposes of the Project in question shall have been or can be acquired.

SECTION 408. All requisitions, certificates and opinions received by the Trustee, as required in this Article as conditions of payment from the Construction Fund, may be relied upon by the Trustee.

SECTION 409. The Commission covenants that, at least once in each month during the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, it

will cause the Consulting Engineers to prepare a progress report in connection with the construction of each such Project, including their current estimates of:

(i) the dates, respectively, on which the Rappahannock River Bridge and the Hampton Roads Crossing will be opened for traffic,

(ii) the dates, respectively, on which the construction of the Rappahannock River Bridge and the Hampton Roads Crossing will be completed, and

(iii) the costs, respectively, of the Rappahannock River Bridge and the Hampton Roads Crossing (showing separately the amount for each general classification set forth in the engineering report mentioned in the preambles of this Indenture), exclusive of contingencies, financing charges and interest during construction,

and comparisons between such times and amounts and the estimated times and amounts set forth in said engineering report and in the progress schedule which accompanied their statement filed under the provisions of clause (c) of Section 208 of this Indenture. Copies of such progress reports shall be filed with the Trustee and the Commission, and mailed by the Commission to each principal underwriter and all bondholders who shall have filed their names and addresses with the Secretary of the Commission for such purpose.

The Commission covenants that, at least once in each six (6) months until the construction of the Projects shall have been completed, it will cause an audit to be made by an independent firm of certified public accountants of recognized ability and standing, to be chosen by the Commission with the approval of the Trustee, covering all receipts and moneys then on deposit with or in the name of the Trustee and the Commission and any security held therefor, any investments thereof and all disbursements made pursuant to the provisions of Sections 404 and 405 of this Article. Copies of such audit reports shall be filed with the Trustee and the Commission, and mailed by the Commission to each principal underwriter, the Consulting Engineers and all bondholders who shall have filed their names and addresses with the Secretary of the Commission for such purpose.

SECTION 410. When the construction of the Rappahannock River Bridge and the Hampton Roads Crossing shall have been completed, which fact shall be evidenced to the Trustees by a certificate stating the date of such completion, signed by the State Highway Commissioner or the Chief Engineer and by the Secretary of the Commission and approved by the Consulting Engineers, accompanied by an opinion of the Attorney General or Assistant Attorney General of the Commonwealth stating

(a) that the Commission has acquired title to, or perpetual easements for the purposes of, the Rappahannock River Bridge and the Hampton Roads Crossing and all of the property necessary and incident thereto, free from all liens or encumbrances except liens, encumbrances or other defects of title which do not have a materially adverse effect upon the Commission's right to use such lands or properties for the purposes intended or which have been adequately guarded against by a bond or other form of indemnity,

(b) that there are no uncanceled mechanics', laborers', contractors' or materialmen's liens on any property pertaining to either Project or on file in any public office where the same should be filed in order to be valid liens against any part of such property, and that, in the opinion of the signer, the time within which such liens can be filed has expired, and

(c) that the Commission has acquired bus facilities and all rights, easements and franchises, if any, necessary to the operation of such facilities by the Commission, or that the Commission has entered into a contract or contracts for the operation of bus facilities by an independent operator or operators which will provide transportation facilities substantially similar to those which would have been provided by the operation of bus facilities by the Commission,

the balance in the Construction Fund not reserved by the Commission with the approval of the Consulting Engineers for the payment of any remaining part of the cost of such Projects shall be transferred by the Trustees, subject to the

provisions of Section 411 of this Indenture, to the credit of the Reserve Account in the Sinking Fund.

If at any time after such transfer there shall be filed with the Trustee a certificate, signed by the Chairman or Vice Chairman and by the Secretary of the Commission and approved by the Consulting Engineers, stating that the cost of the Rappahannock River Bridge and the Hampton Roads Crossing has been finally determined and that the part of such cost then remaining unpaid exceeds the amount reserved by the Trustee under this Section, an amount equal to such excess shall forthwith be retransferred by the Trustee from the Reserve Account to the Construction Fund and thereafter applied, upon requisition as above provided, to meet such unpaid cost; provided, however, that the amount so retransferred shall not exceed the amount transferred from the Construction Fund to the Reserve Account under the foregoing provisions of this Section. If at any time after such transfer or retransfer there shall be filed with the Trustee a certificate, similarly signed and approved, stating that the cost of the Rappahannock River Bridge and the Hampton Roads Crossing has been finally determined and that the amount reserved under this Section exceeds the part of such cost then remaining unpaid, an amount equal to such excess shall forthwith be transferred by the Trustee from the Construction Fund to the Reserve Account.

In making any such transfer or retransfer the Trustee may rely upon (a) a certificate filed with it by the Commission, signed by the Chairman or Vice Chairman of the Commission and approved by the Consulting Engineers, as to any items of such cost then remaining unpaid and as to any estimate in such certificate of the amount of any items of such cost the actual amount of which is not finally determined, and (b) a certificate, signed by the Attorney General or an Assistant Attorney General of the Commonwealth, as to the status and amount of any claims then outstanding affecting such cost. The Trustee may require the filing of such certificates as a condition to such transfer or retransfer.

SECTION 411. In the event that there shall be filed with the Trustee, simultaneously with the filing of the certificate

of completion under the provisions of Section 410 of this Article, an additional certificate, signed by the State Highway Commissioner or the Chief Engineer and by the Secretary of the Commission and approved by the Consulting Engineers, stating that the cost of the Rappahannock River Bridge and the Hampton Roads Crossing has been finally determined and setting forth the amount required to pay the balance of such final cost, any balance remaining to the credit of the Construction Fund over and above the amount so required, may be expended by the Commission, if then permitted by law, for the payment of the cost of constructing additional approach highways to any of the Projects (which, for the purpose of this Indenture, shall be deemed to be a part of the Project to which it is constructed), the construction and inclusion of which as a part thereof will not, in the written opinion of the Traffic Engineers filed with the Trustee, adversely affect the revenues of the Projects. Such expenditures shall be made in the manner required for payments from the Construction Fund under the provisions of Section 405 of this Article. Any part of such balance not so expended within three (3) years from the date of filing such certificates shall be transferred by the Trustee to the credit of the Reserve Account in the Sinking Fund.

SECTION 412. When the construction of the Hampton Roads Crossing shall have been completed, the operation of the Chesapeake Ferries shall be discontinued, the ferry properties shall be sold or otherwise disposed of, and the proceeds from the sale or salvage of any such properties shall be deposited to the credit of the Reserve Account in the Sinking Fund.

ARTICLE V.

REVENUES AND FUNDS.

SECTION 501. The Commission covenants (1) that it will continue in effect the present schedule of tolls for traffic over the York River Bridge until such schedule shall be revised as hereinafter provided, (2) that it will continue in effect the present schedule of tolls for traffic over the Chesapeake Ferries

until the Hampton Roads Crossing shall be opened for traffic. (3) that, as soon as practicable after the delivery of bonds under the provisions of Section 208 of this Indenture, it will fix and place in effect the schedule of tolls for traffic over the James River Bridges set forth by DeLeuw, Cather & Company and Wilbur Smith and Associates in their traffic report dated August 30, 1954, and until such time it will continue in effect the present schedule of tolls for such traffic, (4) that before the Rappahannock River Bridge or the Hampton Roads Crossing shall be opened for traffic, it will, in each case, fix and place in effect an initial schedule of tolls for traffic over such Project which will be in substantial conformity with and not less than the tolls set forth and recommended by De Leuw, Cather & Company and Wilbur Smith and Associates in said traffic report, (5) that it will not change or revise the tolls in any such schedule if, in the opinion of the Traffic Engineers, such change or revision will result in producing less revenues, unless such change or revision, in the opinion of the Traffic Engineers, will still result in producing revenues sufficient to provide for deposit to the credit of the Sinking Fund in each fiscal year of an amount not less than the amount of estimated net revenues as shown by said traffic report and said engineering report of the Consulting Engineers dated August 16, 1954, for each such fiscal year, and (6) that, subject to the foregoing provisions of this Section, from time to time and as often as it shall appear necessary it will request the Traffic Engineers to make recommendations as to revisions of the schedules of tolls and will file a copy of each such request with the Trustee and mail copies thereof to each principal underwriter and, upon receiving such recommendations or giving reasonable opportunity for such recommendations to be made, it will revise such schedules of tolls as may be necessary or proper, in order that the revenues of the Projects will at all times be sufficient:

(a) to provide funds for the payment of Current Expenses;

(b) to provide for making the transfers from the 1954 Revenue Fund-Trustee Account to the credit of the Reserve Maintenance Fund of the amounts recommended by

the Consulting Engineers under the provisions of Section 504 of this Article; and

(c) to provide for making the transfers from the 1954 Revenue Fund-Trustee Account to the credit of the Sinking Fund under the provisions of Section 507 of this Article of the following amounts (in order to provide for the payment of the interest on the bonds as the same shall become due and payable and for the retirement of all of the bonds issued under the provisions of this Indenture on or before their stated maturity) :

(i) in each fiscal year an amount sufficient to provide for paying the interest on all bonds issued under the provisions of this Indenture and then outstanding as the same shall become due and payable (less any amount paid from the Construction Fund),

(ii) in each fiscal year beginning with the fiscal year ending August 31, 1962, the following amounts, respectively:

<i>Fiscal Year Ending August 31,</i>	<i>Amount</i>	<i>Fiscal Year Ending August 31,</i>	<i>Amount</i>
1962	\$ 564,000	1979	\$3,024,000
1963	734,000	1980	3,177,000
1964	896,000	1981	3,313,000
1965	1,013,000	1982	3,462,000
1966	1,143,000	1983	3,627,000
1967	1,298,000	1984	3,799,000
1968	1,411,000	1985	3,941,000
1969	1,563,000	1986	4,087,000
1970	1,710,000	1987	4,237,000
1971	1,833,000	1988	4,357,000
1972	1,989,000	1989	4,478,000
1973	2,161,000	1990	4,605,000
1974	2,324,000	1991	4,735,000
1975	2,455,000	1992	4,835,000
1976	2,590,000	1993	4,930,000
1977	2,731,000	1994	5,095,000
1978	2,874,000		

provided, however, that if bonds shall be issued under the provisions of Section 209 of this Indenture, the respective amounts under the provisions of this subdivision shall be increased in proportion to the increase in the total principal amount of bonds issued under the provisions of this Indenture; and

(iii) in each fiscal year an amount equal to thirty per centum (30%) of the respective amounts provided for in subdivisions (i) and (ii) above for such fiscal year.

The transfer to the credit of the Sinking Fund in any fiscal year of an amount in excess of the amount provided for above for such fiscal year shall not be taken into account in revising the schedules of tolls for any subsequent fiscal year or years. But any deficiency in the amounts of the transfers to the credit of the Sinking Fund and the Reserve Maintenance Fund in any fiscal year shall, as promptly as may be practicable, be added to the amounts provided for above for the subsequent fiscal years in revising such schedules of tolls, the amount so to be added in each of such subsequent fiscal years to be approved by the Traffic Engineers.

The Commission covenants that if the total amount transferred to the credit of the Sinking Fund in any fiscal year following the fiscal year which ends August 31, 1955, shall be less than the amount provided for above for such fiscal year, it will, before the 15th day of October of the following fiscal year, request the Traffic Engineers to make their recommendations as to a revision of the schedules of tolls, and copies of such request and of the recommendations of the Traffic Engineers shall be filed with the Trustee and mailed by the Commission to each principal underwriter. Anything in this Indenture to the contrary notwithstanding, if the Commission shall comply with all recommendations of the Traffic Engineers in respect of tolls, it will not constitute an event of default under the provisions of this Indenture even though the total amounts transferred to the credit of the Reserve Maintenance Fund or the Sinking Fund, as the case may be, in any fiscal year shall be less than the amounts provided for in

clauses (b) and (c) of this Section for such fiscal year. In the event of any such deficiency, the Trustee or the holders of not less than fifteen per centum (15%) in principal amount of the bonds then outstanding may, however, and the Trustee shall, upon the request of the holders of not less than ten per centum (10%) in principal amount of the bonds then outstanding and upon being indemnified to its satisfaction, institute and prosecute in a court of competent jurisdiction an appropriate action to compel the Commission to revise the schedules of tolls. The Commission covenants that it will adopt and charge tolls in compliance with any final order or decree entered in any such proceeding.

The Commission covenants that forthwith upon the adoption of any revised schedule of tolls certified copies thereof will be filed with the Trustee and mailed by the Commission to each principal underwriter.

Notwithstanding any of the other provisions of this Section or of this Indenture, the Commission may, after the opening for traffic of the Hampton Roads Crossing and if then permitted by law, discontinue the collection of tolls for the use of the Nansemond and Chuckatuck bridges included in the James River Bridges in the event (a) the gross revenues from the Projects for two consecutive complete fiscal years immediately preceding shall have exceeded by not less than One Hundred Fifty Thousand Dollars (\$150,000), in each such year the gross revenues of the Projects as estimated by DeLeuw, Cather & Company and Wilbur Smith and Associates for such fiscal years in their traffic report hereinabove mentioned and (b) a public hearing shall have been held, after at least ten days' published notice thereof, at which interested persons may appear and be heard.

SECTION 502. The Commission covenants that tolls will be classified in a reasonable way to cover all traffic, so that the tolls may be uniform in application to all traffic falling within any reasonable class regardless of the status or character of any person, firm or corporation participating in the traffic, that no reduced rate of toll will be allowed within any such class except through the use of commutation or other

tickets or privileges based upon frequency or volume, and that no free vehicular passage will be permitted over any of the Projects or any part thereof, except that free vehicular passage over the approach highways included in the Hampton Roads Crossing may be permitted as contemplated in the traffic report of De Leuw, Cather & Company and Wilbur Smith and Associates referred to in Section 501 of this Article, and free vehicular passage may be permitted to the Consulting Engineers, Traffic Engineers, members, officers and employees of the Commission or to any fire department and to the police officers of the Federal Government or of any state, county or municipality while in the discharge of their official duties.

SECTION 503. A special fund is hereby created in the State Treasury and designated "State of Virginia 1954 Toll Projects Revenue Fund" (herein sometimes called the "Revenue Fund"). The Commission covenants that all tolls and other revenues arising from the operation or ownership of the Projects and properties in connection therewith will be collected by the Commission and deposited daily, as far as practicable, in a state depository, in the name of the State Treasurer for the credit of the Revenue Fund. All sums received by the Commission from any other source for paying any part of the cost of maintaining, repairing and operating the Projects shall be forthwith deposited with the Trustee to the credit of the 1954 Revenue Fund-Trustee Account.

SECTION 504. The Commission covenants that it will cause the Consulting Engineers employed by it under the provisions of Section 706 of this Indenture, among such other duties as may be imposed upon them by the Commission or by this Indenture, to make an inspection at least once a year of each Project and, on or before the 1st day of June, 1955, and on or before the 1st day of June in each year thereafter, to submit to the Commission a report setting forth (a) their findings whether each Project has been maintained in good repair, working order and condition, and (b) their recommendations as to

(i) the proper maintenance, repair and operation of each Project during the ensuing fiscal year and an estimate of the amount of money necessary for such purposes,

(ii) the insurance to be carried under the provisions of Sections 707 and 708 of this Indenture, and

(iii) the amount that should be transferred during the ensuing fiscal year to the credit of the Reserve Maintenance Fund on account of each Project for the purposes set forth in Section 509 of this Article.

The Commission further covenants that it will cause the Chief Engineer, before the time required for the submission of such report by the Consulting Engineers, to submit to the Commission and the Consulting Engineers his recommendations as to the matters mentioned in items (i), (ii) and (iii) of the preceding paragraph. Copies of such reports of the Consulting Engineers and the Chief Engineer shall be filed with the Trustee and mailed by the Commission to each principal underwriter.

SECTION 505. The Commission covenants that on or before the 20th day of June, 1955, and on or before the 20th day of June in each fiscal year thereafter, it will prepare a preliminary budget of Current Expenses of each Project for the ensuing fiscal year. Copies of each such preliminary budget shall be filed with the Trustee and mailed to the Consulting Engineers and to each principal underwriter. The Commission further covenants that it will comply with any reasonable request of the Consulting Engineers as to the classifications in which such budget shall be prepared, particularly with respect to the divisions into which such budget shall be divided.

If the holders of five per centum (5%) in aggregate principal amount of the bonds then outstanding or a majority of the principal underwriters shall so request the Commission in writing on or before the 1st day of July in any year, the Commission shall hold a public hearing on or before the 1st day of August in such year at which any bondholder may appear in person or by agent or attorney and present any

objections he may have to the final adoption of such budget. Notice of the time and place of such hearing shall be mailed by the Commission at least ten (10) days before the hearing to the Trustee, each principal underwriter, the Consulting Engineers and each bondholder who shall have filed his name and address with the Secretary of the Commission for such purpose.

The Commission further covenants that on or before the first day of each fiscal year it will finally adopt the budget of Current Expenses for such fiscal year (hereinafter sometimes called the "Annual Budget") and that the total appropriations in any division thereof will not exceed the total appropriations in the corresponding division in the preliminary budget without the approval of the Consulting Engineers. Copies of the Annual Budget shall be filed with the Trustee and mailed by the Commission to the Consulting Engineers and each principal underwriter.

If for any reason the Commission shall not have adopted the Annual Budget before the first day of any fiscal year, the preliminary budget for such fiscal year, if approved by the Consulting Engineers, or, if there is none so approved, the budget for the preceding fiscal year, shall, until the adoption of the Annual Budget, be deemed to be in force and shall be treated as the Annual Budget under the provisions of this Article.

The Annual Budget adopted by the Commission for the Chesapeake Ferries, the James River Bridges and the York River Bridge for the fiscal year ending August 31, 1955 shall be deemed the Annual Budget for such period under the provisions of this Indenture.

The Commission may at any time adopt an amended or supplemental Annual Budget for the remainder of the then current fiscal year, but no such amended or supplemental Annual Budget shall supersede any prior budget until it shall be approved by the Consulting Engineers, and when so approved it shall be treated as the Annual Budget under the provisions of this Article. Copies of any such amended or supplemental

Annual Budget shall be filed with the Trustee and mailed by the Commission to the Consulting Engineers and each principal underwriter.

The Commission covenants that the Current Expenses of each Project incurred in any fiscal year will not exceed the reasonable and necessary amount thereof, and that it will not expend any amount or incur any obligations for maintenance, repair and operation of any Project in excess of the amounts provided for Current Expenses of such Project in the Annual Budget, except amounts payable from the Reserve Maintenance Fund. Nothing in this Section contained shall limit the amount which the Commission may expend for Current Expenses in any year provided any amounts expended therefor in excess of the Annual Budget shall be received by the Commission from some source other than the revenues of the Projects and the Commission shall not make any reimbursement therefor from such revenues.

SECTION 506. A special fund is hereby created and designated "1954 Revenue Fund-Trustee Account", to be held and applied in accordance with the provisions of this Article. On or before the 7th day of each month the Chairman of the Commission, or such other person as may be designated by the Commission by resolution for such purpose, shall issue a voucher directing the issuance of a warrant by the State Comptroller for payment by the State Treasurer of all moneys held as of the last day of the preceding month for the credit of the Revenue Fund pursuant to the provisions of Section 503 of this Article, to the Trustee for deposit to the credit of the 1954 Revenue Fund-Trustee Account.

Payments from the 1954 Revenue Fund-Trustee Account, except the transfers and payments which the Trustee is authorized to make as hereinafter provided in this Article, shall be made in accordance with the provisions of this Section. Before any such payment shall be made the Commission shall file with the Trustee:

(a) a requisition, signed by the State Highway Commissioner or by such other officer or employee of the Com-

mission as shall be designated by the Commission by resolution for such purpose, stating in respect of each payment to be made:

(i) the Project on account of which such payment is to be made,

(ii) the item number of the payment,

(iii) the name of the person, firm or corporation to whom payment is due,

(iv) the amount to be paid, and

(v) the purpose by general classification for which the obligation to be paid was incurred; and

(b) a certificate, signed by the State Highway Commissioner or the Chief Engineer and attached to the requisition, certifying:

(i) that obligations in the stated amounts have been incurred by the Commission and that each item thereof was properly incurred in maintaining, repairing and operating such Project and has not been paid,

(ii) that there has not been filed with or served upon the Commission notice of any lien, right to lien, or attachment upon, or claim affecting the right to receive payment of, any of the moneys payable to any of the persons, firms or corporations named in such requisition, which has not been released or will not be released simultaneously with the payment of such obligation, and

(iii) that the total amount of such payments will not be in excess of the unencumbered balance of the Annual Budget for such Project or any amendment thereof or supplement thereto.

Upon receipt of each requisition and accompanying certificate the Trustee shall transfer from the 1954 Revenue Fund-Trustee Account to the credit of a special account in its commercial department in the name of the State Treasurer, an

amount equal to the total of the amounts to be paid as set forth in such requisition. In making each such transfer the Trustee may rely upon such requisition and accompanying certificate. The Commission shall thereupon file with the State Comptroller a duplicate of each such requisition and accompanying certificates and a voucher, signed by the State Highway Commissioner or by such other officer or employee of the Commission as may be designated by the Commission by resolution for such purpose, covering each item set forth in such requisition, and thereupon the State Comptroller shall issue warrants for the payment by the State Treasurer of each such item, and each such payment shall be made by the State Treasurer by a check on such special account.

In addition to such transfers, the Trustee shall pay from the 1954 Revenue Fund-Trustee Account to the Commission upon its requisitions therefor, signed by the State Highway Commissioner or the Chief Engineer and by the Secretary of the Commission, at one time or from time to time a sum or sums aggregating not more than Fifty Thousand Dollars (\$50,000) exclusive of reimbursements as hereinafter in this Section authorized, such sums and such reimbursements to be used by the Commission as a revolving fund for the payment of Current Expenses which can not conveniently be paid as herein otherwise provided. Such moneys shall be deemed to be a part of the 1954 Revenue Fund-Trustee Account until paid out. The revolving fund shall be reimbursed by the Trustee from time to time for such expenses so paid by payments from the 1954 Revenue Fund-Trustee Account upon requisition of the Commission, filed with the Trustee and similarly signed, specifying the Project on account of which such expenses were paid, the payee, the amount and the purpose by general classification of each payment from the revolving fund for which such reimbursement is requested, accompanied by a certificate, similarly signed, certifying that each such expense so paid was a necessary item of Current Expenses of such Project, that such expense could not conveniently be paid except from such revolving fund, and that such payments were not in excess of the unencumbered balance of the Annual Budget or any amendment or supplement thereto. In making such pay-

ments and reimbursements the Trustee may rely upon such requisition and certificates.

SECTION 507. A special fund is hereby created and designated "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund" (herein sometimes called the "Sinking Fund"). There are hereby created three separate accounts in the Sinking Fund designated "Bond Interest Account", "Reserve Account", and "Redemption Account", respectively. Another special fund is hereby created and designated "State of Virginia Toll Projects Reserve Maintenance Fund" (herein sometimes called the "Reserve Maintenance Fund").

The moneys in each of such Funds and Accounts shall be held by the Trustee in trust and applied as hereinafter provided with regard to each such Fund or Account and, pending such application, shall be subject to a lien and charge in favor of the holders of the bonds issued and outstanding under this Indenture and for the further security of such holders until paid out or transferred as herein provided.

It shall be the duty of the Trustee, on or before the 27th day of each month, to withdraw from the 1954 Revenue Fund-Trustee Account all moneys held for the credit of said Fund on the last day of the preceding month less an amount (to be held as a reserve for Current Expenses) equal to twenty per centum (20%) of the amount shown by the Annual Budget to be necessary for Current Expenses for the current fiscal year, and deposit the sum so withdrawn to the credit of the following Accounts or Fund in the following order:

(a) to the credit of the Bond Interest Account, such amount thereof (or the entire sum so withdrawn if less than the required amount) as may be required, in addition to any amount transferred from the Construction Fund to the credit of the Bond Interest Account under the provisions of Section 404 of this Indenture, to make the amount then to the credit of the Bond Interest Account equal to the amount of interest which will become due and

payable within the next ensuing six (6) months on all bonds then outstanding;

(b) to the credit of the Reserve Maintenance Fund, such amount, if any, of any balance remaining after making the deposit under clause (a) above (or the entire balance if less than the required amount) as may be required to make the amount deposited in such fiscal year to the credit of the Reserve Maintenance Fund equal to the amount recommended by the Consulting Engineers, as provided by Section 504 of this Article (or by section 504 of the trust indenture securing the Series 1949 Bonds), to be deposited to the credit of said Fund during such fiscal year; provided, however, that if the amount so deposited to the credit of said Fund in any fiscal year shall be less than the amount recommended by the Consulting Engineers, the requirement therefor shall nevertheless be cumulative and the amount of any deficiency in any fiscal year shall be added to the amount otherwise required to be deposited in each fiscal year thereafter until such time as such deficiency shall have been made up, unless such requirement shall have been modified by the Consulting Engineers in writing, signed copies of such modification to be filed with the Trustee and the Commission and mailed by the Commission to each principal underwriter;

(c) to the credit of the Reserve Account, such amount, if any, of any balance remaining after making the deposits under clauses (a) and (b) above (or the entire balance if less than the required amount) as may be required to make the amount then to the credit of the Reserve Account equal to two years' interest on all bonds then outstanding; provided, however, that the Commission, during the period of any emergency or threatened emergency which, in its opinion, is affecting or may affect adversely the traffic over or the revenues from the Projects, may increase such requirement by an amount not exceeding one hundred per centum (100%) thereof, and that the amount of such increase shall be fixed by resolution which shall recite the emergency or threatened emergency, and

any such resolution may be amended from time to time or repealed; copies of each such resolution, certified by the Secretary of the Commission, shall be filed with the Trustee and mailed by the Commission to the Consulting Engineers and each principal underwriter; and

(d) to the credit of the Redemption Account, the balance, if any, remaining after making the deposits under clauses (a), (b) and (c) above.

SECTION 508. The Trustee shall, from time to time, withdraw from the Bond Interest Account and (a) remit by mail to each owner of registered bonds without coupons the amounts required for paying interest upon such bonds as such interest becomes due and payable and (b) set aside or deposit in trust with the Paying Agents sufficient moneys for paying the interest on the coupon bonds as such interest becomes due and payable.

SECTION 509. Except as hereinafter provided in this Section and in Section 707 of this Indenture, or except in case of an emergency caused by some extraordinary occurrence, so characterized in a certificate signed by the Consulting Engineers and filed with the Trustee, and an insufficiency of moneys in the 1954 Revenue Fund-Trustee Account to meet such emergency, the moneys in the Reserve Maintenance Fund shall be held for paying the cost of unusual or extraordinary maintenance or repairs, renewals and replacements, premiums on insurance and the cost of replacing equipment, and shall be disbursed only for such purposes.

Payments from the Reserve Maintenance Fund, except the transfers which the Trustee is authorized to make as hereinafter provided in this Section, shall be made in the same manner as payments from the Construction Fund under the provisions of Section 405 of this Indenture in so far as such provisions shall be applicable.

If at any time the amounts held for the credit of the Bond Interest Account and the Reserve Account shall be insufficient for the purpose of paying the interest on the bonds as such

interest becomes due and payable, then the Trustee shall transfer from the Reserve Maintenance Fund to the credit of the Bond Interest Account an amount sufficient to make up any such deficiency. Any moneys so transferred from the Reserve Maintenance Fund to the credit of the Bond Interest Account shall be restored by the Trustee from available moneys in the 1954 Revenue Fund-Trustee Account, subject to the same conditions as are prescribed for transfers to the credit of the Reserve Maintenance Fund under the provisions of Section 507 of this Article.

The Trustee shall from time to time transfer any moneys from the Reserve Maintenance Fund to the credit of the Redemption Account upon the receipt of a certified copy of a resolution duly adopted by the Commission directing such transfer and a certificate of the Consulting Engineers certifying that the amount so to be transferred is not required for the purposes for which the Reserve Maintenance Fund has been created.

SECTION 510. Except as otherwise provided in Section 410 of this Indenture, moneys held for the credit of the Reserve Account shall be used for the purpose of paying interest on bonds whenever and to the extent that the moneys held for the credit of the Bond Interest Account shall be insufficient for such purpose. If at any time the moneys held for the credit of the Reserve Account shall exceed the maximum requirement for the Reserve Account under the provisions of clause (c) of Section 507 of this Article, such excess shall be transferred by the Trustee to the credit of the Redemption Account.

SECTION 511. Moneys held for the credit of the Redemption Account shall be applied to the retirement of bonds issued under the provisions of this Indenture as follows:

- (a) The Trustee shall endeavor to purchase bonds or portions of bonds secured hereby and then outstanding, whether or not such bonds or portions shall then be subject to redemption, at the most advantageous price obtainable

with reasonable diligence, having regard to interest rate and price, such price not to exceed the principal of such bonds plus the amount of the premium, if any, which would be payable on the next redemption date to the holders of such bonds under the provisions of Article III of this Indenture if such bonds or portions of bonds should be called for redemption on such date from moneys in the Sinking Fund. The Trustee shall pay the interest accrued on such bonds or portions of bonds to the date of delivery thereof from the Bond Interest Account and the purchase price from the Redemption Account, but no such purchase shall be made by the Trustee within the period of forty-five (45) days next preceding any interest payment date on which such bonds are subject to call for redemption under the provisions of this Indenture.

(b) Subject to the provisions of Article III of this Indenture, the Trustee shall call for redemption on each interest payment date on which bonds are subject to redemption from moneys in the Sinking Fund such amount of bonds or portions of bonds then subject to redemption as, with the redemption premium, if any, and all necessary and proper expenses incurred in connection therewith, will exhaust the Redemption Account as nearly as may be; provided, however, that the Trustee shall not be obligated to call less than One Hundred Thousand Dollars (\$100,000) principal amount of bonds for redemption at any one time. Such redemption shall be made pursuant to the provisions of Article III of this Indenture. Not less than thirty (30) days before the redemption date the Trustee shall withdraw from the Bond Interest Account and from the Redemption Account and set aside in separate accounts or deposit with the Paying Agents the respective amounts required for paying the interest on, and the principal and redemption premium of, the bonds or portions of bonds so called for redemption, and shall pay from the Redemption Account all expenses in connection with such redemption.

SECTION 512. Subject to the terms and conditions set forth in this Indenture, moneys held for the credit of the Bond

Interest Account, the Reserve Account and the Redemption Account shall be held in trust and disbursed by the Trustee for (a) the retransfer to the Construction Fund of any amount required to be retransferred under the provisions of Section 410 of this Indenture or (b) the payment of interest upon the bonds issued hereunder as such interest becomes due and payable or (c) the payment of the principal of such bonds at maturity or (d) the payment of the purchase or redemption price of such bonds before maturity, and such moneys are hereby pledged to and charged with the payments mentioned in this Section.

SECTION 513. All moneys which the Trustee shall have withdrawn from the Sinking Fund or shall have received from any other source and set aside, or deposited with the Paying Agents, for the purpose of paying any of the bonds hereby secured, either at the maturity thereof or upon call for redemption, or for the purpose of paying any maturing coupons appertaining to any of the coupon bonds hereby secured, shall be held in trust for the respective holders of such bonds or coupons. But any moneys which shall be so set aside or deposited by the Trustee and which shall remain unclaimed by the holders of such bonds or of such coupons for the period of six (6) years after the date on which such bonds or such coupons shall have become due and payable shall upon request in writing be paid to the Commission or to such officer, board or body as may then be entitled by law to receive the same, and thereafter the holders of such bonds or coupons shall look only to the Commission or to such officer, board or body, as the case may be, for payment and then only to the extent of the amounts so received without any interest thereon, and the Trustee and the Paying Agents shall have no responsibility with respect to such moneys.

SECTION 514. All bonds paid, redeemed or purchased, either at or before maturity, together with all unmaturing coupons, if any, appertaining thereto, shall be cancelled when such payment, redemption or purchase is made. All interest coupons shall be cancelled upon their payment. All bonds and

coupons cancelled under any of the provisions of this Indenture shall be cremated by the Trustee or by the New York Paying Agent at the request of the Trustee. The Trustee or the New York Paying Agent effecting such cremation shall execute certificates of cremation in triplicate, describing the bonds and coupons so cremated, except that the numbers of the bonds to which such coupons appertain may be omitted unless otherwise directed by the State Highway Commissioner. One executed certificate of cremation shall be filed with the Commission, one with the independent auditors for the Commission and one with the Trustee.

ARTICLE VI.

DEPOSITARIES OF MONEYS, SECURITY FOR DEPOSITS AND INVESTMENT OF FUNDS.

SECTION 601. All moneys deposited under the provisions of this Indenture with the Trustee or any other depositary or held by the Commission shall be trust funds under the terms hereof and shall not be subject to lien or attachment by any creditor of the Commission. Such moneys shall be held in trust and applied in accordance with the provisions of this Indenture.

No moneys shall be deposited with any depositary, other than the Trustee, in an amount exceeding fifty per centum (50%) of the amount which an officer of such depositary shall certify to the Commission as the combined capital and surplus of such depositary.

All moneys deposited with the Trustee or any other depositary hereunder shall be continuously secured, for the benefit of the Commission and the holders of the bonds, either (a) by lodging with a bank or trust company approved by the Trustee and the Commission as custodian, as collateral security, direct obligations of, or obligations the principal of and

the interest on which are unconditionally guaranteed by, the United States Government, or other marketable securities eligible as security for the deposit of trust funds under regulations of the Board of Governors of the Federal Reserve System, having a market value (exclusive of accrued interest) not less than the amount of such deposit, or (b) in such other manner as may then be required or permitted by applicable state or federal laws and regulations regarding the security for, or granting a preference in the case of, the deposit of trust funds; provided, however, that it shall not be necessary for the Paying Agents to give security for the deposit of any moneys with them for the payment of the principal of or the redemption premium or the interest on any bonds issued hereunder, or for the Trustee to give security for any moneys which shall be represented by obligations purchased under the provisions of this Article as an investment of such moneys.

All moneys deposited with each depository, including the Trustee, shall be credited to the particular fund or account to which such moneys belong.

SECTION 602. Moneys held for the credit of the Construction Fund shall, as nearly as may be practicable, be invested and reinvested by the Trustee in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than the date on which the Consulting Engineers shall have estimated the Hampton Roads Crossing will be opened for traffic as set forth in their statement filed under the provisions of clause (c) of Section 208 of this Indenture. Any moneys held for the credit of the Construction Fund on said date or thereafter shall, as nearly as may be practicable, be invested and reinvested by the Trustee in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government which shall mature, or which shall be subject to redemption

by the holder thereof at the option of such holder, not later than twelve (12) months after the date of such investment.

Moneys held for the credit of the Bond Interest Account in the Sinking Fund shall, as nearly as may be practicable, be invested and reinvested by the Trustee in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than the date when moneys held for the credit of said Account will be required for the purpose intended.

Moneys held for the credit of the Reserve Account in the Sinking Fund shall, as nearly as may be practicable, be invested and reinvested by the Trustee in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than thirty-six (36) months after the date of such investment.

Moneys held for the credit of the Reserve Maintenance Fund shall be invested by the Trustee, from time to time, upon receipt of a copy of a resolution of the Commission, certified by its Secretary, directing such investment and the written approval of the Consulting Engineers of the amount of such moneys to be so invested and the maturities of the obligations to be purchased, in direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States Government.

Obligations so purchased as an investment of moneys in any such Fund or Account shall be deemed at all times to be a part of such Fund or Account, and the interest accruing thereon and any profit realized from such investment shall be credited to such Fund or Account, and any loss resulting from such investment shall be charged to such Fund or Account. The Trustee shall sell at the best price obtainable or present for redemption any obligations so purchased whenever it shall be necessary so to do in order to provide moneys

to meet any payment or transfer from such Fund or Account. Neither the Trustee nor the Commission shall be liable or responsible for any loss resulting from any such investment.

ARTICLE VII

PARTICULAR COVENANTS.

SECTION 701. The Commission covenants that it will promptly pay the principal of and the interest on every bond issued under the provisions of this Indenture at the places, on the dates and in the manner provided herein and in said bonds and in any coupons appertaining to said bonds, and any premium required for the retirement of said bonds by purchase or redemption, according to the true intent and meaning thereof. Except as in this Indenture otherwise provided, the principal, interest and premiums are payable solely from tolls and other revenues derived from the ownership or operation of the Projects, which tolls and other revenues are hereby pledged to the payment thereof in the manner and to the extent hereinabove particularly specified, and nothing in the bonds or coupons or in this Indenture shall be construed as obligating the State of Virginia or any political subdivision thereof to pay the bonds or the interest thereon except from revenues of the Projects or as pledging the faith and credit or taxing power of the State or of any such political subdivision.

The Commission covenants that so long as the bonds or any of them shall be outstanding it will cause offices or agencies where the coupon bonds, not registered as to principal, and coupons may be presented for payment to be maintained in the City of Norfolk, Virginia, and in the Borough of Manhattan, City and State of New York.

SECTION 702. The Commission covenants that it will forthwith proceed to construct the Rappahannock River Bridge and the Hampton Roads Crossing as described in the engi-

neering report mentioned in the preambles of this Indenture and in accordance with plans and specifications which shall have been approved by the Consulting Engineers and in conformity with law and all requirements of all governmental authorities having jurisdiction thereover, and that it will complete such construction with all expedition practicable. The Commission further covenants and agrees that upon the opening of each of said Projects for traffic it will deliver to the Trustee a certificate, signed by the Chairman or Vice Chairman of the Commission, stating the date upon which such opening occurred. The Commission further covenants that it will, on or before the opening of the Hampton Roads Crossing for traffic either (a) acquire bus facilities in accordance with the plan therefor which shall have been approved by the Consulting Engineers and that such bus facilities will be available for the transportation of passengers through or over such Project not later than the opening of the Project for traffic, or (b) enter into a contract or contracts for the operation of bus facilities by an independent operator for the transportation of such passengers in accordance with the plan therefor which shall have been approved by the Consulting Engineers; provided, however, that in the event the Commission shall determine by resolution on or before the opening of the Hampton Roads Crossing for traffic or at any subsequent date, with the written approval of the Consulting Engineers and the Traffic Engineers of such determination, that it is inexpedient for the Commission to provide bus facilities or having provided bus facilities that it is expedient to discontinue the operation of bus facilities, then and in such event any balance remaining to the credit of the Bus Facilities Account and not committed to the payment of the cost of bus facilities shall be withdrawn by the Commission and deposited with the Trustee to the credit of the Construction Fund or the Reserve Account in the Sinking Fund, as the Commission may determine by resolution, or in the event the bus facilities shall be sold or otherwise disposed of, the proceeds thereof shall be deposited with the Trustee to the credit of the Reserve Account in the Sinking Fund.

The Commission further covenants and agrees that before entering into any contract for such construction it will secure the approval of the Consulting Engineers of such contract and of the plans and specifications referred to therein, and that it will require each person, firm or corporation with whom it may contract for labor or materials in connection with the construction of any Project for which bonds shall be issued under the provisions of this Indenture to furnish a performance bond in the full amount of any contract exceeding Five Thousand Dollars (\$5,000) in amount or, in lieu thereof and with the approval of the Commission, to deposit with the Trustee, to insure completion and performance, marketable securities having a market value equal to the amount of such contract and eligible as security for the deposit of trust funds under regulations of the Board of Governors of the Federal Reserve System, and to carry such workmen's compensation or employers' liability insurance as may be required by law and such public liability, property damage and builders' risk insurance, if any, as may be required by the Consulting Engineers. The Commission further covenants and agrees that in the event of any default under any such contract the proceeds of such performance bond or securities shall forthwith, upon receipt of such proceeds, be applied toward the completion of the contract in connection with which such performance bond or securities shall have been furnished.

The Commission further covenants and agrees that each such contract for labor or materials of construction will also provide that the Commission shall have the right to withhold payments thereunder in excess of ninety per centum (90%) of current estimates approved by the Consulting Engineers except payment of the final balance due under any such contract.

SECTION 703. The Commission covenants that it will establish and enforce reasonable rules and regulations governing the use of the Projects and the operation thereof, that all payments under contracts entered into by it, all compensation and conditions of employment, and all salaries, fees and

wages paid by it, in connection with the maintenance, repair and operation of the Projects will be reasonable, that no more persons will be employed by it than are necessary, that it will maintain and operate the Projects in an efficient and economical manner, that, from the revenues of the Projects, it will at all times maintain the same in good repair and in sound operating condition and will make all necessary repairs, renewals and replacements, and that it will observe and perform all of the terms and conditions contained in the State Revenue Bond Act.

The Commission further covenants that it will not grant any permit for the construction or operation of a bridge, tunnel or ferry permitted by the State Revenue Bond Act to be granted by the Commission, where such operation will, in the opinion of the Consulting Engineers, adversely affect the revenues of the Projects.

SECTION 704. The Commission covenants that it will not create or suffer to be created any lien or charge upon the Projects or any thereof or upon the tolls or other revenues therefrom except the lien and charge of the bonds secured hereby upon such tolls and revenues, and that, from such revenues or other available funds, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, within sixty (60) days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects which, if unpaid, might by law become a lien upon the Projects or any thereof or the tolls or other revenues therefrom; provided, however, that nothing in this Section contained shall require the Commission to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings.

SECTION 705. Notwithstanding any other provision of this Indenture, the Commission may permit the State of Virginia or any of its agencies, departments or political subdivisions, to pay the cost of maintaining, repairing and oper-

ating any Project out of funds other than revenues of the Projects.

SECTION 706. The Commission covenants that it will, for the purpose of performing and carrying out the duties imposed on the Consulting Engineers by this Indenture, employ an independent engineer or engineering firm or corporation having a nationwide and favorable repute for skill and experience in such work, and that it will, for the purpose of performing and carrying out the duties imposed on the Traffic Engineers by this Indenture, employ an independent engineer or engineering firm or corporation having a nationwide and favorable repute for skill and experience in such work. Parsons, Brinckerhoff, Hall & Macdonald, Consulting Engineers, of New York, New York, are now employed by the Commission as such Consulting Engineers. The Commission further covenants that before employing any other engineer or engineering firm or corporation as Consulting Engineers and before employing any engineer or engineering firm or corporation as Traffic Engineers under this Indenture, it will secure the written approval of the Trustee.

The Commission further covenants that an engineer of suitable experience will at all times be employed for the purpose of performing and carrying out the duties imposed on the Chief Engineer by this Indenture in connection with the construction of the Rappahannock River Bridge and the Hampton Roads Crossing and the operation of the Projects.

SECTION 707. The Commission covenants that during the construction of the Rappahannock River Bridge and the Hampton Roads Crossing it will carry such builders' risk insurance, if any, as shall be recommended by the Consulting Engineers, and that from and after the time when the contractors or any of them engaged in constructing the Rappahannock River Bridge or any part thereof or any bridge or tunnel or part thereof in the Hampton Roads Crossing shall cease to be responsible, pursuant to the provisions of the respective contracts for the construction of such bridge, tunnel or part, for loss or damage to such bridge, tunnel or part occurring from

any cause, it will insure and at all times keep such bridge, tunnel or part insured with a responsible insurance company or companies qualified to assume the risk thereof, against physical loss or damage however caused, with such exceptions as are ordinarily required by insurers of structures or facilities of similar type, in an amount not less than eighty per centum (80%) of the replacement value of each such bridge, tunnel or part, less depreciation, as certified by the Consulting Engineers in writing filed with the Commission and with the Trustee and mailed by the Commission to each principal underwriter; provided, however, that such amount of insurance shall at all times be sufficient to comply with any legal or contractual requirement which, if breached, would result in assumption by the Commission of a portion of any loss or damage as a co-insurer, and that such insurance may provide for the deduction from each claim for loss or damage (except in case of a total loss) of not more than two per centum (2%) of the total amount of insurance required by the application of the co-insurance clause, unless the Consulting Engineers shall approve a higher deduction. The Commission further covenants that it will similarly insure and at all times keep each bridge included in the James River Bridges and the York River Bridge insured for loss or damage occurring from any cause, and also the properties constituting the Chesapeake Ferries until such properties shall be sold or disposed of as hereinabove provided. If at any time the Commission shall be unable to obtain such insurance to the extent above required, either as to the amount of such insurance or as to the risks covered thereby, it will not constitute an event of default under the provisions of this Indenture if the Commission shall maintain such insurance to the extent reasonably obtainable.

All such policies shall be for the benefit of the Trustee and the Commission as their interests shall appear, shall be made payable to the Trustee and shall be deposited with the Trustee, and the Trustee shall have the sole right to receive the proceeds of such insurance and to collect and receipt for claims thereunder. The proceeds of any and all such insurance shall be held by the Trustee as security for the bonds issued hereunder until paid out as hereinafter provided.

The Commission covenants that, immediately after any damage to or destruction of any Project or any part thereof, it will cause the Consulting Engineers to prepare plans and specifications for repairing, replacing or reconstructing the damaged or destroyed property (either in accordance with the original or a different design) and an estimate of the cost thereof, and to file copies of such estimate with the Commission and the Trustee.

The proceeds of all insurance referred to in this Section shall be available for, and shall to the extent necessary be applied to, the repair, replacement or reconstruction of the damaged or destroyed property, and shall be disbursed by the Trustee in the manner hereinabove provided for payments from the Construction Fund. If such proceeds are more than sufficient for such purpose, the balance remaining shall be deposited to the credit of the Reserve Maintenance Fund or the Redemption Account, as the Commission by resolution may determine. If such proceeds shall be insufficient for such purpose, the deficiency may be supplied by the Trustee upon requisition of the Commission, from any moneys in the Reserve Maintenance Fund.

The Commission covenants that, if the cost of repairing, replacing or reconstructing the damaged or destroyed property as estimated by the Consulting Engineers shall not exceed the proceeds of insurance and other moneys available for such purpose, it will forthwith commence and diligently prosecute the repair, replacement or reconstruction of the damaged or destroyed property according to plans and specifications prepared by the Consulting Engineers.

The proceeds of any insurance not applied within thirty (30) months after their receipt by the Trustee to repairing, replacing or reconstructing the damaged or destroyed property, unless the Commission shall be prevented from so doing because of conditions beyond its control or unless the Commission, with the consent of the holders of a majority in principal amount of all the bonds then outstanding, shall otherwise direct, shall be deposited to the credit of the Redemption Account.

SECTION 708. The Commission covenants that it will at all times carry in a responsible insurance company or companies qualified to assume the risk thereof:

(a) use and occupancy insurance covering loss of revenues from each Project by reason of necessary interruption, total or partial, in the use thereof resulting from damage to or destruction of any part thereof however caused, with such exceptions as are ordinarily required by insurers carrying similar insurance, in such amount as the Consulting Engineers shall estimate is sufficient to provide a full normal income during the period of suspension of use; provided, however, that such insurance shall cover a period of suspension of not less than twelve (12) months and such longer period as the Consulting Engineers shall approve, and that such insurance may exclude loss sustained by the Commission during the first seven (7) days of any total or partial interruption of use; and provided further, that if at any time the Commission shall be unable to obtain such insurance to the extent above required, either as to the amount of such insurance or as to the risks covered thereby, it will not constitute an event of default under the provisions of this Indenture if the Commission shall carry such insurance to the extent reasonably obtainable; and

(b) public liability and property damage insurance in such amount and covering such risks as the Consulting Engineers may recommend.

Copies of all estimates and recommendations made by the Consulting Engineers under the provisions of this Section shall be filed with the Commission and the Trustee and mailed by the Commission to each principal underwriter.

In estimating full normal income for use and occupancy insurance, the Consulting Engineers shall give consideration to the expected as well as current and prior revenues from the operation of each Project or from other sources, and may also make allowance for any probable decrease in the

costs of maintenance or operation or other charges and expenses while use of such Project is interrupted. All policies providing use and occupancy insurance shall be made payable to and deposited with the Trustee, and the Trustee shall have the sole right to receive any proceeds of such policies and to collect and receipt for claims thereunder. Any proceeds of use and occupancy insurance shall be deposited by the Trustee to the credit of the 1954 Revenue Fund-Trustee Account.

SECTION 709. Within the first ten (10) days of each fiscal year the Commission shall file with the Trustee and shall mail to the Consulting Engineers and each principal underwriter a schedule of all insurance policies referred to in Sections 707 and 708 of this Article which are then in effect, stating with respect to each policy the name of the insurer, the amount, number and expiration date, and the hazards and risks insured against. All such insurance policies shall be open to the inspection of the bondholders and their representatives at all reasonable times. The Trustee is hereby authorized in its own name to demand, collect, sue and receipt for any insurance money which may become due and payable under any policies payable to it.

Any appraisalment or adjustment of any loss or damage and any settlement or payment of indemnity therefor which may be agreed upon between the Commission and any insurer shall be evidenced to the Trustee by a certificate, signed by the Chairman or Vice Chairman and the Secretary of the Commission and approved by the Consulting Engineers, which certificate may be relied upon by the Trustee as conclusive. The Trustee shall in no way be liable or responsible for the collection of insurance moneys in case of any loss or damage.

SECTION 710. The Commission covenants and agrees that none of the revenues of the Projects will be used for any purpose other than as provided in this Indenture and no contract or contracts will be entered into or any action taken by which the rights of the Trustee or of the bondholders might be impaired or diminished.

SECTION 711. The Commission and the Trustee mutually covenant that they will, from time to time, each upon the written request of the other, execute and deliver such further instruments and take such further action as may be reasonable and as may be required by the other to carry out the purposes of this Indenture; provided, however, that no such instrument or action shall involve any personal liability on the Trustee or members of the Commission or any officer thereof.

SECTION 712. The Commission covenants that it will keep an accurate record of the total cost of each Project, of the daily tolls and other revenues collected, of the number and class of vehicles using each Project, and of the application of such tolls and other revenues. Such records shall be open at all reasonable times to the inspection of all interested persons.

The Commission further covenants that at least once each month it will cause to be filed with the Trustee and mailed to the Consulting Engineers, each principal underwriter, and all bondholders who shall have filed their names and addresses with the Secretary of the Commission for such purpose, copies of any revision of any toll schedule during the preceding calendar month and a report setting forth in respect of the preceding calendar month:

- (a) an income and expense account for each Project, including the bus facilities, if any,
- (b) the number of vehicles in each class using each Project,
- (c) all deposits to the credit of and withdrawals from each Fund and Account created under the provisions of this Indenture,
- (d) the details of all bonds issued, paid, purchased or redeemed,
- (e) a balance sheet as of the end of such month,
- (f) the amounts on deposit at the end of such month to the credit of each such Fund and Account, showing the

respective amounts on deposit to the credit of each such Fund and Account in each bank or trust company and the security held therefor, and showing the details of any investments thereof, and

(g) the amounts of the proceeds received from any sales of property pursuant to the provisions of Section 713 of this Article.

The Commission further covenants that in the month of September in each year it will cause an audit to be made of its books and accounts relating to the Projects by an independent certified public accountant of recognized ability and standing, to be chosen by the Commission with the approval of the Trustee. The Trustee shall make available to such accountant all its books and records pertaining to the Projects. Promptly thereafter reports of each such audit shall be filed with the Commission and the Trustee, and copies of such reports shall be mailed by the Commission to the Consulting Engineers, each principal underwriter, and all bondholders who shall have filed their names and addresses with the Secretary of the Commission for such purpose. Each such audit report shall set forth in respect of the preceding fiscal year the same matters as are hereinabove required for the monthly reports, and also the findings of such certified public accountants whether the moneys received by the Commission under the provisions of this Indenture have been applied in accordance with the provisions of this Indenture, whether any payments for Current Expenses in the preceding fiscal year were in excess of the Annual Budget for such fiscal year and whether the Commission is in default in the performance of any of the covenants contained in Section 501 of this Indenture. Such monthly reports and audit reports shall be open to the inspection of the bondholders and their agents and representatives.

The Commission further covenants that it will cause any additional reports or audits relating to the Projects to be made as required by law and that, as often as may be requested, it will furnish to the Trustee, each principal underwriter and the holder of any bond issued hereunder such

other information concerning the Projects or the operation thereof as either of them may reasonably request.

The cost of the reports and audits referred to in this Section shall be treated as a part of the cost of operation of the Projects.

SECTION 718. The Commission covenants that, except as otherwise required or permitted by the State Revenue Bond Act or by this Indenture, it will not sell, lease or otherwise dispose of or encumber any of the Projects or any part thereof and will not create or permit to be created any charge or lien on the revenues derived therefrom except as provided in this Indenture. The Commission may, however, from time to time, sell any machinery, fixtures, apparatus, tools, instruments or other movable property acquired by it from the proceeds of bonds issued on account of any Project or from the revenues thereof, if the Commission by resolution shall determine that such articles are no longer needed or are no longer useful in connection with the construction or operation and maintenance of such Project, and the proceeds thereof shall be applied to the replacement of the properties so sold or disposed of or shall be deposited to the credit of the Construction Fund, the Reserve Maintenance Fund or the Redemption Account, as the Commission by resolution may determine. The Commission may from time to time sell such real estate forming part of any Project as the Commission by resolution shall determine is not needed or serves no useful purpose in connection with the maintenance and operation of such Project, if the Consulting Engineers shall in writing approve such sale. The proceeds of any sale of real estate shall be disposed of as hereinabove provided for the proceeds of the sale or disposal of movable property. The provisions of this paragraph are in all respects subject to the provisions of Section 412 of this Indenture.

Upon any sale of property under the provisions of this Section the Commission shall notify the Trustee of the property so sold and the amount and disposition of the proceeds thereof.

Notwithstanding any other provisions of this Section, the Commission may, if the Consulting Engineers shall in writing approve, lease or sell bus facilities operated by the Commission in the event the Commission shall theretofore have provided by contract for the operation by an independent operator of bus facilities to provide services substantially similar to those provided by the bus facilities so sold or leased; provided, however, nothing contained in this Section shall prevent the Commission from selling or otherwise disposing of the bus facilities as permitted by the provisions of Section 702 of this Article and upon the happening of the conditions therein set forth.

ARTICLE VIII

REMEDIES.

SECTION 801. No coupon which in any way before, at, or after maturity shall have been transferred or pledged separate and apart from the bond to which it appertains shall, unless accompanied by such bond, be entitled, in case of default hereunder, to any benefit of or from this Indenture, except after the prior payment in full of the principal of all bonds and of all coupons not so transferred or pledged. In case the time for the payment of any coupon or the interest on any registered bond without coupons shall be extended, whether or not such extension be by or with the consent of the Commission, such coupon or such interest so extended shall not be entitled in case of default hereunder to the benefit or security of this Indenture except subject to the prior payment in full of the principal of all bonds then outstanding and of all coupons and interest the time for the payment of which shall not have been extended.

SECTION 802. Each of the following events is hereby declared an "event of default", that is to say: If

(a) payment of the principal and premium, if any, of any of the bonds shall not be made when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or

(b) payment of any instalment of interest shall not be made within thirty (30) days after the same shall become due and payable; or

(c) the Commission shall unreasonably delay or fail to carry on with reasonable dispatch or discontinue the construction of the Rappahannock River Bridge or the Hampton Roads Crossing; or

(d) the Commission shall for any reason be rendered incapable of fulfilling its obligations hereunder; or

(e) any substantial part of any Project shall be destroyed or damaged to the extent of impairing its efficient operation or adversely affecting its gross revenues and shall not be promptly repaired, replaced or reconstructed (whether such failure promptly to repair, replace or reconstruct the same be due to the impracticability of such repair, replacement or reconstruction or to lack of funds therefor or for any other reason); or

(f) final judgment for the payment of money shall be rendered against the Commission as a result of the ownership, control or operation of any Project and any such judgment shall not be discharged within ninety (90) days from the entry thereof or an appeal shall not be taken therefrom or from the order, decree or process upon which or pursuant to which such judgment shall have been granted or entered, in such manner as to stay the execution of or levy under such judgment, order, decree or process or the enforcement thereof; or

(g) an order or decree shall be entered, with the consent or acquiescence of the Commission, appointing a receiver or receivers of the Projects or any thereof or of the tolls or other revenues thereof, or if such order or decree, having been entered without the consent or acquies-

cence of the Commission, shall not be vacated or discharged or stayed on appeal within sixty (60) days after the entry thereof; or

(h) any proceeding shall be instituted, with the consent or acquiescence of the Commission, for the purpose of effecting a composition between the Commission and its creditors or for the purpose of adjusting the claims of such creditors, pursuant to any federal or state statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the revenues of the Projects; or

(i) the Commission shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in the bonds or in this Indenture on the part of the Commission to be performed, and such default shall continue for thirty (30) days after written notice specifying such default and requiring same to be remedied shall have been given to the Commission by the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the holders of not less than ten per centum (10%) in principal amount of the bonds then outstanding.

SECTION 808. Upon the happening and continuance of any event of default specified in Section 802 of this Article, then and in every such case the Trustee may proceed, and upon the written request of the holders of not less than ten per centum (10%) in principal amount of the bonds then outstanding hereunder shall proceed, subject to the provisions of Section 902 of this Indenture, to protect and enforce its rights and the rights of the bondholders under the laws of the State of Virginia or under this Indenture by such suits, actions or special proceedings in equity or at law, or by proceedings in the office of any board or officer having jurisdiction, either for the specific performance of any covenant or agreement contained herein or in aid or execution of any power herein granted or for the enforcement of any proper legal or equitable remedy, as the Trustee, being advised by

counsel, shall deem most effectual to protect and enforce such rights.

In the enforcement of any remedy under this Indenture the Trustee shall be entitled to sue for, enforce payment of and receive any and all amounts then or during any default becoming, and at any time remaining, due from the Commission for principal, interest or otherwise under any of the provisions of this Indenture or of the bonds and unpaid, with interest on overdue payments at the rate or rates of interest specified in such bonds, together with any and all costs and expenses of collection and of all proceedings hereunder and under such bonds, without prejudice to any other right or remedy of the Trustee or of the bondholders, and to recover and enforce judgment or decree against the Commission, but solely as provided herein and in such bonds, for any portion of such amounts remaining unpaid, with interest, costs and expenses, and to collect (but solely from moneys in the Sinking Fund and any other moneys available for such purpose) in any manner provided by law, the moneys adjudged or decreed to be payable.

SECTION 804. Anything in this Indenture to the contrary notwithstanding, if at any time the moneys in the Sinking Fund shall not be sufficient to pay the principal of or the interest on the bonds as the same shall become due and payable, such moneys, together with any moneys then available or thereafter becoming available for such purpose, whether through the exercise of the remedies provided for in this Article or otherwise, shall be applied as follows:

(a) Unless the principal of all the bonds shall have become due and payable, all such moneys shall be applied

first: to the payment to the persons entitled thereto of all instalments of interest then due and payable, in the order of the maturity of the instalments of such interest, and, if the amount available shall not be sufficient to pay in full any particular instalment, then to the payment ratably, according to the amounts due on

such instalment, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds; and

second: to the retirement of bonds in accordance with the provisions of Section 511 of this Indenture.

(b) If the principal of all the bonds shall have become due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the bonds, with interest on such bonds as aforesaid, without preference or priority of principal over interest or of interest over principal, or of any instalment of interest over any other instalment of interest, or of any bond over any other bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds.

The provisions of this Section are in all respects subject to the provisions of Section 801 of this Article.

Whenever moneys are to be applied by the Trustee pursuant to the provisions of this Section, such moneys shall be applied by the Trustee at such times, and from time to time, as the Trustee in its sole discretion shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future; the deposit of such moneys with the Paying Agents, or otherwise setting aside such moneys, in trust for the proper purpose shall constitute proper application by the Trustee; and the Trustee shall incur no liability whatsoever to the Commission, to any bondholder or to any other person for any delay in applying any such moneys, so long as the Trustee acts with reasonable diligence, having due regard to the circumstances, and ultimately applies the same in accordance with such provisions of this Indenture as may be applicable at the time of application by the Trustee. Whenever the Trustee shall exercise

such discretion in applying such moneys, it shall fix the date (which shall be an interest payment date unless the Trustee shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such date shall cease to accrue. The Trustee shall give such notice as it may deem appropriate of the fixing of any such date, and shall not be required to make payment to the holder of any unpaid coupon or any bond until such coupon or such bond and all unmatured coupons, if any, appertaining to such bond shall be surrendered to the Trustee for appropriate endorsement, or for cancellation if fully paid.

SECTION 805. In case any proceeding taken by the Trustee on account of any default shall have been discontinued or abandoned for any reason, then and in every such case the Commission, the Trustee and the bondholders shall be restored to their former positions and rights hereunder, respectively, and all rights, remedies, powers and duties of the Trustee shall continue as though no such proceeding had been taken.

SECTION 806. Anything in this Indenture to the contrary notwithstanding, the holders of a majority in principal amount of the bonds then outstanding hereunder shall have the right, subject to the provisions of Section 902 of this Indenture, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee hereunder, provided that such direction shall not be otherwise than in accordance with law or the provisions of this Indenture.

SECTION 807. No holder of any of the bonds shall have any right to institute any suit, action or proceeding in equity or at law for the execution of any trust hereunder or for any other remedy hereunder unless such holder previously shall have given to the Trustee written notice of the event of default on account of which such suit, action or proceeding is to be instituted, and unless also the holders of not less than

ten per centum (10%) in principal amount of the bonds then outstanding shall have made written request of the Trustee after the right to exercise such powers or right of action, as the case may be, shall have accrued, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers hereinabove granted or to institute such action, suit or proceeding in its or their name, and unless, also, there shall have been offered to the Trustee reasonable security and indemnity against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall have refused or neglected to comply with such request within a reasonable time; and such notification, request and offer of indemnity are hereby declared in every such case, at the option of the Trustee, to be conditions precedent to the execution of the powers and trusts of this Indenture or for any other remedy hereunder. It is understood and intended that no one or more holders of the bonds hereby secured shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of this Indenture, or to enforce any right hereunder except in the manner herein provided, that all proceedings at law or in equity shall be instituted, had and maintained in the manner herein provided and for the benefit of all holders of such outstanding bonds and coupons, and that any individual rights of action or other right given to one or more of such holders by law are restricted by this Indenture to the rights and remedies herein provided.

SECTION 808. All rights of action under this Indenture or under any of the bonds secured hereby, enforceable by the Trustee, may be enforced by it without the possession of any of the bonds or the coupons appertaining thereto or the production thereof on the trial or other proceeding relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name for the benefit of all of the holders of such bonds and coupons, subject to the provisions of this Indenture.

SECTION 809. No remedy herein conferred upon or reserved to the Trustee or to the holders of the bonds is intended to be exclusive of any other remedy or remedies herein provided, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder.

SECTION 810. No delay or omission of the Trustee or of any holder of the bonds to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by this Article to the Trustee and the holders of the bonds, respectively, may be exercised from time to time and as often as may be deemed expedient.

The Trustee may, and upon written request of the holders of not less than a majority in principal amount of the bonds then outstanding shall, waive any default which in its opinion shall have been remedied before the entry of final judgment or decree in any suit, action or proceeding instituted by it under the provisions of this Indenture or before the completion of the enforcement of any other remedy under this Indenture, but no such waiver shall extend to or affect any other existing or any subsequent default or defaults or impair any rights or remedies consequent thereon.

SECTION 811. The Trustee shall mail to each principal underwriter, all registered owners of bonds then outstanding at their addresses as they appear on the registration books, and all other bondholders who shall have filed their names and addresses with the Trustee for such purpose, written notice of the occurrence of any event of default set forth in Section 802 of this Article within thirty (30) days after the Trustee shall have notice that any such event of default has occurred. If in any fiscal year the total amount of deposits to the credit of the Sinking Fund shall be less than the respective amounts referred to in clause (c) of Section 501 of this Indenture, the Trustee on or before the first day of the third month

of the next succeeding fiscal year shall mail to each principal underwriter, all registered owners of bonds then outstanding at their addresses as they appear on the registration books, and all other bondholders who shall have filed their names and addresses with the Trustee for such purpose, written notice of the failure to make such deposits. The Trustee shall not, however, be subject to any liability to the principal underwriters or any bondholder by reason of its failure to mail any such notice.

ARTICLE IX.

CONCERNING THE TRUSTEE.

SECTION 901. The Trustee accepts and agrees to execute the trusts imposed upon it by this Indenture, but only upon the terms and conditions set forth in this Article and subject to the provisions of this Indenture, to all of which the parties hereto and the respective holders of the bonds agree.

SECTION 902. The Trustee shall be under no obligation to institute any suit, or to take any remedial proceeding under this Indenture, or to enter any appearance or in any way defend in any suit in which it may be made defendant, or to take any steps in the execution of the trusts hereby created or in the enforcement of any rights and powers hereunder, until it shall be indemnified to its satisfaction against any and all costs and expenses, outlays and counsel fees and other reasonable disbursements, and against all liability; the Trustee may, nevertheless, begin suit, or appear in and defend suit, or do anything else in its judgment proper to be done by it as such Trustee, without indemnity, and in such case the Commission shall reimburse the Trustee from the revenues of the Projects for all costs and expenses, outlays and counsel fees and other reasonable disbursements properly incurred in connection therewith. If the Commission shall fail to make such reimbursement, the Trustee may reimburse itself from any

moneys in its possession under the provisions of this Indenture and shall be entitled to a preference therefor over any of the bonds or coupons outstanding hereunder.

SECTION 903. The Trustee shall be under no obligation to effect or maintain insurance or to renew any policies of insurance or to inquire as to the sufficiency of any policies of insurance carried by the Commission, or to report, or make or file claims or proof of loss for, any loss or damage insured against or which may occur, or to keep itself informed or advised as to the payment of any taxes or assessments, or to require any such payment to be made. The Trustee shall have no responsibility in respect of the validity or sufficiency of this Indenture or the due execution or acknowledgment thereof, or in respect of the validity of the bonds or of the coupons or the due execution or issuance thereof. The Trustee shall be under no obligation, except as otherwise herein expressly required, to see that any duties herein imposed upon the Commission, the Consulting Engineers, the Traffic Engineers, the Paying Agents, any depository, or any party other than itself, or any covenants herein contained on the part of any party other than itself to be performed, shall be done or performed, and the Trustee shall be under no obligation for failure to see that any such duties or covenants are so done or performed.

SECTION 904. The Trustee shall not be liable or responsible because of the failure of the Commission or of any of its employees or agents to make any collections or deposits or to perform any act herein required of the Commission or because of the loss of any moneys arising through the insolvency or the act or default or omission of any other depository in which such moneys shall have been deposited under the provisions of this Indenture. The Trustee shall not be responsible for the application of any of the proceeds of the bonds or any other moneys deposited with it and paid out, withdrawn or transferred hereunder, if such application, payment, withdrawal or transfer shall be made in accordance with the provisions of this Indenture. The immunities and

exemptions from liability of the Trustee hereunder shall extend to its directors, officers, employees and agents.

SECTION 905. Subject to the provisions of any contract, the Commission shall, from the revenues of the Projects, pay to the Trustee reasonable compensation for all services performed by it hereunder and also all its reasonable expenses, charges and other disbursements and those of its attorneys, agents and employees incurred in and about the administration and execution of the trusts hereby created and the performance of its powers and duties hereunder, and, from such revenues only, shall indemnify and save the Trustee harmless against any liabilities which it may incur in the exercise and performance of its powers and duties hereunder. If the Commission shall fail to make any payment required by this Section, the Trustee may make such payment from any moneys in its possession under the provisions of this Indenture and shall be entitled to a preference therefor over any of the bonds or coupons outstanding hereunder.

SECTION 906. It shall be the duty of the Trustee, on or before the last day of each month after the month in which bonds are delivered under the provisions of Section 208 of this Indenture, to file with the Commission a statement setting forth in respect of the preceding calendar month:

(a) the amount withdrawn or transferred by it and the amount deposited with it on account of each Fund and Account held by it under the provisions of this Indenture,

(b) the amount on deposit with it at the end of each month to the credit of each such Fund and Account,

(c) a brief description of all obligations held by it as an investment of moneys in each such Fund and Account,

(d) the amount applied to the purchase or redemption of bonds under the provisions of Section 511 of this Indenture and a description of the bonds or portions of bonds so purchased or redeemed, and

(e) any other information which the Commission may reasonably request.

All records and files pertaining to the Projects in the custody of the Trustee shall be open at all reasonable times to the inspection of the Commission, each principal underwriter and their agents and representatives.

SECTION 907. In case at any time it shall be necessary or desirable for the Trustee to make any investigation respecting any fact preparatory to taking or not taking any action or doing or not doing anything as such Trustee, and in any case in which this Indenture provides for permitting or taking any action, the Trustee may rely upon any certificate required or permitted to be filed with it under the provisions of this Indenture, and any such certificate shall be evidence of such fact to protect the Trustee in any action that it may or may not take or in respect of anything it may or may not do, in good faith, by reason of the supposed existence of such fact. Except as otherwise provided in this Indenture, any request, notice or other instrument from the Commission to the Trustee shall be deemed to have been signed by the proper party or parties if signed by the State Highway Commissioner or the Chief Engineer and by the Secretary of the Commission, and the Trustee may accept a certificate signed by the Secretary of the Commission as to any action taken by the Commission.

SECTION 908. Except as otherwise provided in this Indenture, the Trustee shall not be bound to take notice or be deemed to have notice of any event of default hereunder, unless specifically notified in writing of such event of default by the holders of not less than ten per centum (10%) in principal amount of the bonds hereby secured and then outstanding.

SECTION 909. The bank or trust company acting as Trustee under this Indenture, for its own account or for the account of any of its fiduciary accounts, and its directors, officers, employees or agents, may in good faith buy, sell, own,

hold and deal in any of the bonds or coupons issued under and secured by this Indenture, and may join in any action which any bondholder may be entitled to take with like effect as if such bank or trust company were not the Trustee under this Indenture.

SECTION 910. The recitals, statements and representations contained herein and in the bonds (excluding the Trustee's certificate of authentication on the bonds) shall be taken and construed as made by and on the part of the Commission and not by the Trustee, and the Trustee assumes no responsibility for the correctness of the same.

SECTION 911. The Trustee shall be protected and shall incur no liability in acting or proceeding, or in not acting or not proceeding, in good faith, reasonably and in accordance with the terms of this Indenture, upon any resolution, order, notice, request, consent, waiver, certificate, statement, affidavit, requisition, bond or other paper or document which it shall in good faith believe to be genuine and to have been adopted or signed by the proper board or person or to have been prepared and furnished pursuant to any of the provisions of this Indenture, or upon the written opinion of any attorney, engineer or accountant believed by it to be qualified in relation to the subject matter, and the Trustee shall be under no duty to make any investigation or inquiry as to any statements contained or matters referred to in any such instrument. The Trustee shall not be under any obligation to see to the recording or filing of this Indenture or otherwise to the giving to any person of notice of the provisions hereof.

SECTION 912. The Trustee may resign and thereby become discharged from the trusts hereby created by notice in writing to be given to the Commission and to each principal underwriter and published once in a daily newspaper of general circulation published in the City of Richmond, Virginia, and in a financial journal published in the Borough of Manhattan, City and State of New York, or a daily newspaper of general circulation published in said Borough, at least thirty (30) days

before such resignation is to take effect, but such resignation shall take effect immediately upon the appointment of a new Trustee hereunder, if such new Trustee shall be appointed before the time limited by such notice and shall then accept the trusts hereof.

SECTION 913. The Trustee may be removed at any time by an instrument or concurrent instruments in writing, signed by the holders of not less than a majority in principal amount of the bonds hereby secured and then outstanding and filed with the Commission. A photostatic copy of each such instrument shall be delivered promptly by the Commission to the Trustee. The Trustee may also be removed at any time for any breach of trust or violation of this Indenture by a resolution of the Commission.

SECTION 914. If at any time hereafter the Trustee shall resign, be removed, be dissolved or otherwise become incapable of acting, or the bank or trust company acting as Trustee shall be taken over by any governmental official, agency, department or board, the position of Trustee shall thereupon become vacant. If at any time moneys on deposit with the Trustee shall not be secured as required by Section 601 of this Indenture, a vacancy in the position of Trustee may be declared by a resolution duly passed by the Commission. If the position of Trustee shall become vacant for any of the foregoing reasons or for any other reason, the Commission shall appoint a Trustee to fill such vacancy. The Commission shall publish notice of any such appointment by it made once in each week for four (4) successive weeks in a daily newspaper of general circulation published in the City of Richmond, Virginia, and in a financial journal published in the Borough of Manhattan, City and State of New York, or a daily newspaper of general circulation published in said Borough, and before the second publication of such notice shall mail a copy thereof to each principal underwriter.

At any time within one year after any such vacancy shall have occurred, the holders of a majority in principal amount

of the bonds hereby secured and then outstanding, by an instrument or concurrent instruments in writing, signed by such bondholders or their attorneys in fact or legal representatives and filed with the Commission, may appoint a successor Trustee which shall supersede any Trustee theretofore appointed by the Commission. Photostatic copies of each such instrument shall be delivered promptly by the Commission to the predecessor Trustee and to the Trustee so appointed by the bondholders.

If no appointment of a successor Trustee shall be made pursuant to the foregoing provisions of this Section, the holder of any bond outstanding hereunder or any retiring Trustee may apply to any court of competent jurisdiction to appoint a successor Trustee. Such court may thereupon, after such notice, if any, as such court may deem proper and prescribe, appoint a successor Trustee.

Any Trustee hereafter appointed shall be a bank or trust company duly authorized to exercise corporate trust powers and subject to examination by federal or state authority, of good standing, and having a combined capital and surplus aggregating not less than Five Million Dollars (\$5,000,000).

SECTION 915. Every successor Trustee appointed hereunder shall execute, acknowledge and deliver to its predecessor, and also to the Commission, an instrument in writing accepting such appointment hereunder, and thereupon such successor, without any further act, shall become fully vested with all the rights, immunities, powers and trusts, and subject to all the duties and obligations, of its predecessor; but such predecessor shall, nevertheless, on the written request of its successor or of the Commission, and upon payment of the expenses, charges and other disbursements of such predecessor which are payable pursuant to the provisions of Section 905 of this Article, execute and deliver an instrument transferring to such successor all the rights, immunities, powers and trusts of such predecessor hereunder; and every predecessor Trustee shall deliver all property and moneys held by it hereunder to its successor. Should any instrument in

writing from the Commission be required by any successor Trustee for more fully and certainly vesting in such Trustee the rights, immunities, powers and trusts hereby vested or intended to be vested in its predecessor, any such instrument in writing shall and will, on request, be executed, acknowledged and delivered by the Commission.

Notwithstanding any of the foregoing provisions of this Article, any bank or trust company having power to perform the duties and execute the trusts of this Indenture and otherwise qualified to act as Trustee hereunder with or into which the bank or trust company acting as Trustee may be merged or consolidated, or to which the assets and business of such bank or trust company may be sold, shall be deemed the successor of the Trustee.

ARTICLE X

EXECUTION OF INSTRUMENTS BY BONDHOLDERS AND PROOF OF OWNERSHIP OF BONDS.

SECTION 1001. Any request, direction, consent or other instrument in writing required by this Indenture to be signed or executed by bondholders may be in any number of concurrent instruments of similar tenor and may be signed or executed by such bondholders in person or by agent appointed by an instrument in writing. Proof of the execution of any such instrument and of the ownership of bonds shall be sufficient for any purpose of this Indenture and shall be conclusive in favor of the Trustee with regard to any action taken by it under such instrument if made in the following manner:

(a) The fact and date of the execution by any person of any such instrument may be proved by the verification of any officer in any jurisdiction who, by the laws thereof, has power to take affidavits within such jurisdiction, to the effect that such instrument was subscribed and sworn to before him, or by an affidavit of a witness to such execution.

(b) The fact of the holding of coupon bonds hereunder by any bondholder and the amount and the numbers of such bonds and the date of his holding the same (unless such bonds be registered) may be proved by the affidavit of the person claiming to be such holder, if such affidavit shall be deemed by the Trustee to be satisfactory, or by a certificate executed by any trust company, bank, banker or any other depositary, wherever situated, if such certificate shall be deemed by the Trustee to be satisfactory, showing that at the date therein mentioned such person had on deposit with such trust company, bank, banker or other depositary the bonds described in such certificate. The Trustee may conclusively assume that such ownership continues until written notice to the contrary is served upon it. The ownership of coupon bonds registered as to principal and of registered bonds without coupons shall be proved by the registration books kept under the provisions of Section 206 of this Indenture.

But nothing contained in this Article shall be construed as limiting the Trustee to such proof, it being intended that the Trustee may accept any other evidence of the matters herein stated which it may deem sufficient. Any request or consent of the holder of any bond shall bind every future holder of the same bond in respect of anything done by the Trustee in pursuance of such request or consent.

Notwithstanding any of the foregoing provisions of this Section, the Trustee shall not be required to recognize any person as a holder of any bond or coupon or to take any action at his request unless such bond or coupon shall be deposited with it.

ARTICLE XI

SUPPLEMENTAL INDENTURES.

SECTION 1101. The Commission and the Trustee may, from time to time and at any time, enter into such indentures

or agreements supplemental hereto as shall not be inconsistent with the terms and provisions hereof (which supplemental indentures or agreements shall thereafter form a part hereof),

(a) to cure any ambiguity or formal defect or omission in this Indenture or in any supplemental indenture, or

(b) to grant to or confer upon the Trustee for the benefit of the bondholders any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the bondholders or the Trustee.

SECTION 1102. Subject to the terms and provisions contained in this Section, and not otherwise, the holders of not less than two-thirds (2/3) in aggregate principal amount of the bonds then outstanding shall have the right, from time to time, anything contained in this Indenture to the contrary notwithstanding, to consent to and approve the execution by the Commission and the Trustee of such indenture or indentures supplemental hereto as shall be deemed necessary or desirable by the Commission for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in this Indenture or in any supplemental indenture; provided, however, that nothing herein contained shall permit, or be construed as permitting, (a) an extension of the maturity of the principal of or the interest on any bond issued hereunder, or (b) a reduction in the principal amount of any bond or the redemption premium or the rate of interest thereon, or (c) the creation of a lien upon or a pledge of revenues other than the lien and pledge created by this Indenture, or (d) a preference or priority of any bond or bonds over any other bond or bonds, or (e) a reduction in the aggregate principal amount of the bonds required for consent to such supplemental indenture. Nothing herein contained, however, shall be construed as making necessary the approval by bondholders of the execution of any supplemental indenture or agreement as authorized in Section 1101 of this Article.

If at any time the Commission shall request the Trustee to enter into any supplemental indenture for any of the purposes of this Section, the Trustee shall, at the expense of the Commission, cause notice of the proposed execution of such supplemental indenture to be published once in each week for four successive weeks in a daily newspaper of general circulation published in the City of Richmond, Virginia, and in a financial journal published in the Borough of Manhattan, City and State of New York, or a daily newspaper of general circulation published in said Borough, and, on or before the date of the first publication of such notice, the Trustee shall also cause a similar notice to be mailed, postage prepaid, to each principal underwriter, to all registered owners of bonds then outstanding at their addresses as they appear on the registration books and to all other bondholders who shall have filed their names and addresses with the Trustee for such purpose. Such notice shall briefly set forth the nature of the proposed supplemental indenture and shall state that a copy thereof is on file at the office of the Trustee for inspection by all bondholders. The Trustee shall not, however, be subject to any liability to any bondholder by reason of its failure to mail the notice required by this Section, and any such failure shall not affect the validity of such supplemental indenture when consented to and approved as provided in this Section.

Whenever, at any time within one year after the date of the first publication of such notice, the Commission shall deliver to the Trustee an instrument or instruments purporting to be executed by the holders of not less than two-thirds (2/3) in aggregate principal amount of the bonds then outstanding, which instrument or instruments shall refer to the proposed supplemental indenture described in such notice and shall specifically consent to and approve the execution thereof in substantially the form of the copy thereof referred to in such notice, thereupon, but not otherwise, the Trustee may execute such supplemental indenture in substantially such form, without liability or responsibility to any holder of any bond, whether or not such holder shall have consented thereto.

If the holders of not less than two-thirds (2/3) in aggregate principal amount of the bonds outstanding at the time of the execution of such supplemental indenture shall have consented to and approved the execution thereof as herein provided, no holder of any bond shall have any right to object to the execution of such supplemental indenture, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question the propriety of the execution thereof, or to enjoin or restrain the Trustee or the Commission from executing the same or from taking any action pursuant to the provisions thereof.

Upon the execution of any supplemental indenture pursuant to the provisions of this Section, this Indenture shall be and be deemed to be modified and amended in accordance therewith, and the respective rights, duties and obligations under this Indenture of the Commission, the Trustee and all holders of bonds then outstanding shall thereafter be determined, exercised and enforced hereunder, subject in all respects to such modifications and amendments.

SECTION 1103. The Trustee is authorized to join with the Commission in the execution of any such supplemental indenture and to make the further agreements and stipulations which may be contained therein. Any supplemental indenture executed in accordance with the provisions of this Article shall thereafter form a part of this Indenture; and all the terms and conditions contained in any such supplemental indenture as to any provision authorized to be contained therein shall be and shall be deemed to be part of the terms and conditions of this Indenture for any and all purposes. In case of the execution and delivery of any supplemental indenture, express reference may be made thereto in the text of the bonds issued thereafter, if deemed necessary or desirable by the Trustee.

SECTION 1104. In each and every case provided for in this Article, the Trustee shall be entitled to exercise its discretion in determining whether or not any proposed supplemental

indenture, or any term or provision therein contained, is proper or desirable, having in view the purposes of such instrument, the needs of the Commission, and the rights and interests of the bondholders, and the Trustee shall not be under any responsibility or liability to the Commission or to any bondholder or to anyone whomsoever, for any act or thing which it may do or decline to do in good faith, subject to the provisions of this Article. The Trustee shall be entitled to receive, and shall be fully protected in relying upon, the opinion of any counsel approved by it, who may be counsel for the Commission, as conclusive evidence that any such supplemental indenture does or does not comply with the provisions of this Indenture, and that it is or is not proper for the Trustee, under the provisions of this Article, to join in the execution of such supplemental indenture.

ARTICLE XII.

DEFEASANCE.

SECTION 1201. If, when the bonds secured hereby shall have become due and payable in accordance with their terms or shall have been duly called for redemption or irrevocable instructions to call the bonds for redemption shall have been given by the Commission to the Trustee, the whole amount of the principal and the interest and the premium, if any, so due and payable upon all of the bonds and coupons then outstanding shall be paid or sufficient moneys shall be held by the Trustee or the Paying Agents for such purpose, and provision shall also be made for paying all other sums payable hereunder by the Commission, then and in that case the right, title and interest of the Trustee shall thereupon cease, determine and become void, and the Trustee in such case, on demand of the Commission, shall release this Indenture and shall execute such documents to evidence such release as may be reasonably required by the Commission, and shall turn over to the Commission or to such officer, board or body as may

then be entitled by law to receive the same any surplus in the Sinking Fund and all balances remaining in any other funds or accounts other than moneys held for the redemption or payment of bonds or coupons; otherwise this Indenture shall be, continue and remain in full force and effect.

ARTICLE XIII.

MISCELLANEOUS PROVISIONS.

SECTION 1301. In the event of the dissolution of the Commission all of the covenants, stipulations, obligations and agreements contained in this Indenture by or in behalf of or for the benefit of the Commission shall bind or inure to the benefit of the successor or successors of the Commission from time to time and any officer, board, commission, authority, agency or instrumentality to whom or to which any power or duty affecting such covenants, stipulations, obligations and agreements shall be transferred by or in accordance with law, and the word "Commission" as used in this Indenture shall include such successor or successors.

SECTION 1302. Any bank or trust company with or into which any Paying Agent may be merged or consolidated, or to which the assets and business of such Paying Agent may be sold, shall be deemed the successor of such Paying Agent for the purposes of this Indenture. If the position of Paying Agent in the State of Virginia, or in the Borough of Manhattan, City and State of New York, shall become vacant for any reason, the Commission shall, within thirty (30) days thereafter, appoint a bank or trust company located in the City of Norfolk or the City of Richmond, Virginia, or in said Borough of Manhattan, as the case may be, as such Paying Agent to fill such vacancy; provided, however, that if the Commission shall fail to appoint such Paying Agent within said period, the Trustee shall make such appointment.

SECTION 1303. Any notice, demand, direction, request or other instrument authorized or required by this Indenture to be given to or filed with the Commission or the Trustee shall be deemed to have been sufficiently given or filed for all purposes of this Indenture if and when sent by registered mail, return receipt requested:

to the Commission, if addressed to State Highway Commission, Richmond, Virginia;

to the Trustee, if addressed to National Bank of Commerce of Norfolk, Norfolk, Virginia, or to any successor Trustee, if addressed to it at its principal office.

All documents received by the Trustee under the provisions of this Indenture shall be retained in its possession, subject at all reasonable times to the inspection of the Commission, the Consulting Engineers, each principal underwriter, any bondholder, and the agents and representatives thereof.

SECTION 1304. Except as herein otherwise expressly provided, nothing in this Indenture expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the parties hereto and the holders of the bonds issued under and secured by this Indenture any right, remedy or claim, legal or equitable, under or by reason of this Indenture or any provision hereof, this Indenture and all its provisions being intended to be and being for the sole and exclusive benefit of the parties hereto and the holders from time to time of the bonds issued hereunder.

SECTION 1305. Nothing in the bonds or coupons or in this Indenture shall be construed as pledging the faith and credit of the State or to create any debt of the State, or to convey or mortgage any Project or any part thereof, but such bonds and the interest thereon shall be payable solely from the funds herein provided therefor.

SECTION 1306. In case any one or more of the provisions of this Indenture or of the bonds or coupons issued here-

under shall for any reason be held to be illegal or invalid, such illegality or invalidity shall not affect any other provision of this Indenture or of said bonds or coupons, but this Indenture and said bonds and coupons shall be construed and enforced as if such illegal or invalid provision had not been contained therein.

SECTION 1307. No covenant, stipulation, obligation or agreement contained herein shall be deemed to be a covenant, stipulation, obligation or agreement of any present or future member, agent or employee of the Commission in his individual capacity, and neither the members of the Commission nor any official executing the bonds shall be liable personally on the bonds or be subject to any personal liability or accountability by reason of the issuance thereof. This Indenture is executed with the intent that the laws of the State of Virginia shall govern its construction.

SECTION 1308. The principal underwriters shall be under no obligation to any bondholder for any action that they may or may not take or in respect of anything that they may or may not do by reason of any information contained in any reports or other documents received by them under the provisions of this Indenture. The immunities and exemptions from liability of the principal underwriters hereunder shall extend to their partners, directors, successors, employees and agents.

SECTION 1309. This Indenture may be executed in multiple counterparts, each of which shall be regarded for all purposes as an original; and such counterparts shall constitute but one and the same instrument.

SECTION 1310. Any headings preceding the texts of the several articles hereof, and any table of contents or marginal notes appended to copies hereof, shall be solely for convenience of reference and shall not constitute a part of this Indenture, nor shall they affect its meaning, construction or effect.

IN WITNESS WHEREOF, the State Highway Commission has caused this Indenture to be executed in its behalf by the State Highway Commissioner, the Chairman of said Commission, and its official seal to be impressed hereon and attested by its Secretary, and National Bank of Commerce of Norfolk has caused this Indenture to be executed in its behalf by its President or a Vice President and its corporate seal to be impressed hereon and attested by its Cashier or an Assistant Cashier, all as of the day and year first above written.

STATE HIGHWAY COMMISSION

(SEAL) By
State Highway Commissioner,
Chairman of said Commission

Attest:

.....
Secretary

NATIONAL BANK OF COMMERCE OF NORFOLK
Trustee

(SEAL) By
Vice President

Attest:

.....
Cashier

We hereby approve the provisions of the foregoing Indenture.

.....
State Treasurer of Virginia

.....
State Comptroller of Virginia

COMMONWEALTH OF VIRGINIA }
CITY OF RICHMOND } ss

Be it remembered that on the day of, 1954, before me, the subscriber, a notary public within and for said City and State, personally came J. A. Anderson, who is the State Highway Commissioner and Chairman of the State Highway Commission, and acknowledged that the name of said State Highway Commission was subscribed to the foregoing Indenture by him as such officer, and that the seal impressed hereon is the seal of said Commission and that said name was subscribed and said seal impressed by the direction and authority of said Commission, and that the foregoing Indenture is the free act and deed of said Commission, for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal on the day and year aforesaid.

.....
Notary Public

My commission expires

(Seal)

COMMONWEALTH OF VIRGINIA }
CITY OF NORFOLK } ss

Be it remembered that on the day of, 1954, before me, the subscriber, a notary public within and for said City and State, personally came Edwin R. Mackethan, who is a Vice President of said National Bank of Commerce of Norfolk, and acknowledged that the name of said bank was subscribed to the foregoing Indenture by himself as Vice President thereof, and that the seal impressed thereon is the seal of said bank and that said name was subscribed and said seal impressed by the direction and authority of said bank, and that the foregoing Indenture is the free act and deed of said bank, for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal on the day and year aforesaid.

.....
Notary Public

My commission expires

(Seal)

Moved by Mr. Rawls, seconded by Mr. Barrow, that the following resolution be adopted, ratifying the publication of notice of sale of the Bonds:

**A RESOLUTION RATIFYING THE PUBLICATION
OF NOTICE OF SALE OF \$95,000,000 STATE
OF VIRGINIA TOLL REVENUE BONDS
(SERIES 1954).**

BE IT RESOLVED by the State Highway Commission, an agency of the State of Virginia, as follows:

Section 1. The action of the Secretary of the State Highway Commission in publishing in the Wall Street Journal, a financial newspaper published in New York City, and in The Daily Bond Buyer, a financial journal published in New York City, on October 18, 1954, of a notice calling for bids for \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), to bear interest at the rate of three per centum (3%) per annum, is hereby ratified and confirmed, such notice being in the following form:

NOTICE OF SALE

**\$95,000,000
STATE OF VIRGINIA
Toll Revenue Bonds
(Series 1954).**

Sealed bids will be received by the State Highway Commission, in the Auditorium of the Central Highway Office Building, 1221 East Broad Street, Richmond, Virginia, until 11 o'clock A.M., Eastern Standard Time,

October 27, 1954,

at which time and place all bids will be publicly opened and read, for \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), dated September 1, 1954, maturing September 1, 1994, and bearing interest at the rate of three per centum (3%) per annum, payable semi-annually on March 1 and September 1 in each year,

Coupon bonds in the denomination of \$1,000 registrable as to principal alone, and registered bonds without coupons in denominations of \$1,000 or any multiple thereof, interchangeable as provided in the Trust Indenture securing said bonds. Interest on coupon bonds and principal of such bonds, unless registered, payable at the principal office of National Bank of Commerce of Norfolk, in the City of Norfolk, Virginia, or at the option of the holder, at the principal office of

Chemical Bank and Trust Company, in New York, N. Y.; principal of registered bonds without coupons and of coupon bonds registered as to principal payable at the principal office of the Trustee; interest on registered bonds without coupons payable by check or draft mailed to the registered owner.

The bonds at the time outstanding may be redeemed, on thirty (30) days' published notice and otherwise as provided in the Trust Indenture, either (a) in whole, on any date not earlier than Sept. 1, 1959, at the option of the Commission, from any moneys that may be made available for such purpose, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 5% of such principal amount if redeemed on or prior to August 31, 1964, 4% if redeemed thereafter and on or prior to August 31, 1969, 3% if redeemed thereafter and on or prior to August 31, 1974, 2% if redeemed thereafter and on or prior to August 31, 1979, 1% if redeemed thereafter and on or prior to August 31, 1984, and without premium if redeemed thereafter, or (b) in part, on any interest payment date not earlier than September 1, 1959, from moneys in the State of Virginia Toll Revenue Bonds (Series 1954) interest and Sinking Fund, at the principal amount of the bonds to be redeemed, together with the interest accrued thereon to the date fixed for redemption, plus a premium of 3% of such principal amount if redeemed on or prior to March 1, 1964, 2% if redeemed thereafter and on or prior to March 1, 1969, 1% if redeemed thereafter and on or prior to March 1, 1974, 1% if redeemed thereafter and on or prior to March 1, 1979, 1% if redeemed thereafter and on or prior to March 1, 1984, and without premium if redeemed thereafter. If less than all of the bonds shall be called for redemption, the particular bonds or portions of registered bonds without coupons to be redeemed shall be selected by lot as provided in the Trust Indenture.

The bonds will be issued for the purpose of (a) providing funds, with other funds available for such purpose, for refunding or paying at their respective maturities all outstanding bonds of an issue known as "State of Virginia Toll Revenue Bonds (Series 1949)" heretofore issued and for the payment of which there are pledged revenues of (i) the ferry properties commonly known as the "Chesapeake Ferries", (ii) the bridges known as the "James River Bridges", and (iii) the bridge over the York River between Yorktown, in York County, and Gloucester Point, in Gloucester County, known as the "York River Bridge", (b) paying the cost of a bridge across the Rappahannock River, extending from Greys Point in Middlesex County, to a point in the vicinity of White Stone in Lancaster County, known as the "Rappahannock River Bridge", and (c) paying the cost of a combined bridge and tunnel project across Hampton Roads and approaches and approach highways thereto, known as the "Hampton Roads Crossing", including the cost of bus facilities for the transportation of passengers through or over said project and provision of a sum for the payment of employment severance benefits (the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing, and the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, being collectively known as the "Projects").

The bonds will be issued under the provisions of and secured by a Trust Indenture to be dated as of September 1, 1954, by and between the State Highway Commission, an agency of the State of Virginia, and National Bank of Commerce of Norfolk, Norfolk, Virginia, as Trustee. The principal of and the interest on the bonds will be payable solely from the State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund, which fund is pledged to and charged with the payment of the principal of and interest on all bonds issued under the Trust Indenture. The Trust Indenture provides for the fixing and charging by the Commission of tolls for the use of the Projects sufficient to provide funds to pay the cost of maintaining, repairing and operating the Projects and to pay the principal of and the interest on all bonds issued under the Trust Indenture as the same shall become due and payable, and to create reserves for such purposes.

No bid for less than all of the bonds offered or for less than 97.50% of par value plus accrued interest will be entertained. The bonds will be awarded to the bidder offering the highest price for the bonds.

Each bid must be submitted on a form to be furnished by the undersigned, must be enclosed in a sealed envelope marked "Bid for \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954)", addressed to the State Highway Commission, 1221 East Broad Street, Richmond, Virginia, and must be accompanied by a certified or bank cashier's check for \$950,000, payable unconditionally to the State Treasurer of Virginia, on which no interest will be allowed. Award or rejection of bids will be made by the Commission on the date above stated for the receipt of bids, and the checks of unsuccessful bidders will be returned immediately. The check of the successful bidder will be held uncashed as security for the performance of his bid, but in the event the successful bidder shall fail to comply with the terms of his bid, the check may then be cashed and the proceeds thereof retained as and for full liquidated damages.

The right to reject any and all bids is reserved.

All of the bonds will be delivered in definitive form as coupon bonds on or about November 25, 1954, at the principal office of National Bank of Commerce of Norfolk, Norfolk, Virginia, or at the office of Chemical Bank and Trust Company, 50 Broad Street, New York City, N. Y., at the purchaser's choice, upon payment of the purchase price of said bonds by a certified or bank cashier's check or checks payable in New York Clearing House funds to the order of the State Treasurer of Virginia, and the good faith check of the purchaser will thereupon be returned.

Bid forms and copies of the Official Statement, the Engineering Report of Parsons, Brinckerhoff, Hall and Macdonald, the Traffic Report of De Luns, Cather and Company, and Wilbur Smith and Associates, and the Trust Indenture under the provisions of which the bonds are to be issued and secured may be obtained by application to the undersigned or to Allen and Company, 80 Broad Street, New York, or to Willis, Kenny and Ayres, Inc., 21 North 8th Street, Richmond 19, Virginia.

There will be furnished at the time of delivery the usual closing papers, including a certificate stating that there is no litigation pending affecting the validity of the bonds, and the unqualified approving opinion of Mitchell and Pershing, New York, New York, on the bonds.

By Order of the STATE HIGHWAY COMMISSION

Secretary.

Section 2. The form referred to in the Notice of Sale set forth in Section 1 above on which all bids are required to be made shall be substantially as follows:

BID FOR

\$95,000,000
STATE OF VIRGINIA
Toll Revenue Bonds
(Series 1954)

....., 1954

State Highway Commission,
1221 East Broad Street,
Richmond, Virginia

Sirs:

Upon the terms and conditions set forth in the Notice of Sale, which is hereby made a part of this bid, we hereby offer to pay
..... DOLLARS (\$.....), plus accrued interest from September 1, 1954, to the date of delivery for all, but no part less than all, of \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), bearing interest at the rate of three per centum (3%) per annum.

If this bid is accepted, the undersigned are to act as the "principal underwriters" as defined in the Trust Indenture securing said bonds.

We enclose herewith certified or bank cashier's check, payable to the order of the State Treasurer of Virginia for \$950,000, which check is to be applied in accordance with said Notice of Sale.

(no addition or alteration, except as provided above, is to be made to this bid)

Section 3. This resolution shall become effective immediately.

Moved by Mr. Watkins, seconded by Mr. Rogers that the following resolution be adopted:

A RESOLUTION APPROVING THE FORM OF THE PROPOSED OFFICIAL STATEMENT IN RELATION TO \$95,000,000 STATE OF VIRGINIA TOLL REVENUE BONDS (SERIES 1954) AND AUTHORIZING THE SIGNING THEREOF.

BE IT RESOLVED by the State Highway Commission, an agency of the State of Virginia, that the proposed Official Statement of the State Highway Commission in connection with the issuance of \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), is hereby approved in the form of the proposed Official Statement which is filed simultaneously herewith with the Secretary of the State Highway Commission and has the following notation endorsed thereon:

"Form of Official Statement
authorized by resolution
adopted on October 19, 1954

(Signed by) J. A. Anderson,
State Highway Commissioner
and Chairman of the State
Highway Commission"

with such changes in form as may be approved by the State Highway Commissioner and Chairman of the State Highway Commission, his signing of such Official Statement to be conclusive evidence of changes, and the principal underwriters to which said bonds shall be awarded are hereby authorized to distribute in connection with their offering of said bonds copies of said Official Statement.

**State
Highway Commission
Of Virginia**

Relating to the issuance of

\$95,000,000

**State of Virginia
Toll Revenue Bonds
(Series 1954)**

Legal Opinion by Messrs. Mitchell and Perding, New York, N. Y.

Engineers Report by Messrs. Frank, Hoff, Hill & Macdonald, New York, N. Y.

Traffic Report by De Looy, Collier & Company, Chicago, Ill. and Wilbur Smith
and Associates, New Haven, Conn.

PROPOSED OFFICIAL STATEMENT

**\$95,000,000
STATE OF VIRGINIA
3%
Toll Revenue Bonds (Series 1954)**

Dated September 1, 1954

Due September 1, 1994

Payable solely from the revenues of the Projects hereinafter described.

Issuable as coupon bonds, registrable as to principal, in the denomination of \$1,000, and as registered bonds without coupons in denominations of \$1,000 or any multiple thereof, and interchangeable as provided in the indenture. To be initially issued as coupon bonds. Semi-annual interest (March 1 and September 1) and principal of coupon bonds not registered as to principal are payable at the National Bank of Commerce of Norfolk, in Norfolk, Virginia, or at Chemical Bank & Trust Company, New York City, at holder's option. Principal of registered bonds without coupons and of coupon bonds registered as to principal is payable at the National Bank of Commerce of Norfolk, in Norfolk, Virginia, as Trustee.

Redeemable prior to maturity, on 30 days' published notice, either in whole on any date not earlier than September 1, 1959, from any moneys made available for such purpose, or in part (by lot) on any interest payment date not earlier than September 1, 1959, by operation of the Sinking Fund, at the following prices and accrued interest to the date fixed for redemption:

	Redemption Price	
	Sinking Fund	As a Whole
September 1, 1959 to and including August 31, 1964.....	103	105
September 1, 1964 to and including August 31, 1969.....	102½	104
September 1, 1969 to and including August 31, 1974.....	102	103
September 1, 1974 to and including August 31, 1979.....	101½	102
September 1, 1979 to and including August 31, 1984.....	101	101
September 1, 1984 and thereafter.....	100	100

NATIONAL BANK OF COMMERCE OF NORFOLK, TRUSTEE, NORFOLK, VIRGINIA

Price and accrued interest

Interest on the bonds is exempt, in the opinion of Bond Counsel, from all present Federal Income Taxes. The State Revenue Bond Act, with respect to bonds issued thereunder, provides "Such bonds and the income thereof shall be exempt from all taxation within the state."

The bonds are to be issued under and secured by a Trust Indenture between the State Highway Commission, an agency of the State of Virginia, and the National Bank of Commerce of Norfolk, Norfolk, Virginia, as Trustee, which provides for the issuance of the bonds and of additional bonds under the limitations therein and sets forth and fully defines, among other things, the duties and responsibilities of all parties with respect to the custody and application of the proceeds of the bonds, the construction of the Projects to be constructed, the collection and disposition of revenues, the proper maintenance, repair and operation of the Projects, the conservation and application of all funds, the safeguarding of moneys on hand or on deposit, and the rights and remedies of the Trustee and the holders of the bonds.

The State of Virginia is not obligated to pay the bonds or the interest thereon except from tolls and revenues of the Projects and the faith and credit of the State are not pledged but, as set forth on page 5, the State Highway Commission may contribute funds toward the payment of principal of and interest on the bonds to be offered and in addition may contribute funds toward the operation, maintenance and construction of the Projects for which these bonds are to be sold, but may not obligate itself to do so.

The bonds are offered for delivery when, as and if issued and subject to the approval of legality by Mitchell and Pershing, New York City, Bond Counsel to the State Highway Commission.

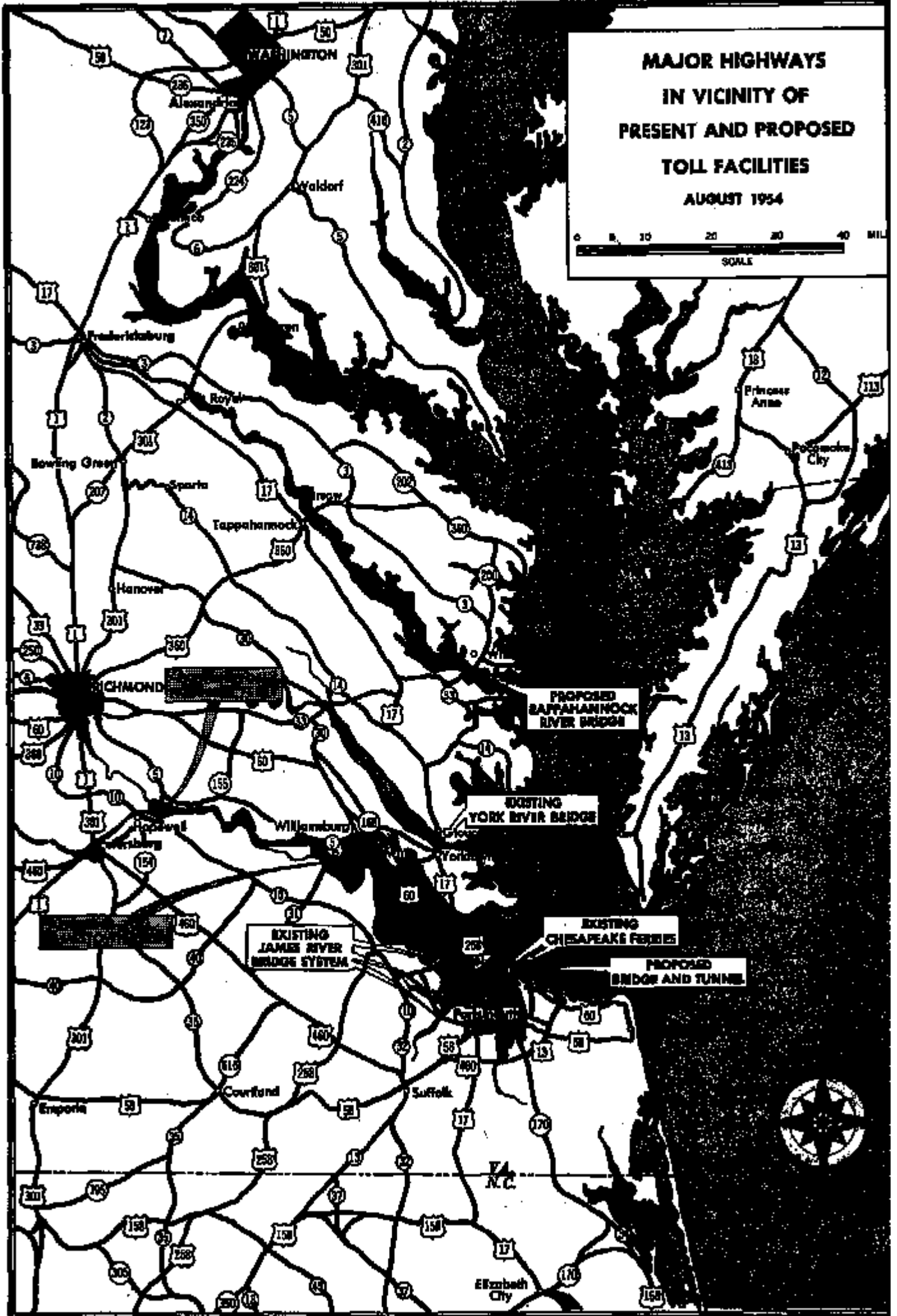
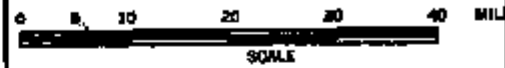
It is expected that delivery of the definitive bonds will be on or about November 23, 1954.

This Official Statement does not constitute an offer to sell bonds to any State or any person to whom it is unlawful to make such sale in such State. No dealer, salesman or any other person has been authorized to give any information or make any representation, other than those contained herein, in connection with the offering of these bonds, and if given or made, such information or representation must not be relied upon.

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**MAJOR HIGHWAYS
IN VICINITY OF
PRESENT AND PROPOSED
TOLL FACILITIES
AUGUST 1954**





COMMONWEALTH OF VIRGINIA



DEPARTMENT OF HIGHWAYS RICHMOND 19, VA.

ERRON, COMMISSIONER
HOW. LAWRENCEVILLE, VA.
W. H. MARTINSVILLE, VA.
TARZEWELL, VA.
E. NELSON, Mt. JACKSON, VA.
FRANKLIN, VA.
E. ROGERS, HAMILTON, VA.
I. WATKINS, JR., SOUTH BOSTON, VA.
A. WRIGHT, TAPPANNOCK, VA.

BURTON MARYE, JR.,
DEPUTY COMMISSIONER & CHIEF ENGINEER
R. P. ELLISON, EXECUTIVE ASSISTANT
W. R. BLIDDEN, ASSISTANT CHIEF ENGINEER
H. H. HARTON, ASSISTANT CHIEF ENGINEER
F. A. DAVIS, PURCHASING AGENT
J. P. MILLS, JR.,
TRAPING & PLANNING ENGINEER
S. D. FELIX, RIGHT OF WAY ENGINEER
C. J. ALLARD, AUDITOR

October —, 1954

OFFICIAL STATEMENT of the STATE HIGHWAY COMMISSION relating to the State of Virginia Toll Revenue Bonds (Series 1954) Dated September 1, 1954

This Official Statement, which includes the cover page, was prepared by this Office and sets forth information relating to certain toll revenue projects of the State Highway Commission and to the \$95,000,000 Toll Revenue Bonds (Series 1954) of the State of Virginia, dated September 1, 1954, to be issued by the State Highway Commission as an agency of the State of Virginia.

STATE HIGHWAY COMMISSION AND ITS POWERS

Membership

The Commission consists of nine members appointed by the Governor of the Commonwealth, subject to approval of the General Assembly, for terms of four years each.

The present members of the Commission and the dates of expiration of their terms of office are:

JAMES A. ANDERSON, <i>Commissioner and Chairman,</i> of Lexington	Term expires June 30, 1958
HOWARD C. ROGERS, of Hamilton.....	Term expires June 30, 1958
WILLIAM A. WRIGHT, of Tappahannock.....	Term expires June 30, 1958
S. S. FLYTHE, of Martinsville.....	Term expires June 30, 1957
SOL W. RAWLS, of Franklin.....	Term expires June 30, 1957
BURGESS E. NELSON, of Mount Jackson.....	Term expires June 30, 1956
SAMUEL D. MAY, of Tarzwell.....	Term expires June 30, 1956
EMORY P. BARROW, of Lawrenceville.....	Term expires June 30, 1955
TUCKER O. WATKINS, JR., of South Boston, Va.....	Term expires June 30, 1955

Powers

By virtue of Chapter 399 of the Acts of Virginia of 1940, the Commission was authorized and empowered,

- (a) to acquire by purchase or by condemnation and to construct, improve, operate and maintain any one or more of the bridge and ferry projects mentioned in said Chapter 399 including, among others,

- (i) the ferry properties (hereinafter sometimes collectively called the "Chesapeake Ferries"), consisting of the properties commonly known as the "Newport News Ferry", operating across Hampton Roads from the City of Newport News to Pine Beach in the City of Norfolk, and as the "Old Point Ferry", operating from Old Point in Elizabeth City County (City of Hampton) across Hampton Roads to Willoughby in the City of Norfolk.

- (ii) the bridge properties (hereinafter sometimes collectively called the "James River Bridges"), owned by the James River Bridge System, a Virginia corporation, comprising the existing bridges across the James, Chuckatuck and Nansemond rivers, together with connecting roads, in the City of Warwick, counties of Isle of Wight and Nansemond.

- (iii) a bridge across the York River (hereinafter sometimes called the "York River Bridge"), extending from a point within the Town of Yorktown, in York County, or within York County, to Gloucester Point or to some point in Gloucester County, and approaches thereto, and

- (iv) a bridge across the Rappahannock River (hereinafter sometimes called the "Rappahannock River Bridge"), extending from Greys Point, or its vicinity, in Middlesex County, to a point in the vicinity of White Stone, in Lancaster County, or at some other feasible points in the general vicinity of said two points, and approaches thereto;

- (b) to issue revenue bonds of the State of Virginia, payable solely from earnings, to pay the cost of such projects;
- (c) to fix and collect tolls and other charges for the use of such projects; and
- (d) to couple or unite into one unit for financing purposes any two or more of such projects.

Acting under said Chapter 399 the Commission determined to combine the Chesapeake Ferries, the James River Bridges, the York River Bridge and the Rappahannock River Bridge for financing purposes. The Commission duly issued State of Virginia Toll Revenue Bonds (Series 1949) in the aggregate principal amount of \$19,000,000 to acquire the Chesapeake Ferries and the James River Bridges and to construct the York River Bridge, but the issuance of the bonds to pay the cost of constructing the Rappahannock River Bridge was deferred.

By virtue of the State Revenue Bond Act (Code of Virginia, Sections 33-227 to 33-265, inclusive), as amended by Chapter 319 of the Acts of Virginia of 1954, the Commission is

authorized to issue revenue bonds of the State for the combined purpose of providing funds to pay the cost of the Rappahannock River Bridge, the cost of the proposed Hampton Roads Crossing (hereinafter more particularly described) and to provide funds to retire the State of Virginia Toll Revenue Bonds (Series 1949) which are now outstanding.

The Commission is also authorized to include, as a part of the Hampton Roads Crossing, bus facilities for the transportation of passengers and to provide for the payment of employment severance benefits to employees of the Chesapeake Ferriss.

Contributions at the Discretion of the Commission

Section 33-248, Code of Virginia (included in the State Revenue Bond Act) is as follows:

"The Commission may, in its discretion, use any part of funds available for the construction of State highways, in any construction district in which any project is wholly or partly located, to aid in the payment of the cost of such projects and for the payment, purchase or redemption of revenue bonds issued in connection with any such project, or in connection with any such project and any one or more other projects. The Commission may also, in its discretion, use any part of funds available for the maintenance of State highways, in any construction district in which any project is wholly or partly located, to provide for the operation, maintenance and repair of any such project and for the payment of interest on revenue bonds issued in connection with any such project, or in connection with any such project and any one or more other projects.

"Provided, however, that in the event the Commission uses any part of the fund available to itself for the construction of roads in the State Highway System without reference to construction districts, commonly called the 'gap fund', for any purpose permitted by this section, it shall not expend in excess of three-eighths of the amount of such fund, including other amounts of such fund that may be expended in the three districts in which such projects are located; and provided further that in no case shall any of the funds of any construction district other than those in which the projects are located be used for the purposes of this article."

The Supreme Court of Appeals of Virginia in *Almond vs. Gilmer* (51 S.E. (2d) 272) stated, with respect to the statutory provision above quoted:

"It contemplates that the Commission may allocate funds for the maintenance, repair and operation not otherwise allocated or the State legislature, in its discretion, may make an appropriation for that purpose, yet unless and until other funds be so voluntarily made available, the receipts are charged with the cost of maintenance, repair and operation, and the right of the holders of the bonds to be paid interest and principal is therefore subordinate thereto and the State is not even indirectly or contingently obligated to make appropriation for their payment.

"It is true that the Commission and the State of Virginia may stand by as benevolent protectors of this enterprise of their creation. The one may allocate any funds not

otherwise allocated or prohibited, to aid in its acquisition, maintenance and operation, and the other may make such appropriations toward those ends as it may desire. Yet neither is required to assume such philanthropic role."

The Power of Condemnation

The Commission is authorized and empowered by the State Revenue Bond Act, whenever a reasonable price can not be agreed upon or whenever the owner is legally incapacitated or is absent or is unable to convey valid title or is unknown, to acquire by condemnation any land, rights, easements, franchises and other property deemed necessary or convenient for the purpose of constructing any project or portion thereof.

The Commission has been advised by the office of the Attorney General of the Commonwealth that the Commission, in the exercise of its powers of condemnation, is governed by the procedure for condemning land and other property for State highway purposes and that the procedure to be followed includes the power of the State Highway Commissioner to file with the appropriate clerk of court his certificate as to the fair value of the land taken and damage done and thereupon immediately enter upon the land to be taken.

GENERAL INFORMATION

All of the present and proposed facilities included in this bond issue are in the southeastern part of Virginia and will serve metropolitan centers, agricultural areas and resort areas. Hampton Roads, at the mouth of the James River, is the water area surrounded by Norfolk, Portsmouth, South Norfolk, Hampton, Newport News and Warwick, and is frequently referred to as the world's finest harbor. The ice-free ports of Hampton Roads are so situated geographically that they are ideal for serving shippers of the East, South and Midwestern areas of the nation. Over two hundred steamship lines serve this port, which ships more coal and tobacco than any other in the country.

The Norfolk Metropolitan Area, including Portsmouth, Newport News, and other nearby areas, is a major scene of industrial activity, particularly in shipbuilding and related services. One of the more important is the Newport News Shipbuilding & Drydock Corporation, builder of the *S.S. America*, the *S.S. United States* and many other famous vessels. Large fertilizer plants of the Smith-Douglas Company, Armour Fertilizer Works and several others contribute to the over-all business activity, and currently a multi-million dollar oil refinery is being constructed by the Pan-American Oil Company, and two additional such refineries are planned by others. One of the country's largest chemical companies has recently acquired a large tract of land in this area with the idea of erecting a major chemical unit.

A very large U. S. Navy shipbuilding yard is located at Portsmouth and the largest U. S. Naval Base is located at Norfolk. The U. S. Naval Air Station at Norfolk was commissioned in 1918 and is now the greatest naval aviation station in the world. There are approximately 35,000 civilians under the jurisdiction of the Naval Base and the receiving station processes approximately 8,000 men per month. There are approximately 130,000 persons living in and around the Navy Base. Rear Admiral I. N. Kiland, Commandant Fifth Naval District, wrote the following letter to the Commissioner of Highways with regard to the proposed project:

HEADQUARTERS
FIFTH NAVAL DISTRICT
NORFOLK 11, VIRGINIA

September 30, 1954

Major General J. A. Anderson
Commissioner of Highways
Commonwealth of Virginia
Richmond, Virginia

My dear General Anderson:

I have observed with great interest the rapid succession of events leading to the first stages of the construction of the bridge-tunnel in Hampton Roads. I have been particularly impressed with the speed which has characterized all of the many preliminary steps which have to be taken prior to the actual construction. It is understood that bids on the first phase of the project will be opened within the next 10 days and that in all probability actual construction of the island structures will commence before the end of this calendar year.

The Navy is looking forward to the early completion of this facility with keen anticipation. When this new route is opened, it will provide vastly improved means of ingress and egress for highway traffic to and from the Naval installations in the Hampton Roads area. A considerable portion of such traffic consists of truck shipments between Norfolk and other Naval activities and supply points to the northward and northeastward of Norfolk. Furthermore, it will also greatly benefit the thousands of our Naval personnel who must now depend upon the ferries to gain access to cities lying to the north and west. With time for leave and liberty very limited, it is important that delays en route be reduced to a minimum.

A second advantage to the Navy will be a marked reduction in congestion of traffic in the vicinity of the Naval Base now generated by the operation of the Pine Beach-Newport News ferry.

Because of the mutual advantages of the Hampton Roads bridge-tunnel to both the Navy and the public as a whole, I would like to assure you of my earnest desire to cooperate in every way possible with your department during the construction of this facility so that the benefits may be enjoyed by all as soon as possible.

With kindest regards,

Sincerely,

(Signed)

I. N. KILAND, *Rear Admiral*

U. S. Navy Commandant Fifth Naval District

The U. S. Army maintains bases at Fort Eustis, Fort Story and Fort Monroe, while the U. S. Air Force has a large station at Langley Field. Industrial and commercial activity have increased 25% and 34%, respectively, since 1940, and every indication points towards continued expansion to serve a larger market in consumers' durable goods and production. A greater portion of the population is permanent and the trend in transients is diminishing percentagewise. A continued expansion of the population can be expected to increase the labor supply and accordingly continue the growth of industry in this area.

Eight trunk line railroads serve the area, giving adequate rail service to the entire Eastern part of the country, and provide industry with convenient and reasonable service.

Strong and growing factors in the development of the Hampton Roads area are the nationally famous beaches and resorts of Virginia Beach, Ocean View, and Buckroe Beach, which yearly receive an increasing business from an ever-increasing number of tourists drawn from all over Virginia and the surrounding states.

The lower peninsula area, which includes Newport News, Hampton, Warwick, and York County, was settled in 1607, with the first permanent English settlement on this continent. Colonial Williamsburg, Jamestown Island and Yorktown are points of national interest visited annually by hundreds of thousands of tourists.

The industrial and business picture on the lower peninsula has always been one of marine and shipbuilding and coal shipment. Transportation, mainly in connection with marine and import trade, rates second in importance with fishing, seafood, and agriculture following. The shipyard industry has launched a program of peacetime operation including reconversion and alterations, as well as new shipping and power plant equipment.

Various public and private agencies are at work developing and expanding the seafood industry, especially in new outlets such as modern processing and marketing. This is true also of the agricultural industry with emphasis in dairying, poultry, and stock raising.

The economic stability of the southeastern area of Virginia, depending upon the U. S. Army, Navy and Air Force, importing and exporting, shipbuilding, manufacturing, agriculture, fishing, transportation, and tourist trade, is diversified and expected to continue to grow.

HIGHLIGHTS

1. In 1953, 50,000 jobs and \$160,000,000 of payrolls in Virginia and neighboring states depended on activities connected with the Virginia ports.
2. Thirty thousand jobs and \$105,000,000 of payrolls in the Hampton Roads area were port-dependent and port-related in 1953. This equals 13 per cent of total civilian employment and 12 per cent of the income for this area.
3. Approximately 12,500 jobs and \$40,000,000 of payrolls in Virginia outside the Hampton Roads area were generated by port-dependent and port-related activities in 1953.
4. Some 7,500 jobs with annual payrolls of \$25,000,000 in other states were dependent in 1953 upon activities in the Virginia ports.
5. In addition to the foregoing, 74 port-oriented plants in the Hampton Roads area and nearby territory in 1953 employed 7,400 workers with payrolls of \$22,000,000.
6. In 1953, port-dependent firms exclusive of the railroads made payments of \$15,200,000 for the purchase of inventory and supplies, and for rent, insurance, communications, and legal expenses in Virginia.

7. One-sixth of the total combined freight revenue of the Chesapeake and Ohio, Norfolk and Western, and Virginian Railways, and the Norfolk and Portsmouth Belt Line Railroad Company in 1953 was derived from hauling coal and other cargo to and from Hampton Roads ports.

8. Port-dependent and related business firms exclusive of the railroads paid about \$1,750,000 in local taxes in 1953 to the cities and counties in the Hampton Roads area. Local tax officials reported a total of \$1,411,518 from an incomplete list.

9. More than \$2,000,000 in selected tax payments imputed to port activities was paid to the State government in 1952 as individual and corporate income taxes, State business license taxes, and by the railroads.

10. The imputed tax payments of the railroads derived from port business in 1953 to local governments throughout Virginia were \$569,000; to the State government, \$980,000.

11. Port and related activities in the Hampton Roads area generate the same amount of employment, income, and taxes as a city of 96,000 people. The secondary effect on areas outside the port provides employment for some 40,000 people in other parts of Virginia and some 25,000 people in other states.

12. In 1951, 20.6 per cent of the total retail sales in Virginia were made in the Hampton Roads area. The total of these sales was \$558,000,000. The primary and secondary port workers account for roughly 12 per cent or about \$67,000,000 of such sales.

13. Many business opportunities for brokers, representatives of nation-wide manufacturers and distributors and the like are partially or totally dependent upon port business. The impact of such activities extends beyond the port area.

14. A considerable number of manufacturing and distributing companies located in Virginia benefit from lower transportation rates on various raw materials and finished products because of the ports.

15. Commercial ships purchase food products and marine supplies and thus provide a sizeable market for agricultural and other products from many parts of Virginia.

16. The Virginia ports are important trade links between the producers and consumers of Virginia, many other states and various foreign countries.

Population—1950 Census

Norfolk	213,513	Warwick	39,875**
Portsmouth	80,039	Gloucester	10,848
South Norfolk	10,434	Northampton	10,012
Norfolk County	99,937	Lancaster	8,640
Princess Anne County..	86,877	Richmond	6,189
Virginia Beach	5,400	Middlesex	6,715
Newport News	42,358	Matthews	7,148
Hampton	60,994*		

*Hampton, now a city, combines the entire area which was formerly Hampton and Elizabeth City County.

**Warwick, now a city, comprises the total area formerly known as Warwick County.

The combined population of the Hampton Roads area for 1930, 1940, 1950, and estimates by the Norfolk Chamber of Commerce for 1954 are as follows:*

1930	1940	1950	1954
299,069	343,423	589,427	696,700

*The area whose population appears above at present is comprised of the Cities of Warwick, Hampton, Newport News, Norfolk, South Norfolk, Portsmouth, and Virginia Beach plus the Counties of Princess Anne and Norfolk.

THE EXISTING FACILITIES

James River Bridges

The James River Bridges constitute a 16½-mile link in U. S. Route 17, located in the City of Warwick, and Counties of Isle of Wight and Nansemond, Virginia, and include three long highway bridges, each with a movable span, crossing the James River and two tributaries, Chuckatuck Creek and Nansemond River, together with eleven miles of connecting highway.

This link comprises the portion of U. S. Route 17 between Newport News and Portsmouth, Virginia, which extends with its connection with U. S. Route 1 at Fredericksburg, Virginia, south to its terminus below Tampa, Florida.

The James River Bridges are more fully described in the Parsons, Brinckerhoff, Hall & Macdonald report summarized on page 47.

The State Highway Commission, after purchasing the system for \$5,600,000 from the James River Bridge System, a private corporation, began operation of the system on September 30, 1949.

A contract has been let for the reinforcing of the floor beams of the girder spans of the James River Bridge. Under the rehabilitation program, certain repairs and improvements are scheduled to be made to the bridges. These improvements and their estimated costs are itemized below:

Substructure repairs (all bridges)	\$1,048,000
Replacing present timber decks on movable spans with open steel grid flooring	270,000
Floor beams repairs on steel girder spans.....	64,000
Modernization of vertical lift equipment	50,000
Painting of truss spans	100,000
Bituminous surfacing of bridge roadways	75,000
Widening of the north approach to the main river crossing.....	35,000
Construction of two toll plazas and the purchase and installation of toll collection equipment	250,000
Total.....	\$1,892,000*

* Funds for these purposes are available in the Reserve Maintenance Fund under the trust indenture securing the outstanding bonds (Series 1949) and will be used for such purposes. As of August 31, 1954 the balance in this fund was \$2,092,574.

The York River Bridge

This toll facility, opened to traffic on May 7, 1952, carries U. S. Route 17 across the York River between Yorktown and Gloucester Point. In addition to serving the through north-south traffic on U. S. Route 17, it has many users destined to or originating at historic points of interest, such as the Colonial Battlefield Park at Yorktown and the restored Colonial Village at Williamsburg. The bridge also serves a number of naval, military and industrial establishments.

The York River Bridge is more fully described in the Parsons, Brinckerhoff, Hall & Macdonald report summarized on page 47.

Chesapeake Ferries

The Newport News-Pine Beach and the Old Point-Willoughby ferry lines are herein referred to as the "Chesapeake Ferries." The Commission has operated the ferries since March 1, 1946. They were purchased by the State Highway Commission as heretofore indicated and will no longer operate after completion of the Hampton Roads Bridge and Tunnel System (herein sometimes called the "Hampton Roads Crossing").

The over-all physical and operating condition of the entire fleet is very good. The following is a list of the Ferries presently owned and operated by the Commission:

Vessel	Type	Horse Power	Auto Capacity	Route
Richmond	Steam	1,500	60	Pine Beach-N.N.
Norfolk	Steam	1,500	60	Pine Beach-N.N.
Warwick	Diesel	1,600	50	Pine Beach-N.N.
Newport News	Diesel	1,600	50	Pine Beach-N.N.
Ocean City	Diesel	1,600	50	Pine Beach-N.N.
Hampton Roads	Steam	1,100	50	Willoughby-O.P.
Seawells Point	Diesel Electric	580	35	Willoughby-O.P.
Chesapeake	Diesel Electric	580	35	Willoughby-O.P.
Jamestown	Diesel Electric	580	35	Alternates
City of Hampton	Diesel	550	30	Alternates

Management

All present facilities are under the supervision of the State Highway Commission of Virginia. The Commission has always maintained a high standard of efficiency, honesty and experienced personnel.

STATE OF VIRGINIA

Ba

ASSETS

Revenue Funds:

CASH—CHANGE FUND		\$	15,000.00	
Cash in Bank—Revenue Fund—Trustee Acct.:				
Balance per Trustee.....	\$	253,896.65		
Less Req. in Transit.....		138,219.39		
			115,677.26	
Cash with Treasurer of Virginia:				
August, 1954 Revenue Collected.....			476,753.26	
Accounts Receivable			11,100.16	
Inventory—Fuel Oil			715.87	
Deferred Charges—Undistributed Labor.....			3,858.83	\$ 622,602.38

Reserve Maintenance Funds:

CASH IN BANK:				
Chesapeake Ferries Account:				
Balance per Trustee	\$	822,097.92		
Less Req. in Transit.....		898.00		
			821,199.92	
Toll Bridges Account:				
Balance per Trustee.....		498,821.82		
Less Req. in Transit.....		16,886.65		
			481,934.67	
Invested in Time Deposit Accounts:				
Toll Bridges			1,289,390.10	2,092,574.69

Sinking Funds:

CASH IN BANK:				
Bond Service Account.....	\$	213,438.64		
Redemption Account		2,598.59		
			216,037.23	
Invested in U.S. Savings Notes & Time Deposits:				
Bond Service Account.....		201,384.98		
Reserve Account		1,150,609.06		
			1,361,944.04	1,567,981.27

Construction Funds:

NET BOND PROCEEDS EXPENDED OR OBLIGATED:				
Chesapeake Ferries—Purchase	\$2,500,000.00			
Chesapeake Ferries—Improvements	1,373,631.76			
James River Bridge System.....	5,600,000.00			
George P. Coleman Bridge.....	9,828,159.77			
Expense Incident to Financing.....	117,581.92			
			\$18,917,983.45	
			<u>\$28,200,541.79</u>	

: BOND FUNDS

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LIABILITIES AND BALANCES

Revenue Funds:

Liability for Unredeemed Tickets.....	\$	65,400.58	
Unclaimed Wage Checks.....		95.84	
Fund Balance—			
Reserved for Future Transfers.....	\$	541,291.09	
Invested in Change Fund and Inventory.....		15,715.87	
		<u>557,106.46</u>	\$ 622,602.85

Reserve Maintenance Funds:

Retention on Contracts:			
Toll Bridges		8,510.13	
FUND BALANCES:			
Chesapeake Ferries		821,199.92	
Toll Bridges		<u>1,767,864.64</u>	2,092,574.69

Sinking Funds:

FUND BALANCES:			
Bond Service Account.....		414,773.62	
Reserve Account		1,150,609.06	
Redemption Account		<u>2,598.59</u>	1,567,981.27

Construction Account:

Reserve for Funds Expended or Obligated.....			<u>18,917,883.45</u>
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\$22,200,541.79

STATE HIGHWAY COMMISSION OF VIRGINIA

**COMPARATIVE STATEMENT
OPERATING INCOME AND EXPENSE**

Income	Fiscal Years Ending August 31				
	1950 (11 Months)	1951	1952	1953	1954
Chesapeake Ferries					
Toll Revenue.....	\$1,274,289	\$1,687,782	\$2,057,273	\$2,221,881	\$2,217,852
Property Rental.....	23,991	26,741	27,395	35,374	35,854
Other	2,287	2,587	5,561	11,181	6,629
Total—Chesapeake Ferries.....	<u>\$1,800,567</u>	<u>\$1,717,060</u>	<u>\$2,090,229</u>	<u>\$2,268,336</u>	<u>\$2,260,335</u>
James River Bridge System					
Toll Revenue.....	\$ 866,112	\$1,100,422	\$1,331,837	\$1,422,549	\$1,369,777
Property Rental.....	890	406	398	426	856
Other	1,190	27	499	528	1,445
Total—James River Bridge System	<u>\$ 867,692</u>	<u>\$1,100,855</u>	<u>\$1,332,729</u>	<u>\$1,423,501</u>	<u>\$1,371,578</u>
York River Bridge					
Toll Revenue.....	—	—	\$ 477,295*	\$ 783,128	\$ 768,852
Property Rental.....	—	—	25	44	96
Misc. Revenue.....	—	—	547	427	70
Total—York River Bridge.....	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 477,867</u>	<u>\$ 783,599</u>	<u>\$ 769,018</u>
Total Income.....	<u>\$2,168,259</u>	<u>\$2,817,915</u>	<u>\$3,900,825</u>	<u>\$4,425,486</u>	<u>\$4,400,781</u>
Expenses					
Administrative					
General	\$ 20,064	\$ 29,719	\$ 39,562	\$ 50,165	\$ 68,835
Chesapeake Ferries.....	25,585	40,565	47,471	57,748	68,720
James River Bridge System.....	14,694	18,885	19,933	21,889	23,189
York River Bridge.....	—	—	8,451	3,052	5,659
Total Administrative.....	<u>\$ 60,343</u>	<u>\$ 89,169</u>	<u>\$ 115,437</u>	<u>\$ 132,854</u>	<u>\$ 166,353</u>
Operation					
Chesapeake Ferries.....	\$ 771,002	\$ 790,603	\$ 921,887	\$1,012,779	\$1,060,007
James River Bridge System.....	89,159	102,284	91,070	94,220	129,410
York River Bridge.....	—	—	176,445	62,794	62,971
Total Operation.....	<u>\$ 860,161</u>	<u>\$ 892,887</u>	<u>\$1,189,402</u>	<u>\$1,169,793</u>	<u>\$1,242,388</u>
Maintenance and Repairs					
Chesapeake Ferries.....	\$ 86,761	\$ 156,807	\$ 199,650	\$ 223,585	\$ 408,374
James River Bridge System.....	20,179	46,359	38,209	41,118	47,861
York River Bridge.....	—	—	15,726	5,588	9,448
Total Maintenance and Repairs...	<u>\$ 106,940</u>	<u>\$ 203,166</u>	<u>\$ 253,585</u>	<u>\$ 270,291</u>	<u>\$ 465,683</u>
Total Expenses.....	<u>\$1,027,444</u>	<u>\$1,185,222</u>	<u>\$1,558,424</u>	<u>\$1,602,866</u>	<u>\$1,872,519</u>
Net Profit before Maintenance Reserves and Bond Interest Requirements					
	<u>\$1,140,815</u>	<u>\$1,632,693</u>	<u>\$2,342,401</u>	<u>\$2,822,620</u>	<u>\$2,528,212†</u>

* 1952 includes 7 months' operation of Gloucester-Yorktown Ferry and 4 months' operation of York Bridge.

† Net revenues for 1954 were lower because of extraordinary repairs and maintenance on the ferries.

Net revenues of the projects from September 1949 through August 1954 amounted to \$10,466,669 as compared to the original engineers' estimates for the same period of \$7,945,950. This amounts to an increase of 32% above estimates.

PURPOSE OF THIS ISSUE

The State of Virginia Toll Revenue Bonds (Series 1964) are to be issued for the purpose of (a) providing funds, together with other funds available for such purpose, for refunding or paying at their respective maturities all of the outstanding bonds of the issue known as "State of Virginia Toll Revenue Bonds (Series 1949)," (b) paying the cost of the Rappahannock River Bridge, and (c) paying the cost of the Hampton Roads Crossing, including the cost of bus facilities for the transportation of passengers through or over said project and a sum for the payment of employment severance benefits (the James River Bridges, the York River Bridge, the Rappahannock River Bridge, the Hampton Roads Crossing and the Chesapeake Ferries until the Hampton Roads Crossing shall be open for traffic being collectively called the "Projects"). The proceeds of the bonds shall be applied as follows:

To retire the callable Outstanding Bonds

Principal	\$15,197,000	
Premium	526,630	\$15,723,630

(Interest which will accrue on the callable outstanding Bonds from the last interest payment date to the date designated for redemption will be paid from the Sinking Fund under the trust indenture securing the Outstanding Bonds. There will be withdrawn from the Reserve Account in the Sinking Fund under the trust indenture securing the Outstanding Bonds and set aside in a special account with the trustee under said trust indenture the sum of \$887,125 to pay the principal of and the interest to accrue to their respective maturities on the remainder of the Outstanding Bonds.)

Severance benefits (Employees of Chesapeake Ferries).....		\$ 300,000
The cost of constructing the Hampton Roads Crossing, including bus facilities as hereinafter more fully stated (page 46).....		58,500,000
The cost of constructing the Rappahannock River Bridge as hereinafter more fully stated (page 47).....		16,500,000
Administrative, legal, financial, printing, expenses, etc.....		300,000
TOTAL		\$90,323,630
Portion of interest during construction (see page 18).....		8,450,000
TOTAL COST		\$98,773,630
Less: Minimum earnings expected from investment of the Construction Fund		1,148,630
BALANCE		\$92,625,000
Maximum bond discount.....		2,376,000
Principal amount of bonds		\$95,000,000

Interest on \$80,000,000 of bonds during the estimated period of construction of the Hampton Roads Crossing (30 months) and on \$10,000,000 of bonds during the estimated period of construction of the Rappahannock River Bridge (30 months) is capitalized. The estimated net revenues from existing facilities during the same periods, together with the interest so capitalized, will exceed the interest payable upon all of the bonds during such period by approximately \$8,022,000, thus affording additional protection to the bondholders.

Favorable bids have been received on the first two contracts on the Hampton Roads Crossing upon which bids have been requested and on all of the substructure and superstructure of the Rappahannock River Bridge. In view of these bids Parsons, Brinckerhoff, Hall & Macdonald have revised their estimates of cost (summarized on page 48) as set forth in their letter of October 11, 1964 (see page 48).

PROPOSED NEW FACILITIES

Hampton Roads Crossing

The Commission has adopted and approved plans for the construction of the Hampton Roads crossing. This crossing will consist of limited access highways, bridges and tunnel across Hampton Roads. This entire facility is shown on map facing page 14 and is more fully described in the Parsons, Brinckerhoff, Hall & Macdonald letter on page 43. The location and plan for the bridges and the tunnel included in this crossing have been approved by the Chief of Engineers and the Secretary of the Army. This new facility will provide an all-weather, 24-hour-a-day service across Hampton Roads, with approach highways that have almost throughout their entire length four lanes of traffic, thereby eliminating the costly and inadequate ferries now operating between Newport News and Pine Beach, in Norfolk, and between Hampton and Willoughby Spit in Norfolk.

Hampton Roads Project—Estimate of Project Cost

CONSTRUCTION :		
Section A — Structures	\$ 289,000	
Highway	1,017,000	\$ 1,256,000
Section B — Structures	\$ 5,085,000	
Highway	5,051,000	10,086,000
Section C — Tunnel	\$28,025,000	
Bridges	3,250,000	29,275,000
Section D — Structures	\$ 4,216,000	
Highway	2,102,000	6,818,000
BUILDINGS AND TOLL FACILITIES :		
Administration Building	\$ 280,000	
Maintenance Building and Yard.....	140,000	
Toll Facilities and Plaza.....	180,000	580,000
Total Cost of Construction.....		\$47,515,000
Buses, Terminals and Garage.....		815,000
Maintenance and Operating Equipment.....		850,000
Engineering		2,200,000
Borings, Including Supervision.....		250,000
Right-of-Way		3,000,000
Total		\$53,630,000
Contingencies 9.1%		4,870,000
Total Cost of Project.....		\$58,500,000

Rappahannock River Bridge

This new bridge will replace present ferry operations between Greys Point in Middlesex County and White Stone in Lancaster County, Virginia. The location and plan for the bridge have been approved by the Chief of Engineers and the Secretary of the Army.

In addition to linking it more closely to the second peninsula, known as the Middle Neck, the proposed bridge would provide a portion of the Northern Neck with more rapid access to the Hampton Roads areas and points farther south via a new free bridge, now completed by the Department of Highways across the Piankatank River, and the York River Bridge. It would also facilitate travel between the southeastern portion of the Northern Neck and the City of Richmond.

This project is more fully described on page 46 of the Parsons, Brinckerhoff, Hall & Macdonald letter.

Rappahannock River Bridge—Estimate of Project Cost

Substructure	\$ 5,450,000
Superstructure	7,950,000
Construction Cost	<u>\$13,400,000</u>
Engineering, Borings, Right-of-Way.....	525,000
Total	<u>\$13,925,000</u>
Contingencies 11.8%	1,575,000
Total Cost of Project.....	<u>\$15,500,000</u>

Insurance

After consultation with marine insurance brokers, the Consulting Engineers have determined that all risk insurance will be available on all projects in a sufficient amount. They have also determined that use and occupancy insurance will be available in the amount covering two years' revenue on the tunnel and one year on all other projects. Premiums necessary for adequate insurance coverage will be provided for in the operation and maintenance budget.

ESTIMATED REVENUES

The tabulations on pages 41 and 42 show the estimated gross and net revenues of the Projects, based on the estimates of De Lenz, Cather & Company and Wilbur Smith and Associates and the operation and maintenance expenses and reserves as estimated by Parsons, Brinckerhoff, Hall & Macdonald (see page 48), the estimated coverage of debt service based on the toll covenants (see page 18) and the estimated retirement of bonds by operation of the Sinking Fund (see page 19).

TRANSFER OF EXISTING FUNDS

Simultaneously with the delivery of the bonds, moneys then held by the State Treasurer for the credit of the State of Virginia Toll Projects Revenue Fund (a special fund created in the State Treasury under the provisions of the trust indenture securing the Series 1949 Bonds) will be deposited with the Trustee under the new indenture for deposit to the credit of the special account designated "1954 Revenue Fund-Trustee Account".

The balance in the Revenue Fund-Trustee Account, the State of Virginia Toll Projects Reserve Maintenance Fund and the State of Virginia Toll Revenue Bonds Interest and Sinking Fund (special funds created under the provisions of the trust indenture securing the Series 1949 Bonds) will be withdrawn by the trustee under said trust indenture and deposited with the Trustee under the new indenture for deposit to the credit of the special funds designated "1954 Revenue Fund-Trustee Account," "State of Virginia Toll Projects Reserve Maintenance Fund," and "Reserve Account" in the "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund," respectively. The moneys transferred to the "1954 Revenue Fund-Trustee Account" will provide immediate operating capital for the existing projects and, therefore, no provision for administrative expenses of the Commission is made from bond proceeds.

\$95,000,000 STATE OF VIRGINIA TOLL REVENUE BONDS (SERIES 1954)

Debt Service for Toll Covenant Purposes and Coverage

By Estimated Revenues

Fiscal Year Ending Aug. 31	Interest Payable from Construction Fund	Net Revenue Available	Interest at 5%	Provision for Principal in Toll Covenant (a)	Total Principal and Interest	Bonds Outstanding	Times Covered (b)
1955.....	\$1,200,000	\$ 2,562,000	\$ 2,850,000	—	—	\$95,000,000	1.32†
1956.....	1,200,000	2,684,000	2,850,000	—	—	95,000,000	1.88†
1957.....	1,050,000	2,892,000	2,850,000	—	—	95,000,000	1.38†
1958.....	—	4,244,000*	2,850,000	—	—	95,000,000	1.48†
1959.....	—	4,688,000	2,850,000	—	—	95,000,000	1.84†
1960.....	—	4,897,000	2,850,000	—	—	95,000,000	1.71†
1961.....	—	5,105,000	2,850,000	—	—	95,000,000	1.79†
1962.....	—	5,314,000	2,850,000	\$ 584,000	\$ 3,414,000	94,436,000	1.55
1963.....	—	5,522,000	2,839,080	734,000	3,587,000	93,792,000	1.54
1964.....	—	5,730,000	2,811,060	895,000	3,708,000	92,807,000	1.54
1965.....	—	5,886,000	2,784,210	1,013,000	3,797,000	91,709,000	1.55
1966.....	—	6,040,000	2,753,820	1,148,000	3,897,000	90,651,000	1.55
1967.....	—	6,196,000	2,719,590	1,298,000	4,018,000	89,353,000	1.54
1968.....	—	6,346,000	2,680,590	1,411,000	4,092,000	87,942,000	1.55
1969.....	—	6,496,000	2,638,280	1,563,000	4,201,000	86,379,000	1.54
1970.....	—	6,646,000	2,591,370	1,710,000	4,301,000	84,689,000	1.54
1971.....	—	6,796,000	2,540,070	1,839,000	4,379,000	82,836,000	1.55
1972.....	—	6,946,000	2,485,080	1,999,000	4,484,000	80,837,000	1.55
1973.....	—	7,097,000	2,435,110	2,161,000	4,586,000	78,678,000	1.54
1974.....	—	7,247,000	2,380,280	2,324,000	4,684,000	76,352,000	1.54
1975.....	—	7,393,000	2,290,680	2,456,000	4,746,000	73,897,000	1.54
1976.....	—	7,441,000	2,216,910	2,590,000	4,807,000	71,307,000	1.54
1977.....	—	7,536,000	2,139,210	2,731,000	4,870,000	68,576,000	1.54
1978.....	—	7,633,000	2,057,280	2,874,000	4,931,000	65,702,000	1.54
1979.....	—	7,730,000	1,971,060	3,024,000	4,995,000	62,678,000	1.54
1980.....	—	7,826,000	1,880,840	3,177,000	5,057,000	59,501,000	1.54
1981.....	—	7,924,000	1,785,030	3,313,000	5,098,000	56,188,000	1.55
1982.....	—	8,019,000	1,685,640	3,462,000	5,148,000	52,726,000	1.55
1983.....	—	8,116,000	1,581,780	3,627,000	5,209,000	49,099,000	1.55
1984.....	—	8,213,000	1,472,970	3,799,000	5,272,000	45,300,000	1.55
1985.....	—	8,257,000	1,359,000	3,941,000	5,300,000	41,859,000	1.55
1986.....	—	8,300,000	1,240,770	4,087,000	5,328,000	37,272,000	1.55
1987.....	—	8,343,000	1,118,160	4,237,000	5,355,000	33,085,000	1.55
1988.....	—	8,388,000	991,050	4,357,000	5,348,000	28,678,000	1.56
1989.....	—	8,430,000	860,840	4,478,000	5,338,000	24,200,000	1.57
1990.....	—	8,472,000	726,000	4,605,000	5,331,000	19,595,000	1.58
1991.....	—	8,517,000	587,860	4,736,000	5,323,000	14,860,000	1.60
1992.....	—	8,561,000	445,800	4,835,000	5,281,000	10,025,000	1.62
1993.....	—	8,613,000	300,750	4,930,000	5,231,000	5,095,000	1.64
1994.....	—	8,667,000	152,860	5,095,000	5,248,000	—	1.66
	\$3,450,000	\$271,664,000	\$51,285,810	\$95,000,000	\$176,285,810		

(a) Excludes redemption premium.

(b) This table has been computed in accordance with the Commission's covenant in the indenture relating to tolls.

* 2 months present facilities and 10 months new facilities earnings.

† Interest only.

MAINTAINING AN APPROPRIATE CREDIT RATING UNDER THE PROVISIONS OF THE TRUST INDENTURE

Final Year Ending Aug. 31	Interest from Construction Fund	Net Revenues (a)	Interest at 3%	Balance Available for Reserve and Redemption	Reserve Account (3 Years' Interest) (b)	Available for Redemption	Call Price Sept. 1st	Bonds Redeemed	Principal and Premium	Balance Redemption Account	Bonds Outstanding
1955	\$1,200,000	\$ 2,562,000	\$ 2,850,000	\$ 912,000	\$ 912,000	\$ 570,000	103	\$ 558,000	\$ 569,590	\$ 410	\$95,000,000
1956	1,200,000	2,684,000	2,850,000	1,034,000	1,946,000	2,097,180	108	2,086,000	2,097,080	100	92,411,000
1957	1,050,000	2,892,000	2,850,000	1,092,000	3,038,000	2,454,930	108	2,388,000	2,454,480	440	90,028,000
1958	—	4,244,000	2,850,000	1,384,000	4,432,000	2,756,680	103	2,676,000	2,756,280	300	87,352,000
1959	—	4,598,000	2,850,000	1,888,000	5,700,000	3,062,900	108	2,978,000	3,062,180	110	84,879,000
1960	—	4,897,000	2,888,410	2,084,000	5,566,820	3,375,120	102.5	3,292,000	3,374,800	820	81,087,000
1961	—	5,106,000	2,772,380	2,382,770	5,544,680	3,653,780	102.5	3,584,000	3,653,100	680	77,523,000
1962	—	5,314,000	2,700,840	2,618,600	5,401,680	3,928,780	102.5	3,832,000	3,927,800	980	73,681,000
1963	—	5,522,000	2,680,560	2,901,740	5,241,180	4,216,070	102.5	4,113,000	4,216,825	245	69,578,000
1964	—	5,780,000	2,631,370	3,198,740	5,084,740	4,505,685	102.5	4,385,000	4,504,875	810	65,183,000
1965	—	5,886,000	2,432,610	3,454,210	4,865,220	4,805,020	102	4,710,000	4,804,200	820	60,473,000
1966	—	6,040,000	2,325,690	3,714,940	4,651,880	5,116,280	102	5,014,000	5,114,280	950	55,459,000
1967	—	6,196,000	2,210,780	3,986,260	4,421,460	5,434,020	102	5,327,000	5,433,540	480	50,132,000
1968	—	6,346,000	2,087,340	4,258,905	4,174,880	5,762,140	102	5,649,000	5,761,980	160	44,488,000
1969	—	6,486,000	1,965,490	4,541,320	3,910,980	6,101,610	102	5,981,000	6,100,620	990	38,502,000
1970	—	6,646,000	1,814,190	4,832,680	3,628,380	6,451,790	101.5	6,356,000	6,451,340	450	33,146,000
1971	—	6,796,000	1,688,770	5,123,180	3,337,640	6,760,480	101.5	6,660,000	6,759,900	580	28,486,000
1972	—	6,946,000	1,508,960	5,442,620	3,067,920	7,076,560	101.5	6,971,000	7,076,565	965	18,515,000
1973	—	7,097,000	1,384,480	5,762,670	2,868,980	7,398,795	101.5	7,290,000	7,398,360	445	11,225,000
1974	—	7,247,000	1,156,060	6,092,930	2,810,120	7,734,085	101.5	7,619,000	7,733,285	810	8,606,000
1975	—	7,343,000	964,380	6,379,070	1,928,760	8,079,770	101	8,006,000	8,642,060	4,654,070	—
1976	—	7,441,000	764,580	6,676,950	1,629,160	—	—	—	—	—	—
1977	—	7,536,000	565,480	6,981,535	1,110,900	—	—	—	—	—	—
1978	—	7,633,000	336,760	7,296,695	673,500	—	—	—	—	—	—
1979	—	7,780,000	108,180	7,692,630	216,860	—	—	—	—	—	—
1980	—	7,826,000	—	—	—	—	—	—	—	—	—
1981	—	7,924,000	—	—	—	—	—	—	—	—	—
1982	—	8,019,000	—	—	—	—	—	—	—	—	—
1983	—	8,116,000	—	—	—	—	—	—	—	—	—
1984	—	8,218,000	—	—	—	—	—	—	—	—	—
1985	—	8,257,000	—	—	—	—	—	—	—	—	—
1986	—	8,300,000	—	—	—	—	—	—	—	—	—
1987	—	8,348,000	—	—	—	—	—	—	—	—	—
1988	—	8,398,000	—	—	—	—	—	—	—	—	—
1989	—	8,480,000	—	—	—	—	—	—	—	—	—
1990	—	8,473,000	—	—	—	—	—	—	—	—	—
1991	—	8,517,000	—	—	—	—	—	—	—	—	—
1992	—	8,561,000	—	—	—	—	—	—	—	—	—
1993	—	8,613,000	—	—	—	—	—	—	—	—	—
1994	—	8,667,000	—	—	—	—	—	—	—	—	—
		<u>\$271,664,000</u>	<u>\$48,921,180</u>	<u>\$48,921,180</u>	<u>\$48,921,180</u>	<u>\$48,921,180</u>					

\$96,891,650

(b) No consideration is given to transfer to the Reserve Account of any available balances under the old indenture or the amount received from sale of Ferry Properties. (See page 20.)

(c) From the report of De Leuw, Cather & Co. and Wilbur Smith and Associates, after deducting the operating, maintenance expenses, and replacement reserves as estimated by Parsons, Brinckerhoff, Hall & Mondrinal. (See page 43.)

The amount which, since August 31, 1954, has accumulated and is now held in the State of Virginia Toll Revenue Bonds Interest and Sinking Fund under the 1949 trust indenture is sufficient to pay the principal of the non-callable Series 1949 Bonds and interest thereon to their respective maturities, to pay the interest to the call date on all Callable Bonds of the 1949 Series, and place over \$500,000 in the Reserve Account in the Sinking Fund under the new trust indenture.

Estimated Salvage Value of Chesapeake Ferries

The State Revenue Bond Act provides that when the construction of the Hampton Roads Crossing shall have been completed, the operation of the Chesapeake Ferries shall be discontinued, and the proceeds from the sale or salvage of any such properties shall be deposited to the credit of the Reserve Account (hereinafter mentioned) in the Sinking Fund under the new Indenture.

The Commission estimates the salvage value of the Chesapeake Ferries to be \$1,125,000.

SUMMARY OF PROVISIONS OF THE TRUST INDENTURE

THE SECURITY FOR THE BONDS

As authorized by the State Revenue Bond Act (herein sometimes called the "Act"), the bonds will be issued under and secured by a Trust Indenture dated as of September 1, 1954 (hereinafter called the "Indenture"), between the Commission and the National Bank of Commerce of Norfolk, as Trustee. The Indenture, in accordance with and as required by the Act, provides for the creation of a special fund called the "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund," which special fund is pledged to and charged with the payment of the principal of and the interest and redemption premium on all bonds issued under the Indenture, and also provides for the deposit to the credit of said special fund of all tolls and other revenues, over and above the costs of maintenance, repair and operation and reserves for such purposes. Only the tolls and revenues to be received from the Projects are pledged as security for the bonds and the Indenture does not convey or mortgage the Projects or any part thereof.

The \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954) are all term bonds, and the maturity thereof, the rate of interest thereon, the provisions for their redemption prior to maturity and other relevant data with respect thereto, are set forth on page 1 of this Official Statement. The Act provides that the bonds shall have all the qualities and incidents of negotiable instruments under the negotiable instruments law of the Commonwealth of Virginia.

COLLECTION AND DISPOSITION OF REVENUES

Revenue Fund and Annual Budget for Current Expenses

All tolls and other revenues arising from the operation or ownership of the Projects and properties in connection therewith will be collected by the Commission and deposited daily, as far as practicable, in the name of the State Treasurer with a Depository or Deposi-

taries, in a fund called the "State of Virginia 1954 Toll Projects Revenue Fund." The State Treasurer makes monthly transfers to the Trustee for the credit of a special fund designated "1954 Revenue Fund-Trustee Account" (herein called the "Revenue Fund"). The first charge against the Revenue Fund is the payment of Current Expenses, as defined in the Indenture.

The Indenture contains provisions regarding the preparation and adoption by the Commission of a preliminary and an Annual Budget of Current Expenses, after receiving the recommendations of the Commission's Chief Engineer and the "Consulting Engineers" (defined in the Indenture). As provided in the Indenture, the Commission may be required by the holders of five per centum (5%) in aggregate principal amount of the bonds then outstanding or a majority of the "principal underwriters" (defined in the Indenture) to hold a public hearing prior to the adoption of the Annual Budget. The Commission may at any time, with the approval of the Consulting Engineers, adopt an amended or supplemental Annual Budget for the remainder of the then current fiscal year.

No payments can be made from the Revenue Fund unless there is filed with the Trustee a requisition signed by the proper officer or employee of the Commission, stating the purpose of the expenditures, accompanied by a certificate, signed by the State Highway Commissioner or the Chief Engineer, stating that the obligations were properly incurred and that the total amount of such payments will not be in excess of the unencumbered balance of the Annual Budget; except that a \$50,000 revolving fund is provided for convenience. There shall be kept in the Revenue Fund at all times (as a reserve for Current Expenses) an amount equal to twenty per centum (20%) of the amount shown by the Annual Budget to be necessary for Current Expenses for the current fiscal year.

Sinking Fund

A special fund is created by the Indenture and designated "State of Virginia Toll Revenue Bonds (Series 1954) Interest and Sinking Fund" (herein called the "Sinking Fund"). Three separate accounts are created in the Sinking Fund, namely, the "Bond Interest Account," "Reserve Account," and "Redemption Account." Another special fund is created by the Indenture called the "Reserve Maintenance Fund."

On or before the 27th day of each month, it shall be the duty of the Trustee to withdraw from the Revenue Fund the amount of all moneys held in the Revenue Fund on the last day of the preceding month less the amount to be held therein as a reserve for Current Expenses as above mentioned, and deposit the sum so withdrawn to the credit of the following Accounts or Fund in the following order:

(a) to the Bond Interest Account, such amount as may be required to make the amount then to the credit of such Account equal to the amount of interest which will become payable within the next ensuing six (6) months on all bonds then outstanding, except any interest which the Trustee is required to pay from the Construction Fund;

(b) to the credit of the Reserve Maintenance Fund, such amount, if any, of any balance remaining after making the deposit under clause (a) above (or the entire balance if less than the required amount) as may be required to make the amount deposited to the credit of said Fund in any fiscal year equal to the amount recommended by the Consulting Engineers; if the amount so deposited to the credit of said Fund in any fiscal year shall be less than the amount recommended by the Consulting Engineers, the requirement therefor shall be cumulative;

(c) to the credit of the Reserve Account, such amount, if any, of any balance remaining after making the deposits under clauses (a) and (b) above (or the entire balance if less than the required amount) as may be required to make the amount then to the credit of the Reserve Account equal to two years' interest on all bonds then outstanding; provided, however, that the Commission, during the period of any emergency or threatened emergency which, in its opinion, is affecting or may affect adversely the traffic over or the revenues from the Projects, may increase such requirement by an amount not exceeding 100%; and

(d) to the credit of the Redemption Account, the balance, if any, remaining after making the deposits under clauses (a), (b) and (c) above.

Moneys held in the Reserve Account shall be used for paying interest on the bonds whenever and to the extent that the moneys held for the credit of the Bond Interest Account shall be insufficient for such purpose. If at any time the moneys held in the Reserve Account shall exceed the maximum requirement for the Reserve Account, such excess shall be transferred to the Redemption Account.

Moneys in the Reserve Maintenance Fund shall be held principally for the purpose of paying the cost of unusual or extraordinary maintenance and repairs, renewals and replacements, the cost of replacing equipment and premiums on insurance. Payments from the Reserve Maintenance Fund (except certain transfers and emergency payments therefrom as provided in the Indenture) shall be made in the same manner as payments from the Construction Fund.

Moneys held in the Redemption Account shall be applied to the purchase or redemption of bonds as provided in the Indenture.

Moneys held for the credit of the Bond Interest Account, the Reserve Account and the Reserve Maintenance Fund are required to be invested in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government to the extent and in the manner provided in the Indenture.

CUSTODY AND APPLICATION OF BOND PROCEEDS

Simultaneously with the delivery of the \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954) the proceeds of the bonds (including accrued interest) will be paid to the State Treasurer who will simultaneously therewith, upon warrants of the State Comptroller, disburse such proceeds as follows:

(1) The amount required for paying the principal and redemption premium on the outstanding State of Virginia Toll Revenue Bonds (Series 1949) which are to be called for redemption will be paid to the National Bank of Commerce of Norfolk, the trustee under the trust indenture securing such bonds, for deposit to the credit of a special fund to be held in trust for the sole and exclusive purpose of paying such principal and redemption premium.

(2) The amount paid as accrued interest on \$55,000,000 principal amount of State of Virginia Toll Revenue Bonds (Series 1954) will be paid to the Trustee for deposit to the credit of the Bond Interest Account in the Sinking Fund (hereinafter mentioned).

(3) The sum of \$300,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission to be used by the Commission for the payment of expenses incident to the financing.

(4) The sum of \$315,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission designated "Bus Facilities Account" to be used by the Commission for paying the cost of bus facilities as defined in the Indenture.

(5) The sum of \$300,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission designated "Severance Benefits Account," to be used by the Commission for the payment of employment severance benefits to employees of the Commission rendering services in connection with the Chesapeake Ferries.

(6) The balance of said proceeds will be paid to the Trustee for the credit of the Construction Fund.

Moneys on deposit to the Construction Fund shall, as nearly as may be practicable, be kept invested in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government to the extent and in the manner provided in the Indenture.

Payments are to be made from the Construction Fund to meet the costs of the Hampton Roads Crossing and the Rappahannock River Bridge as such costs are defined in the Act and in the Indenture. The Trustee is required to pay from the Construction Fund, without requisition from the Commission, interest upon \$10,000,000 principal amount of the Bonds which is payable on the next succeeding interest payment date after the delivery of the Bonds and on each of the four following interest payment dates (being the estimated period of construction of the Rappahannock River Bridge) and the interest upon \$30,000,000 principal amount of the Bonds which is payable on the next succeeding interest payment date after the delivery of the Bonds and on each of the five following interest payment dates (being the estimated period of construction of the Hampton Roads Crossing).

Except for the payment of interest payable from the Construction Fund, before any payments can be made from the Construction Fund there must be filed with the Trustee a requisition properly certified by the Commission and approved by the Consulting Engineers. The Indenture provides for the creation of a revolving fund of \$50,000 for the payment of items of cost of the Rappahannock River Bridge and the Hampton Roads Crossing which can not conveniently be paid on such requisitions; the revolving fund is to be reimbursed by the Trustee from time to time as payments are made therefrom, upon requisition of the Commission approved by the Consulting Engineers.

The Commission covenants that, at least once in each month after the delivery of the above bonds, it will cause the Consulting Engineers to prepare a progress report in connection with the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, including their current estimates of certain times and amounts of costs and comparisons between such times and amounts and the estimated times and amounts set forth in their engineering report and their progress schedule filed with the Trustee prior to the delivery of such bonds. At least once in each six months during the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, the Commission

shall cause an audit to be made by an independent certified public accountant of all receipts and moneys then on deposit with or in the name of the Trustee and the Commission and any security held therefor and any investment thereof, and all disbursements made pursuant to the Indenture. Such progress and audit reports will be filed with the Trustee and copies will be mailed to bondholders who shall have filed their names and addresses with the Commission for such purpose.

Upon completion of the Rappahannock River Bridge and the Hampton Roads Crossing as provided in the Indenture, the balance in the Construction Fund not reserved by the Commission with the approval of the Consulting Engineers for the payment of any remaining part of the cost of the Rappahannock River Bridge and the Hampton Roads Crossing shall be transferred by the Trustee to the credit of the Reserve Account in the Sinking Fund; provided, however, in the event the cost of the Rappahannock River Bridge and the Hampton Roads Crossing has been finally determined, any balance remaining to the credit of the Construction Fund over and above the total amount of such cost may be expended by the Commission, if permitted by law, for the payment of the cost of constructing, improving or extending approaches or approach highways to any of the Projects, where such expenditures will not, in the written opinion of the Traffic Engineers adversely affect the revenues of the Projects.

ISSUANCE OF ADDITIONAL BONDS

The Indenture provides that, in addition to the \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), additional State of Virginia Toll Revenue Bonds (Series 1954) may be issued if and to the extent necessary to provide funds for completing payment of the cost of the Rappahannock River Bridge or the Hampton Roads Crossing, subject to the filing with the Trustee of a statement, signed by the Consulting Engineers, setting forth their estimate of the total amount required for such purpose and stating that the proceeds of such additional bonds will be required for such purpose.

COVENANT AS TO TOLLS

The Commission covenants that (1) it will continue in effect the present schedule of tolls for traffic over the York River Bridge until such schedule shall be revised as provided by the Indenture, (2) that it will continue in effect the present schedule of tolls for traffic over the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, (3) that as soon as practicable after the delivery of the bonds it will place in effect the schedule of tolls for traffic over the James River Bridges set forth by De Leuw, Cather & Company and Wilbur Smith and Associates in their traffic report dated August 30, 1954, (4) that before the Rappahannock River Bridge or the Hampton Roads Crossing shall be opened for traffic, it will, in each case, fix and place in effect a schedule of tolls for traffic over such Project which will be in substantial conformity with and not less than the tolls set forth by De Leuw, Cather & Company and Wilbur Smith and Associates in their traffic report dated August 30, 1954, (5) that it will not change or revise the tolls if, in the opinion of the Traffic Engineers, such change or revision will result in producing less revenues, unless such change or revision, in the opinion of the Traffic Engineers, will still result in producing revenues sufficient to provide for deposit to the credit of the Sinking Fund in each fiscal year of an amount not less than the amount of estimated net revenues as shown by said traffic report and said engineering report of the Consulting Engineers dated August 16, 1954, for each such fiscal year, and

(6) that, subject to the foregoing provisions of this Section, from time to time and as often as it shall appear necessary it will request the Traffic Engineers to make recommendations as to revisions of the schedules of tolls as may be necessary or proper, in order that the revenues of the Projects will at all times be sufficient:

(a) to provide funds for the payment of Current Expenses,

(b) to provide for making the transfers from the Revenue Fund to the credit of the Reserve Maintenance Fund, and

(c) to provide for making the transfers from the Revenue Fund to the credit of the Sinking Fund of the following amounts:

(i) an amount sufficient (together with moneys in the Construction Fund required to be applied to such purpose) to provide for paying the interest on all bonds issued under the provisions of the Indenture as the same becomes due and payable,

(ii) in each fiscal year beginning with the fiscal year ending August 31, 1962, the following amounts, respectively:

Fiscal Year Ending August 31,	Amount	Fiscal Year Ending August 31,	Amount
1962	\$ 564,000	1979	\$3,024,000
1963	734,000	1980	3,177,000
1964	895,000	1981	3,313,000
1965	1,013,000	1982	3,462,000
1966	1,143,000	1983	3,627,000
1967	1,298,000	1984	3,799,000
1968	1,411,000	1985	3,941,000
1969	1,563,000	1986	4,087,000
1970	1,710,000	1987	4,237,000
1971	1,833,000	1988	4,357,000
1972	1,999,000	1989	4,478,000
1973	2,161,000	1990	4,605,000
1974	2,324,000	1991	4,735,000
1975	2,455,000	1992	4,835,000
1976	2,590,000	1993	4,930,000
1977	2,731,000	1994	5,095,000
1978	2,874,000		

provided, however, that if additional bonds shall be issued under the provisions of Section 209 of the Indenture, the respective amounts set forth above shall be increased in proportion to the increase in the total principal amount of bonds issued under the provisions of this Indenture; and

(iii) in each fiscal year an amount equal to thirty per centum (30%) of the respective amounts provided for in subdivisions (i) and (ii) above for such fiscal year.

As permitted by the Indenture, the Commission may discontinue the collection of tolls for the use of the Nansemond and Chuckatuck bridges included in the James River Bridges upon the happening of the conditions provided in the Indenture.

INSURANCE

The Commission covenants that, from and after the time when the contractors engaged in the construction of the Rappahannock River Bridge and the bridges and tunnel in the Hampton Roads Crossing shall cease to be responsible, it will insure and keep insured such bridge or tunnel with responsible insurance companies, qualified to assume the risk thereof, against physical loss or damage however caused. Such insurance shall be carried in an amount not less than 80% of the replacement value thereof, less depreciation, as certified by the Consulting Engineers; provided, however, that such amount of insurance shall at all times be sufficient to comply with any legal or contractual requirement which, if breached, would result in assumption by the Commission of a portion of any loss or damage as a co-insurer. Such insurance may provide for the deduction from each claim for loss or damage (except in case of a total loss) of not more than 2% of the total amount of insurance required by the application of the co-insurance clause. The Commission further covenants that it will similarly insure and at all times keep insured each bridge included in the James River Bridges and the York River Bridge for loss or damage occurring from any cause.

The Commission covenants that it will carry such workmen's compensation and public liability and property damage insurance as the Consulting Engineers may recommend and use and occupancy insurance as provided in the Indenture in such amount as the Consulting Engineers shall estimate is sufficient to provide a full normal income during the period of suspension of use. If, however, the Commission is unable to obtain any such insurance or use and occupancy insurance to the extent required, it will not constitute an event of default under the Indenture if the Commission shall carry such insurance to the extent reasonably obtainable.

REPORTS AND AUDITS

The Commission covenants to keep an accurate record of the total cost of the Projects, of the daily tolls and other revenues collected, of the number and class of vehicles using the Projects, and of the application of such tolls. Such records shall be open to the inspection of all interested persons.

The Commission covenants that at least once each month it will cause to be filed with the Trustee and mailed to the Consulting Engineers, the principal underwriters and all bondholders who shall have filed their names with the Commission for such purpose, copies of any revisions of the toll schedules in force during the preceding calendar month, and a report which shall include a statement of its operations during the preceding calendar month, including the number of vehicles in each class using the Projects, all deposits to the credit of and withdrawals from each Fund and Account created under the provisions of the Indenture, and the amounts on deposit at the end of each month to the credit of each such Fund and Account.

(3) The sum of \$300,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission to be used by the Commission for the payment of expenses incident to the financing.

(4) The sum of \$315,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission designated "Bus Facilities Account" to be used by the Commission for paying the cost of bus facilities as defined in the Indenture.

(5) The sum of \$300,000 will be paid to the Trustee for deposit to the credit of a special checking account in the name of the Commission designated "Severance Benefits Account," to be used by the Commission for the payment of employment severance benefits to employees of the Commission rendering services in connection with the Chesapeake Ferries.

(6) The balance of said proceeds will be paid to the Trustee for the credit of the Construction Fund.

Moneys on deposit to the Construction Fund shall, as nearly as may be practicable, be kept invested in direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government to the extent and in the manner provided in the Indenture.

Payments are to be made from the Construction Fund to meet the costs of the Hampton Roads Crossing and the Rappahannock River Bridge as such costs are defined in the Act and in the Indenture. The Trustee is required to pay from the Construction Fund, without requisition from the Commission, interest upon \$10,000,000 principal amount of the Bonds which is payable on the next succeeding interest payment date after the delivery of the Bonds and on each of the four following interest payment dates (being the estimated period of construction of the Rappahannock River Bridge) and the interest upon \$30,000,000 principal amount of the Bonds which is payable on the next succeeding interest payment date after the delivery of the Bonds and on each of the five following interest payment dates (being the estimated period of construction of the Hampton Roads Crossing).

Except for the payment of interest payable from the Construction Fund, before any payments can be made from the Construction Fund there must be filed with the Trustee a requisition properly certified by the Commission and approved by the Consulting Engineers. The Indenture provides for the creation of a revolving fund of \$50,000 for the payment of items of cost of the Rappahannock River Bridge and the Hampton Roads Crossing which can not conveniently be paid on such requisitions; the revolving fund is to be reimbursed by the Trustee from time to time as payments are made therefrom, upon requisition of the Commission approved by the Consulting Engineers.

The Commission covenants that, at least once in each month after the delivery of the above bonds, it will cause the Consulting Engineers to prepare a progress report in connection with the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, including their current estimates of certain times and amounts of costs and comparisons between such times and amounts and the estimated times and amounts set forth in their engineering report and their progress schedule filed with the Trustee prior to the delivery of such bonds. At least once in each six months during the construction of the Rappahannock River Bridge and the Hampton Roads Crossing, the Commission

shall cause an audit to be made by an independent certified public accountant of all receipts and moneys then on deposit with or in the name of the Trustee and the Commission and any security held therefor and any investment thereof, and all disbursements made pursuant to the Indenture. Such progress and audit reports will be filed with the Trustee and copies will be mailed to bondholders who shall have filed their names and addresses with the Commission for such purpose.

Upon completion of the Rappahannock River Bridge and the Hampton Roads Crossing as provided in the Indenture, the balance in the Construction Fund not reserved by the Commission with the approval of the Consulting Engineers for the payment of any remaining part of the cost of the Rappahannock River Bridge and the Hampton Roads Crossing shall be transferred by the Trustee to the credit of the Reserve Account in the Sinking Fund; provided, however, in the event the cost of the Rappahannock River Bridge and the Hampton Roads Crossing has been finally determined, any balance remaining to the credit of the Construction Fund over and above the total amount of such cost may be expended by the Commission, if permitted by law, for the payment of the cost of constructing, improving or extending approaches or approach highways to any of the Projects, where such expenditures will not, in the written opinion of the Traffic Engineers adversely affect the revenues of the Projects.

ISSUANCE OF ADDITIONAL BONDS

The Indenture provides that, in addition to the \$95,000,000 State of Virginia Toll Revenue Bonds (Series 1954), additional State of Virginia Toll Revenue Bonds (Series 1954) may be issued if and to the extent necessary to provide funds for completing payment of the cost of the Rappahannock River Bridge or the Hampton Roads Crossing, subject to the filing with the Trustee of a statement, signed by the Consulting Engineers, setting forth their estimate of the total amount required for such purpose and stating that the proceeds of such additional bonds will be required for such purpose.

COVENANT AS TO TOLLS

The Commission covenants that (1) it will continue in effect the present schedule of tolls for traffic over the York River Bridge until such schedule shall be revised as provided by the Indenture, (2) that it will continue in effect the present schedule of tolls for traffic over the Chesapeake Ferries until the Hampton Roads Crossing shall be opened for traffic, (3) that as soon as practicable after the delivery of the bonds it will place in effect the schedule of tolls for traffic over the James River Bridges set forth by De Leuw, Cather & Company and Wilbur Smith and Associates in their traffic report dated August 30, 1954, (4) that before the Rappahannock River Bridge or the Hampton Roads Crossing shall be opened for traffic, it will, in each case, fix and place in effect a schedule of tolls for traffic over such Project which will be in substantial conformity with and not less than the tolls set forth by De Leuw, Cather & Company and Wilbur Smith and Associates in their traffic report dated August 30, 1954, (5) that it will not change or revise the tolls if, in the opinion of the Traffic Engineers, such change or revision will result in producing less revenues, unless such change or revision, in the opinion of the Traffic Engineers, will still result in producing revenues sufficient to provide for deposit to the credit of the Sinking Fund in each fiscal year of an amount not less than the amount of estimated net revenues as shown by said traffic report and said engineering report of the Consulting Engineers dated August 16, 1954, for each such fiscal year, and

(6) that, subject to the foregoing provisions of this Section, from time to time and as often as it shall appear necessary it will request the Traffic Engineers to make recommendations as to revisions of the schedules of tolls as may be necessary or proper, in order that the revenues of the Projects will at all times be sufficient:

(a) to provide funds for the payment of Current Expenses,

(b) to provide for making the transfers from the Revenue Fund to the credit of the Reserve Maintenance Fund, and

(c) to provide for making the transfers from the Revenue Fund to the credit of the Sinking Fund of the following amounts:

(i) an amount sufficient (together with moneys in the Construction Fund required to be applied to such purpose) to provide for paying the interest on all bonds issued under the provisions of the Indenture as the same becomes due and payable,

(ii) in each fiscal year beginning with the fiscal year ending August 31, 1962, the following amounts, respectively:

Fiscal Year Ending August 31,	Amount	Fiscal Year Ending August 31,	Amount
1962	\$ 564,000	1979	\$3,024,000
1963	734,000	1980	3,177,000
1964	895,000	1981	3,313,000
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1976	2,590,000	1993	4,930,000
1977	2,731,000	1994	5,096,000
1978	2,874,000		

provided, however, that if additional bonds shall be issued under the provisions of Section 209 of the Indenture, the respective amounts set forth above shall be increased in proportion to the increase in the total principal amount of bonds issued under the provisions of this Indenture; and

(iii) in each fiscal year an amount equal to thirty per centum (30%) of the respective amounts provided for in subdivisions (i) and (ii) above for such fiscal year.

As permitted by the Indenture, the Commission may discontinue the collection of tolls for the use of the Nansemond and Chuckatuck bridges included in the James River Bridges upon the happening of the conditions provided in the Indenture.

INSURANCE

The Commission covenants that, from and after the time when the contractors engaged in the construction of the Rappahannock River Bridge and the bridges and tunnel in the Hampton Roads Crossing shall cease to be responsible, it will insure and keep insured such bridge or tunnel with responsible insurance companies, qualified to assume the risk thereof, against physical loss or damage however caused. Such insurance shall be carried in an amount not less than 80% of the replacement value thereof, less depreciation, as certified by the Consulting Engineers; provided, however, that such amount of insurance shall at all times be sufficient to comply with any legal or contractual requirement which, if breached, would result in assumption by the Commission of a portion of any loss or damage as a co-insurer. Such insurance may provide for the deduction from each claim for loss or damage (except in case of a total loss) of not more than 2% of the total amount of insurance required by the application of the co-insurance clause. The Commission further covenants that it will similarly insure and at all times keep insured each bridge included in the James River Bridges and the York River Bridge for loss or damage occurring from any cause.

The Commission covenants that it will carry such workmen's compensation and public liability and property damage insurance as the Consulting Engineers may recommend and use and occupancy insurance as provided in the Indenture in such amount as the Consulting Engineers shall estimate is sufficient to provide a full normal income during the period of suspension of use. If, however, the Commission is unable to obtain any such insurance or use and occupancy insurance to the extent required, it will not constitute an event of default under the Indenture if the Commission shall carry such insurance to the extent reasonably obtainable.

REPORTS AND AUDITS

The Commission covenants to keep an accurate record of the total cost of the Projects, of the daily tolls and other revenues collected, of the number and class of vehicles using the Projects, and of the application of such tolls. Such records shall be open to the inspection of all interested persons.

The Commission covenants that at least once each month it will cause to be filed with the Trustee and mailed to the Consulting Engineers, the principal underwriters and all bondholders who shall have filed their names with the Commission for such purpose, copies of any revisions of the toll schedules in force during the preceding calendar month, and a report which shall include a statement of its operations during the preceding calendar month, including the number of vehicles in each class using the Projects, all deposits to the credit of and withdrawals from each Fund and Account created under the provisions of the Indenture, and the amounts on deposit at the end of each month to the credit of each such Fund and Account.

The Commission further covenants that in the month of September in each year it will cause an audit to be made of its books and accounts relating to the Projects by an independent certified public accountant setting forth the same matters as are required for the monthly reports referred to and the findings of such accountants whether the moneys received by the Commission under the Indenture have been applied in accordance with the provisions of the Indenture, whether any payments for Current Expenses in the preceding fiscal year were in excess of the Annual Budget and whether the Commission is in default in the performance of any of the covenants with respect to tolls. Reports of such audits shall be filed with the Commission and the Trustee and copies shall be mailed to the Consulting Engineers, the principal underwriters and all bondholders who shall have filed their names and addresses with the Commission for such purpose. Both the monthly reports and the annual audit reports shall be open to the inspection of the bondholders.

CONSULTING AND TRAFFIC ENGINEERS

The Indenture further provides that so long as any of the bonds are outstanding, the Commission will, for the purpose of performing and carrying out the duties imposed upon the Consulting Engineers and Traffic Engineers by the Indenture, employ independent engineers or engineering firms having a nation-wide and favorable repute for skill and experience in such work, who must be approved by the Trustee. The Commission further covenants that an engineer of suitable experience will at all times be employed for the purpose of performing and carrying out duties imposed on the Chief Engineer by the Indenture.

MODIFICATION OF INDENTURE

The Commission and Trustee may enter into supplemental indentures to cure any ambiguity or formal defect in the Indenture or to grant to the bondholders any additional rights or security that may be lawfully so granted. In addition the Indenture may be modified, altered, amended, added to or rescinded in any particular from time to time with the consent of the holders of not less than two-thirds in aggregate principal amount of the bonds then outstanding; provided that no such amendment shall permit (a) an extension of the maturity of or the interest on any bond issued thereunder, or (b) a reduction in the principal amount of any bond or the redemption premium or the rate of interest thereon, or (c) the creation of a lien upon or a pledge of revenues other than the lien or pledge created by the Indenture, or (d) a preference or priority of any bond or bonds over any other bond or bonds, or (e) a reduction in the aggregate principal amount of the bonds required for consent to such supplemental indenture.

REMEDIES OF BONDHOLDERS

The Indenture defines events of default which include failure to pay principal or any instalment of interest, failure to carry on with reasonable dispatch the construction of the Hampton Roads Crossing or the Rappahannock River Bridge, failure after notice to perform any covenant contained in the Indenture, failure to pay any final money judgment after entry thereof, the entry of a decree appointing a receiver and the institution of proceedings with the consent of the Commission for the purpose of adjusting the claims of creditors pursuant to any federal or state statute, in each case within or for the specified period of grace, if any.

In the event of any such default the Trustee may on its own initiative and shall upon the request of the holders of not less than 10% in principal amount of the bonds outstanding proceed either at law or in equity to protect and enforce any and all rights granted by the Act or under the Indenture, and may enforce and compel the performance of all duties required by such act or by the Indenture to be performed by the Commission including fixing, charging and collecting of tolls for the use of the Projects. No right, however, is granted to sell the Projects or any portion thereof to enforce the rights of the bondholders.

TAX EXEMPTION AND LEGALITY FOR INVESTMENT

In the opinion of counsel named below, interest on these bonds is exempt from all present Federal income taxes.

The State Revenue Bond Act, with respect to bonds issued thereunder provides "Such bonds and the income thereof shall be exempt from all taxation within the State."

Under the Act, the bonds are made securities in which all public officers and public bodies of the Commonwealth and its political subdivisions, all insurance companies and associations, all national banks and trust companies, and savings institutions, including savings and loan associations, in the State, and all executors, administrators, trustees, and other fiduciaries, both individual and corporate, may properly and legally invest funds under their control.

LEGAL MATTERS SUBJECT TO APPROVAL OF COUNSEL

All legal matters incident to the authorization and issue of the bonds by the Commission are subject to the unqualified approval of Mitchell and Pershing, New York, N. Y., Bond Counsel to the Commission. Copies of the unqualified approving opinion of counsel will be available at the time of delivery of the bonds.

MISCELLANEOUS

The foregoing summaries of the provisions of the Act, the State of Virginia Toll Revenue Bonds (Series 1954) and the Indenture do not purport to be complete and are made subject to the detailed provisions thereof to which reference is hereby made. Copies of the Indenture, as well as copies of the Traffic Report and the Engineering Report, are available for inspection at the office of the Commission and at the principal office of the Trustee under the Indenture.

There are appended to this Official Statement summary reports of Parsons, Brinckerhoff, Hall & Macdonald, and De Leuw, Cather & Company and Wilbur Smith and Associates.

Very truly yours,

STATE HIGHWAY COMMISSION OF VIRGINIA

By
State Highway Commissioner.

DE LEUW, CATHER & COMPANY
140 NORTH WACKER DRIVE
CHICAGO, ILLINOIS

WILBUR SMITH AND ASSOCIATES
222 CHURCH STREET
NEW HAVEN, CONNECTICUT

September 15, 1954

GENERAL JAMES A. ANDERSON
COMMISSIONER
STATE HIGHWAY COMMISSION
1221 EAST BROAD STREET
RICHMOND, VIRGINIA

Dear General Anderson:

We are pleased to submit the following synopsis of our report on the estimated traffic and revenues of the proposed Hampton Roads Bridge and Tunnel System (sometimes called the "Hampton Roads Crossing") combined with the James River Bridges, the York River Bridge, and the proposed Rappahannock River Bridge:

The purpose of that report is to estimate the traffic and revenues for the proposed Hampton Roads Crossing and the James River Bridges, assuming removal of the Newport News-Pine Beach and Old Point-Willoughby Ferries. That report indicates the gross revenues that will be realized from the present facilities during the construction period and from the Hampton Roads Crossing, the Rappahannock River Bridge, the York River Bridge, and the James River Bridges during the remainder of the term of the anticipated bond issue. The map facing page 1 shows the location of the present and proposed toll facilities in relation to major highways in southeast Virginia.

All of the present and proposed facilities are in the southeastern part of Virginia serving metropolitan centers as well as the resort areas along the coast. Hampton Roads is frequently referred to as the world's finest natural harbor. The ice-free ports of Hampton Roads are so situated geographically that they are ideal for serving shippers of the East, South, and Midwest areas of the nation.

The Virginia Department of Highways operates two ferry lines across Hampton Roads. The Old Point Ferry carries U. S. Route 60 traffic between Old Point Comfort and Willoughby Spit, Norfolk, while the Newport News Ferry operates as Virginia Route 168 between Newport News and Pine Beach, Norfolk.

The Department of Highways also operates the James River Bridges, consisting of bridges across the James River, Chuckatuck Creek, and Nansemond River. U. S. Route 17 is routed over these bridges. There are three bridges across the James River at Richmond, but none between Richmond and the James River Bridge at Newport News. Anyone wishing to cross the James River between Richmond and Newport News does so on either the Hopewell or Jamestown Ferries.

The York River Bridge, approximately 10 miles upstream from the mouth of the York River, carries U. S. Route 17 traffic across this river between Gloucester Point and

Yorktown. The nearest crossing to this bridge is at West Point, approximately 25 miles farther upstream.

The proposed Rappahannock River Bridge will span the river between Greys Point and White Stone. The nearest crossing of this river is the Downing Bridge at Tappahannock, which is approximately 35 miles upstream.

Factors Affecting Traffic in Area

The various highway facilities serve Tidewater Virginia—the eastern part of Virginia on the western side of Chesapeake Bay. Tidewater Virginia contains many historic, recreational, and vacation spots which are of interest to tourists. Jamestown, Yorktown, and restored Colonial Williamsburg all attract many visitors each year. Virginia Beach is a popular seashore resort. The areas along the shore of Chesapeake Bay and the tributary rivers attract large numbers of visitors.

The Norfolk Metropolitan Area, including Newport News, Portsmouth, and other nearby areas, is an important center of industrial activity, particularly in shipbuilding and related services. A large naval shipbuilding yard is located at Portsmouth, and the huge U. S. Naval Operating Base and Air Station is located in Norfolk.

The U. S. Army maintains permanent bases at Fort Eustis and Fort Monroe, and the U. S. Air Force has a large station at Langley Field.

The increases in population between 1940 and 1950 were 48% for Norfolk and 72% for the Metropolitan Area. The nation increased 14% while Virginia increased 24%.

Description of Proposed Hampton Roads Crossing

A limited access highway will begin at U. S. Route 17, 1.4 miles east of Virginia Route 168, then proceed south and east for approximately 9.8 miles to a point on the north shore of Hampton Roads immediately west of Old Point Comfort. The project will then consist of a bridge for 0.75 miles, a tunnel under the ship channel of 1.4 miles, and finally a bridge for the remaining 1.3 miles to a connection with Ocean View Avenue on Willoughby Spit, Norfolk.

An approach highway will be extended parallel to Maple Avenue between Ocean View Avenue at 3rd View Avenue and Granby Street at Cottage Toll Road. This will permit those vehicles destined for downtown Norfolk to by-pass the congestion near the amusement park at the end of Granby Street. The project will then extend south and east as a boulevard-type street to the intersection of Cottage Toll Road with Sewells Point Road.

A 1.7-mile connection will be constructed from Victoria Boulevard near Raleigh Avenue in Hampton to the expressway at a point approximately one-half mile west of the junction of LaSalle Avenue with the expressway.

The proposed Hampton Roads Crossing will make the crossing much more convenient and attractive to the present patrons of the State Highway Commission's facilities. There will no longer be the long line of vehicles waiting to board the ferry boat. The Crossing will be in operation 24 hours per day and not shut down during the early morning hours as is the case on the Old Point-Willoughby Ferry.

Driving times will be reduced for a majority of the trips. Times from Richmond, Williamsburg, and Yorktown to Norfolk will be reduced by approximately 20 minutes. Virginia Beach will be approximately 26 minutes closer to these cities. The travel time between Newport News and Norfolk will be reduced by approximately 13 minutes. The construction of the high-capacity, free-moving approach roads as a part of the project will assure these benefits.

Surveys and Studies—Origin and destination surveys were conducted at five locations, namely, the James River Bridge, the Newport News-Pine Beach Ferry, the Old Point-Willoughby Ferry, U. S. Route 460 west of Wakefield, and Virginia Route 10 west of Surry. The drivers of virtually all vehicles passing the survey stations or using the ferries were interviewed as to their trip origins and destinations.

The interviews were coded and summarized, with factors developed so that completed tabulations showed traffic movements for an average annual day for the year ended August 31, 1953. Results were then expanded to an average annual day ending August 31, 1954, based on comparisons between the eleven months ended July 31 in 1953 and in 1954. The 12-month period ending August 31, 1954 is used throughout this report as the base year for all estimates of future traffic.

Pedestrian passengers riding the Old Point-Willoughby and Newport News-Pine Beach Ferries were interviewed to determine trip information on a Thursday, Friday, Saturday, and Sunday between the hours of 6:00 A.M. and 10:00 P.M. This material gave excellent data on pedestrian passenger travel habits, and was useful in predicting how these habits would be changed upon the removal of the ferries and the installation of bus service over the new bridge and tunnel system.

Running time studies were conducted on all highways in the area that might be termed in competition with or tributary to the present ferries, the James River Bridge, and the proposed Crossing. These surveys were made by both the Highway Department and the consultants.

Various trucking firms were contacted as to routes now used, present operating schedules, and opinions as to how the proposed Crossing would affect trucking operations.

The Highway Department procured and furnished information on the number of vehicles parked and duration of stay in the parking lot at the Newport News ferry landing.

Analysis of Present Movement—As a basis for estimating the future number of vehicles to use the proposed Crossing and the James River Bridge, respectively, factors influencing the motorist's selection of his present routes of travel were analyzed. It was found that the proportion selecting one route over another varied with the relative advantage of the two routes. When total trip costs, considering time, distance and tolls, are approximately equal, the portion traveling each way is also approximately equal.

Numerous graphs were plotted that compared tolls, time differentials, and distance differentials. The curve for automobile trips which agreed most closely with actual habits under present conditions was obtained by computing the motorist's time at two cents per minute and the distance at four cents per mile. This curve was then checked by making allocations of zone-to-zone movements where the motorist has a choice between the James River Bridge and the Newport News-Pine Beach Ferry. The resulting allocations were accurate within three per cent of the actual traffic movements. A similar allocation check

showed an accuracy within one and one-half per cent when computing the motorist's selection between the two ferry systems. Table A shows the number of vehicles that use each facility for various cost differentials.

TABLE A

**Percentage Distribution of Traffic Between Two Alternate Routes
for Various Cost Differentials in Time, Distance and Tolls**

Per Cent of Traffic		Cost Difference	
Route Producing Saving	Other Route	Automos	Trucks
50	50	\$0.00	\$0.00
60	40	0.11	0.25
70	30	0.26	0.55
80	20	0.44	1.00
90	10	0.70	1.60
100	—	1.30	2.70

Truck movements were analyzed in much the same manner. The most accurate curve for truck trips was derived when time was computed at five and one-half cents per minute and distance at nine cents per mile. The present toll schedules were used when analyzing comparative costs for the various zone-to-zone movements. One hundred per cent of the trips used the favored facility when savings were \$2.70 or greater. As was the case with automobiles, approximately 50 per cent of the trucks went each way when costs were equal. The curve was found to be accurate within four per cent when checked against present zone-to-zone movements. See Table A for a tabulation showing the percentage distribution of trucks for various cost differentials.

Estimated Traffic on Facilities

Traffic Allocations—The allocations of traffic were made to the entire Crossing extending from U. S. Route 17 to Sewells Point Road. In the assignment of traffic, it was also understood that Tidewater Drive will be constructed as an expressway or a semi-expressway from Cottage Toll Road at Lindenwood Avenue to City Hall Avenue in Norfolk and the bridge-tunnel will be designated U. S. Route 60.

Future running times and distances were computed taking cognizance of the entire Crossing. Any changes in this Crossing would affect a portion of the potential trips on one or both of their alternate routes.

We have on file a letter dated May 7, 1954, in which Mr. S. O. Morrisette, Director of the Norfolk City Public Works Department, informs Mr. Burton Marye, Jr., Deputy Commissioner and Chief Engineer of the State Highway Commission, of the status of the Tidewater Drive project. Mr. Morrisette says that plans for the project have been prepared, that they are obligated to the Norfolk Redevelopment and Housing Authority to begin work on the project in 1954, and, based on funds being available when the plans are ready, that the project should easily be completed during the calendar year of 1955.

Since the date of the letter from Mr. Morrisette, funds have been made available and work has been programmed and approved by the Bureau of Public Roads as a city-state federal project.

It is our opinion that motorists will continue to place the same values on time and distance as they do at present when deciding whether to use the James River Bridge or the proposed Hampton Roads Crossing. The derived curves were used, therefore, to allocate traffic between these two facilities. Time, distance, and their monetary values were computed for the alternate routes for all zone-to-zone movements. Cost differentials were then computed, percentages determined, and individual allocations made. The allocations indicated that the bridge and tunnel would divert 359 vehicles per day at 1954 traffic levels from the James River Bridge while retaining all of the 3,757 vehicles per day now carried by the ferries. In the traffic assignments, toll schedules on the two facilities were assumed to remain approximately the same as the present schedules.

Benefits for motorists using both U. S. Route 460 and Virginia Route 10 destined to the Norfolk Metropolitan Area were compared with the benefits for motorists traveling via the peninsula. See map facing page 1 for the location of the alternative routes. Vehicles using the southern route cross the James River at Richmond. Vehicles using the peninsula route cross on the James River Bridge or Chesapeake Ferries. Since comparisons here were mainly between a route with tolls and a toll free road, the derived curves were similar to, but not identical with, curves used in comparing two toll facilities. It was possible, however, to analyze these potential trips in much the same manner as that used in comparing trips between the two systems having tolls.

Of the motorists now traveling southbound via the southern routes—U. S. Route 460 and Virginia Route 10—only those having an origin in Richmond or points north or west thereof are potential users of the proposed Crossing. There are 1,614 of these potential daily trips at 1954 traffic levels now traveling via U. S. Route 60 or Virginia Route 10. There are 1,072 corresponding trips traveling via peninsula routes, U. S. Route 60 or Virginia Route 168.

The proposed Crossing would provide additional time and distance benefits over the present peninsula route. The value of these additional benefits would vary between 26 cents and 91 cents for automobiles, and between 96 cents and \$2.28 for trucks, depending upon the zone of destination in the Norfolk area. It has been estimated that the overall effect of these additional benefits would be to divert 223 automobiles and 70 trucks per average 1954 day from the routes south of the James River to the new bridge and tunnel.

The effect that the proposed Richmond-Petersburg Turnpike would have on the present southern route trips between Richmond and Norfolk was analyzed. It was found that the toll charges would be approximately equal to the time and distance benefits for these particular trips. Whether or not the Richmond-Petersburg Turnpike is built will have little effect, therefore, upon traffic and revenues of the proposed Hampton Roads Crossing.

Generated Traffic—It has been the experience elsewhere that when a new facility of the character proposed here is constructed, traffic volumes are greater than accounted for by diverted traffic plus subsequent natural increases. The additional traffic is termed

"induced traffic". The induced traffic for this proposed facility has been estimated at 25 per cent of the allocated or diverted traffic. If the tunnel had been in operation for the year ending August 31, 1954, the average daily traffic would have been approximately 5,511 vehicles.

Pedestrian Traffic—Detailed studies of the travel habits of the pedestrian passengers using the two Chesapeake ferries were made to ascertain the best method of bus operation. Approximately 42 per cent of all pedestrian passengers arrive at the ferry landing by bus; 28 per cent by private automobiles; 7 per cent by taxi cabs; and the remaining 23 per cent on foot. A majority of the pedestrian passengers have an origin or destination in Newport News or the Naval Base in Norfolk.

Hourly counts of the pedestrian passengers using the Newport News-Pine Beach and Old Point-Willoughby ferries for the four survey days indicated that the high peaks of pedestrian use will make it difficult to provide an economical bus service.

Proposed Bus Operation

Buses could operate from a terminal near the approach road and La Salle Avenue in Hampton to a terminal at Ocean View Boulevard and Granby Street in Norfolk. This route would be approximately 9.5 miles long and would have a passenger fare of \$0.25. Since many of the passengers now riding the ferries have an origin in or near downtown Newport News and a destination at the Naval Base, they would be required to ride one bus from Newport News to the bridge and tunnel project, another bus as described above, and a third bus from Granby Street to the Naval Base. The present trip time from downtown Newport News to the Naval Base is approximately 45 minutes. Future trip time via three buses from Newport News to the Naval Base would be approximately 80 to 70 minutes. The time for this trip would be longer because of the greater distance and two transfers. Of the present 3,000 pedestrians per day on the ferries, it was estimated that 60 per cent would use the bus system, 20 per cent would join group riding pools, and the remaining 20 per cent would cease to cross Hampton Roads.

The amount of service to be provided during the various periods of the day and on the various days of the week was arrived at by taking cognizance of all of the pedestrian data. The tentative headways and number of scheduled buses required vary between 15 minutes in the rush periods and 40 minutes during the non-rush periods. Three buses will be in operation during the rush periods. There will be approximately 17,265 round trips per year.

Revenues

If the proposed Hampton Roads Crossing had been in operation for the year ended August 31, 1954, the revenue for that period would have been approximately \$3,155,000, assuming a toll schedule equivalent to the present ferry toll schedule. Of this amount, \$2,754,000 could be considered to be the present ferry vehicular revenue plus the amount diverted from the James River Bridge plus the 25 per cent induced. An additional \$196,000 would be diverted from the present routes south of the James River and \$165,000 would come from passenger tolls on the bus operation. Previous pedestrians who would become extra passengers in vehicles would yield tolls of \$40,000. The recommended toll schedule is shown in Table B.

Traffic Trends

Various trends that affect potential traffic on the proposed facility have been reviewed. These trends include population, persons per vehicle, vehicle registration, gasoline consumption, and traffic volumes on the present facilities and on other Virginia highways. It is our opinion, based on analysis of this information, that traffic will increase at the rate of four per cent per year, not compounded, for the ten years between 1954 and 1964, thence at three per cent per year for ten years, two per cent per year for the next ten years, and at one per cent per year for the remainder of the life of the bond issue. Table C shows the estimated average daily traffic throughout the expected life of the bond issue. Revenues shown in this report indicate trends. Use of the various facilities will fluctuate with business conditions, intensity of operations at the Naval Base, and other factors which affect the use of motor vehicles.

James River Bridges

The James River Bridges constitute a 16.5-mile link in U. S. Route 17. This system consists of a 4.5-mile bridge across the James River, 11 miles of two-lane highway, and two short bridges across the Nansemond River and Chuckatuck Creek. The bridge across Chuckatuck Creek is sometimes referred to as the Crittenden Bridge. The State Highway Commission, after purchasing the system for \$5,600,000 from the James River Bridge System, a private corporation, began operation of the system on September 30, 1949.

The present toll schedule is cumbersome and difficult to administer. There are many opportunities for confusion. We reviewed the proposed schedule with Mr. D. B. Fugate*, and a few minor changes in his proposed revised rates were made with his concurrence. The recommended toll schedule is shown on Table B. It is contemplated that the new schedule will produce the same revenues as the present schedule. This may not occur, however, since there is presently much confusion in the determination of toll classifications. It is recommended, therefore, that this toll schedule be placed in effect as soon as possible so that the revenues can be observed and revisions made to the schedule if necessary to assure no loss of revenue due to simplification of the schedule.

Revenues—The James River Bridges will lose approximately 10 per cent of their revenues to the Hampton Roads Crossing when the latter is constructed. Revenues for the eleven-month period ending July 31, 1954, were approximately three per cent less than for the same period of the previous year. The 1954 revenues under the revised operation would be \$1,240,000, while the revenues under the present arrangement would be \$1,377,000.

While there has been a slight decline in the revenues of the James River Bridges during this eleven-month period, it is our opinion that this decline is merely a leveling off after large increases during previous years. The average annual increase since 1950, on the 1954 base, has been 7.6 per cent.

It has been assumed, therefore, that the revenues of the James River Bridges will increase at four per cent per year, not compounded, for the ten years between 1954 and 1964, thence at three per cent per year for ten years, two per cent per year for the next ten years, and at one per cent per year for the remainder of the life of the bond issue. Estimated average daily traffic is shown in Table C. Table D shows these expansion factors and the estimated annual revenues.

* Director of Toll Revenue Facilities, State Highway Commission, Commonwealth of Virginia.

As recommended by Mr. Fugate, new toll plazas will be constructed at the south end of the James River Bridge and at the north end of the Nansemond River Bridge. Collection will be confined to these two points. Passenger vehicles and light trucks under one-half ton rated capacity using the three-bridge system for a non-stop trip will pay toll at the entrance plaza only. Other trucks and buses will be required to pay toll at each plaza. Users of the Crittenden Bridge will not be required to pay toll unless they pass the Nansemond or James River Plazas.

York River Bridge

The York River Bridge was opened to traffic on May 7, 1952. This bridge carries U. S. Route 17 traffic between Gloucester Point and Yorktown. In addition to serving the through north-south traffic on U. S. Route 17, it has many users destined to or originating at historic points of interest such as the Colonial Battlefield Park at Yorktown and Colonial Williamsburg. The bridge also serves a number of naval, military, and industrial establishments.

The one-way passenger vehicle toll is \$0.75, but frequent users may purchase commutation books that enable them to use the bridge at an average of \$0.50 per crossing. Single unit truck tolls vary between \$0.75 for light trucks and \$1.75 for trucks having three axles. Tractor trailers and tractor trucks having three axles pay \$2.00, four axles \$2.50 and five axles \$3.00. Buses carrying 19 passengers or less pay \$2.00 while those with 20 or more passengers pay \$3.50. See Table B for details of the toll schedules. It is recommended that the present toll schedule be retained.

Revenues—The revenues for the York River Bridge for the year ended August 31, 1953, were \$733,599. Revenues for the eleven-month period ended July 31, 1954, were 5.1 per cent greater than for the corresponding period of the previous year. If this increase remains constant for the balance of the fiscal year, the revenues for the year ending August 31, 1954 will be \$771,000. It is anticipated that, after the current fiscal year, the same trends will apply to the York River Bridge traffic as indicated for the Hampton Roads Crossing. Table C shows the estimated average daily traffic for these years. Table D also indicates the anticipated revenues for the York River Bridge for the year 1954 and for each year thereafter throughout the life of the bond issue.

Chesapeake Ferries

The Newport News-Pine Beach and the Old Point-Willoughby ferry lines are generally referred to as the Chesapeake Ferries. The Commission has operated the ferries since March 1, 1946, by authority of the Circuit Court of the City of Norfolk and an Act of the General Assembly of Virginia. At that time, the employees were striking against the owners. The Chesapeake Ferries were purchased by the State Highway Commission on February 26, 1948.

The Chesapeake Ferries will no longer operate after completion of the Hampton Roads Crossing.

There are two boats of 30- to 45-vehicle capacity operating on the Old Point line with 35-minute headways. During summer months a third boat is added during peak traffic hours. The average vehicular crossing time, including waiting, loading, crossing, and unloading time, is 50 minutes. This line does not run between 12:30 A.M. and 6:00 A.M.

The Newport News line operates four boats of 40- to 50-vehicle capacity with headways of 17.5 minutes during daylight hours and 20 to 45 minutes at night. Three additional boats are held in reserve for operation during peak traffic hours Friday through Sunday, as required. This line, which operates 24 hours per day, has an average vehicular crossing time of 40 minutes. This time also includes waiting, loading, crossing, and unloading times.

Toll schedules are the same on both routes. The one-way toll for a passenger vehicle, including operator, is \$1.25. Passengers (either pedestrians or in vehicles) pay \$0.20. Commuters' tickets for automobiles and operator may be purchased in books of 12 for \$9.00 while commuter passengers may purchase 25-ticket books for \$4.50. Truck rates for vehicle and operator vary between \$1.25 and \$3.00 depending upon the length of the truck. There are no commuter rates for trucks.

Revenues—The revenues from the Chesapeake Ferries for the year ended August 31, 1953, amounted to approximately \$2,268,000. Revenues for the eleven-month period ended July 31, 1954, were approximately equal to the revenues for the similar period of the previous year. It has been estimated, therefore, that the revenues for the entire year ending August 31, 1954, will also be \$2,268,000. Table D indicates the estimated revenues for the Chesapeake Ferries for the years that the Hampton Roads Crossing will be under construction.

Proposed Rappahannock River Bridge

The proposed Rappahannock River Bridge will span the river between Greys Point and White Stone approximately eight miles upstream from the river mouth. Replacing the Greys Point Ferry, the bridge will serve primarily persons living in Northern Neck Peninsula which is immediately north of the Rappahannock River.

In November 1953, the engineering firm of Parsons, Brinckerhoff, Hall and Macdonald made a report to your Commission on the estimated traffic and revenues for the proposed Rappahannock River Bridge. This report has been reviewed as part of the current assignment in the light of more recent data pertaining to the present Greys Point Ferry, the Downing Bridge, and other facilities.

As stated in our report, traffic on the new bridge will be made up of components of, (1) traffic now using the Greys Point Ferry; and (2) traffic diverted from the Downing Bridge at Tappahannock. There were 236 vehicles per day, on an average, using the Greys Point Ferry during the year ended August 31, 1953. The traffic volumes for the eight-month period ended April 30, 1954, were 11.5 per cent greater than for the same period of the previous year. Assuming this per cent increase will remain constant for the remainder of the year ending August 31, 1954, the average daily traffic for the period will be 263 vehicles.

We have reviewed the origins and destinations of vehicles now using the Downing Bridge, and agree with the 5.7 per cent diversion shown in our report. Applying this 5.7 per cent to the predicted 2,337 vehicles per day on the Downing Bridge for the year ending August 31, 1954, produces a total of 133 daily diverted vehicles. It is estimated that the induced traffic on this facility will approximate 40 per cent of the allocated traffic.

Revenues—If the Rappahannock River Bridge had been in use during the entire year ending August 31, 1954, the revenues would have been approximately \$170,000 based on

the toll schedule shown in Table B. This schedule is the same as in effect on the York River Bridge with automobiles being charged \$0.75 one way and \$0.50 if commutation books are purchased. The same year-to-year increases were applied to the Rappahannock River Bridge estimates as were applied to the other facilities. Applying these increases, which are more conservative than those shown in the Parsons, Brinckerhoff, Hall & Macdonald report, we estimate that the revenue for the year ending August 31, 1958 (the first year of operation) will be \$197,000. The estimate in the November 1953 report is approximately 15 per cent greater than this figure. Estimated average daily traffic for the same years is shown in Table C. Table D shows the revenues for the Rappahannock River Bridge for the year 1958 and the remainder of the life of the bond issue.

Financial Analysis of System

It is estimated that the gross revenues for the present facilities for the year ending August 31, 1955, will be \$4,593,000. Gross revenues for all facilities for the year ending August 31, 1959, the first full year of operation after completion of the proposed Hampton Roads Crossing and the Rappahannock River Bridge, has been estimated to be \$6,403,000. These gross revenues will increase to \$8,431,000 in 1970, \$9,711,000 in 1980, and \$10,458,000 in 1990. See Table D for estimated gross revenues by years for each facility.

The engineering firm of Parsons, Brinckerhoff, Hall & Macdonald have made estimates of the maintenance and operating costs. These estimates, along with estimates of net revenues, are shown in Table E. Their estimates show the total maintenance and operating costs to be \$2,085,000 for 1955, \$1,715,000 in 1959, \$1,785,000 in 1970, \$1,885,000 in 1980, and \$1,985,000 in 1990.

Conclusions

The capacity of the various facilities is such that, with the exception of a few hours on peak days during the last few years of the bond issue, they will accommodate all of the anticipated traffic without crowding.

We understand that the proposed State of Virginia Toll Revenue Bonds (Series 1954) are to be dated September 1, 1954, and are to be stated to mature September 1, 1994. Table E attached hereto sets forth our estimate of the gross and net revenues on all toll facilities in the program for the fiscal year ending August 31, 1955 to August 31, 1994, inclusive. This Table should be used in lieu of Table 12 on page 65 of our Report dated August 30, 1954. We understand that Tables 13 and 14 in that Report will be supplanted by an amortization table in the Official Statement.

Information contained in this letter is taken from the full text of our report "TRAFFIC AND REVENUES FOR THE PROPOSED HAMPTON ROADS BRIDGE AND TUNNEL SYSTEM," dated August 30, 1954.

Very truly yours,

DE LEUW, CATHB & COMPANY

CHARLES E. DE LEUW

WILBUR SMITH AND ASSOCIATES

WILBUR S. SMITH

TABLE B

PROPOSED TOLL SCHEDULES

Vehicle Classification	Hampton Roads Bridges and Tunnel System*		James River System		York River Bridge†	Rappahannock River Bridge
	James Only	James Only Nonsystem‡	James and Nonsystem‡	James and Nonsystem‡		
Passenger Vehicles:						
One-Way	\$1.25	\$0.90	\$0.35	\$1.00	\$0.75	\$0.75
Commutation	0.75	0.55	0.25	0.50	0.50	0.50
Number of Tickets in Book	(12)	(10)	(2)	(10)	(20)	(10)
Passengers:						
One-Way	\$0.20	Free	Free	Free	Free	Free
Commutation	0.18	Free	Free	Free	Free	Free
Single Unit Commercial Vehicles:						
Under One-Half Ton Rated Capacity	\$1.25	\$0.90	\$0.35	\$1.00	\$0.75	\$0.75
Over One-Half but Under Two Ton Rated Capacity:						
Two Axles	1.50	1.20	0.45	1.65	1.00	1.00
Three Axles	1.75	1.40	0.75	2.15	1.25	1.25
Two Tons and Over Rated Capacity:						
Two Axles	1.75	1.55	0.45	2.00	1.50	1.50
Three Axles	2.25	1.75	0.75	2.50	1.75	1.75
Tractor Trailers and Tractor Trucks:						
Three Axles	2.50	2.00	0.75	2.75	2.00	2.00
Four Axles	3.00	2.40	1.00	3.00	2.50	2.50
Five Axles	3.50	2.60	1.00	3.50	3.00	3.00
Buses:						
Nineteen Passengers or Less	2.50	2.50	1.50	4.00	2.00	2.00
Twenty or More Passengers	4.00	4.00	2.00	6.00	3.50	3.50
Motorcycles:						
Single	0.50	0.20	0.10	0.30	0.20	0.20
With Side Car	0.75	0.20	0.10	0.30	0.20	0.20

* Substantially the same tolls as now charged on Chesapeake Ferries.
 † It is proposed that there be no toll for crossing the Octagonum Bridge only.
 ‡ Same toll schedule as present.

TABLE C
ESTIMATED AVERAGE DAILY TRAFFIC
ON VARIOUS TOLL FACILITIES INCLUDED IN PROGRAM—1954 TO 1994

Year Ending August 31	Expansion Factor	James River Bridge	Chesapeake Ferries	Hampton Roads Bridge and Tunnel System	York River Bridge	Rappahannock River Bridge	Total
BEFORE COMPLETION OF HAMPTON ROADS BRIDGE AND TUNNEL SYSTEM							
1953	Actual	3,459	3,719	—	2,698	—	9,876
1954	1.00	3,343	3,757	—	2,827	—	9,927
1955	1.04	3,482	3,907	—	2,940	—	10,329
1956	1.08	3,616	4,058	—	3,053	—	10,727
1957	1.12	3,750	4,208	—	3,166	—	11,124
1958	1.16	3,884	4,358	—	3,279	—	11,521
AFTER COMPLETION OF HAMPTON ROADS BRIDGE AND TUNNEL SYSTEM							
1954	1.00	2,989	—	5,511	2,827	556	11,883
1958	1.16	3,467	—	6,393	3,279	644	13,783
1959	1.20	3,587	—	6,618	3,392	668	14,258
1960	1.24	3,706	—	6,834	3,505	688	14,733
1961	1.28	3,826	—	7,054	3,619	710	15,209
1962	1.32	3,945	—	7,275	3,732	733	15,685
1963	1.36	4,065	—	7,495	3,845	755	16,160
1964	1.40	4,185	—	7,715	3,958	777	16,635
1965	1.43	4,274	—	7,881	4,043	794	16,992
1966	1.46	4,364	—	8,046	4,127	810	17,347
1967	1.49	4,454	—	8,211	4,212	827	17,704
1968	1.52	4,543	—	8,377	4,297	844	18,061
1969	1.55	4,633	—	8,542	4,382	860	18,417
1970	1.58	4,723	—	8,707	4,467	877	18,774
1971	1.61	4,813	—	8,873	4,551	894	19,130
1972	1.64	4,902	—	9,038	4,636	910	19,486
1973	1.67	4,992	—	9,203	4,721	927	19,843
1974	1.70	5,081	—	9,369	4,806	944	20,200
1975	1.72	5,141	—	9,479	4,882	965	20,437
1976	1.74	5,201	—	9,589	4,919	986	20,675
1977	1.76	5,261	—	9,699	4,976	977	20,913
1978	1.78	5,320	—	9,810	5,032	988	21,150
1979	1.80	5,380	—	9,920	5,089	999	21,388
1980	1.82	5,440	—	10,030	5,145	1,010	21,626
1981	1.84	5,500	—	10,140	5,202	1,021	21,863
1982	1.86	5,560	—	10,250	5,258	1,032	22,100
1983	1.88	5,619	—	10,361	5,315	1,043	22,338
1984	1.90	5,679	—	10,471	5,371	1,054	22,576
1985	1.91	5,709	—	10,526	5,400	1,060	22,695
1986	1.92	5,739	—	10,581	5,428	1,066	22,814
1987	1.93	5,769	—	10,636	5,456	1,071	22,932
1988	1.94	5,799	—	10,691	5,484	1,077	23,051
1989	1.95	5,829	—	10,746	5,513	1,082	23,170
1990	1.96	5,858	—	10,802	5,541	1,088	23,289
1991	1.97	5,888	—	10,857	5,569	1,093	23,407
1992	1.98	5,918	—	10,912	5,597	1,099	23,526
1993	1.99	5,948	—	10,967	5,626	1,104	23,645
1994	2.00	5,978	—	11,022	5,654	1,110	23,764

TABLE D
ESTIMATED GROSS REVENUES ON ALL
TOLL FACILITIES INCLUDED IN PROGRAM—1954 TO 1994

In Thousands

Year Ending August 31	Expansion Factor	James River Bridge System	Chesapeake Ferries	Hampton Roads Bridge and Tunnel System	York River Bridge	Rappahannock River Bridge	Total
BEFORE COMPLETION OF HAMPTON ROADS BRIDGE AND TUNNEL SYSTEM							
1953	Actual	\$1,438	\$2,268	\$ —	\$ 734	\$ —	\$ 4,425
1954	1.00	1,377	2,268	—	771	—	4,416
1955	1.04	1,432	2,359	—	802	—	4,593
1956	1.08	1,487	2,449	—	833	—	4,769
1957	1.12	1,543	2,540	—	864	—	4,946
1958	1.16	1,597	2,631	—	894	—	5,122
AFTER COMPLETION OF HAMPTON ROADS BRIDGE AND TUNNEL SYSTEM							
1954	1.00	\$1,240	—	\$3,155	\$ 771	\$ 170	\$ 5,336
1955	1.16	1,438	—	3,660	894	197	6,129
1956	1.20	1,488	—	3,786	925	204	6,403
1957	1.24	1,538	—	3,912	956	211	6,617
1958	1.28	1,587	—	4,038	987	218	6,830
1959	1.32	1,637	—	4,165	1,018	224	7,044
1960	1.36	1,686	—	4,291	1,049	231	7,257
1961	1.40	1,736	—	4,417	1,079	238	7,470
1962	1.43	1,778	—	4,512	1,108	243	7,631
1963	1.46	1,810	—	4,606	1,136	248	7,790
1964	1.49	1,848	—	4,701	1,163	253	7,951
1965	1.52	1,885	—	4,796	1,172	258	8,111
1966	1.55	1,922	—	4,890	1,195	264	8,271
1967	1.58	1,959	—	4,985	1,218	269	8,431
1968	1.61	1,998	—	5,080	1,241	274	8,591
1969	1.64	2,034	—	5,174	1,264	279	8,751
1970	1.67	2,071	—	5,269	1,288	284	8,912
1971	1.70	2,108	—	5,364	1,311	289	9,072
1972	1.73	2,133	—	5,427	1,326	292	9,178
1973	1.74	2,158	—	5,490	1,342	295	9,286
1974	1.76	2,182	—	5,553	1,357	299	9,361
1975	1.78	2,207	—	5,616	1,372	303	9,498
1976	1.80	2,232	—	5,679	1,388	306	9,605
1977	1.82	2,257	—	5,742	1,403	309	9,711
1978	1.84	2,282	—	5,805	1,419	313	9,819
1979	1.86	2,306	—	5,868	1,434	316	9,924
1980	1.88	2,331	—	5,931	1,449	320	10,031
1981	1.90	2,355	—	5,994	1,465	323	10,138
1982	1.91	2,368	—	6,026	1,473	325	10,192
1983	1.92	2,381	—	6,058	1,480	328	10,245
1984	1.93	2,393	—	6,089	1,488	328	10,298
1985	1.94	2,406	—	6,121	1,496	330	10,353
1986	1.95	2,418	—	6,152	1,503	332	10,405
1987	1.96	2,430	—	6,184	1,511	333	10,458
1988	1.97	2,443	—	6,215	1,519	335	10,512
1989	1.98	2,455	—	6,247	1,527	337	10,566
1990	1.99	2,468	—	6,278	1,534	338	10,618
1991	2.00	2,480	—	6,310	1,542	340	10,672

TABLE E
ESTIMATED NET REVENUES ON ALL
TOLL FACILITIES IN PROGRAM—1954 TO 1994

In Thousands

Year Ending August 31	Total Gross Revenues	Maintenance and Operation*			Net Revenues
		General	Bus	Total	
1955**	\$ 4,598	\$ 2,081	\$ —	\$ 2,081	\$ 2,517
1956**	4,769	2,085	—	2,085	2,684
1957**	4,946	2,054	—	2,054	2,892
1958**	2,561	1,027	—	1,027	1,534
1958***	3,085	778	77	855	2,240
1959	6,408	1,560	186	1,746	4,662
1960	6,617	1,566	165	1,731	4,886
1961	6,880	1,570	165	1,735	5,145
1962	7,044	1,575	155	1,730	5,314
1963	7,267	1,580	186	1,766	5,501
1964	7,470	1,586	155	1,741	5,729
1965	7,631	1,590	155	1,745	5,886
1966	7,790	1,595	155	1,750	6,040
1967	7,951	1,600	155	1,755	6,196
1968	8,111	1,610	166	1,776	6,346
1969	8,271	1,620	155	1,775	6,496
1970	8,431	1,630	165	1,795	6,646
1971	8,591	1,640	155	1,795	6,796
1972	8,751	1,650	166	1,816	6,946
1973	8,912	1,660	155	1,815	7,097
1974	9,072	1,670	166	1,836	7,247
1975	9,178	1,680	155	1,835	7,343
1976	9,286	1,690	165	1,855	7,441
1977	9,391	1,700	155	1,855	7,536
1978	9,498	1,710	155	1,865	7,633
1979	9,605	1,720	155	1,875	7,730
1980	9,711	1,730	155	1,885	7,826
1981	9,819	1,740	155	1,895	7,924
1982	9,924	1,750	155	1,905	8,019
1983	10,031	1,760	165	1,915	8,116
1984	10,136	1,770	155	1,925	8,213
1985	10,192	1,780	155	1,935	8,257
1986	10,246	1,790	155	1,945	8,300
1987	10,298	1,800	155	1,955	8,343
1988	10,353	1,810	155	1,965	8,386
1989	10,405	1,820	165	1,975	8,430
1990	10,458	1,830	155	1,985	8,473
1991	10,512	1,840	155	1,995	8,517
1992	10,566	1,850	155	2,005	8,561
1993	10,618	1,850	155	2,005	8,613
1994	10,672	1,850	165	2,005	8,667

* Estimated by Parsons, Brinckerhoff, Hall & Macdonald.

** Before completion of Hampton Roads Bridge and Tunnel and Bay Bridge, March 1958.

*** After completion of Hampton Roads Bridge and Tunnel and Bay Bridge.

**PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS**

FOUNDED BY WILLIAM BARCLAY PARSONS IN 1888

51 BROADWAY, NEW YORK 6, N. Y.

J. MACDONALD
E. S. WATERBURY
K. QUACK
I. DOUGLASS
E. DEFINE
R. KIRK
I. GRENFIELDER
H. BRUCE, JR.

CONSULTANTS

JOHN F. MOSEAN
W. E. R. COVELL

September 15, 1954

GENERAL J. A. ANDERSON,
COMMISSIONER
VIRGINIA DEPARTMENT OF HIGHWAYS
RICHMOND 19, VIRGINIA

Dear General Anderson:

Under date of August 16, 1954, we submitted to you our Engineering Report on the Hampton Roads Project (sometimes called the "Hampton Roads Crossing"), the George P. Coleman Memorial Bridge (sometimes called the "York River Bridge"), the James River Bridge System (sometimes called the "James River Bridges"), and the Rappahannock River Bridge. The following is a summary of that report:

Hampton Roads Crossing

Primarily, this project fills the need for a highway facility that will provide a continuous, direct, all-weather crossing of Hampton Roads—a body of water that separates and forms a natural barrier to highway traffic between the City of Norfolk and the cities of Hampton and Newport News. In addition to serving these large and important cities, the facility will also serve adjacent communities and, more generally, the Tidewater Area of Virginia. It will replace two existing ferry routes which now provide the only direct (but intermittent) service between Norfolk and Newport News and between Norfolk and Hampton (via Old Point).

The Crossing includes approach highways on each side which provide convenient, rapid and effective connections to existing major highways and streets. The approach highways will facilitate the movement of traffic to and from the bridges and tunnel included in the Crossing and will improve, to a very substantial degree, the service rendered by the Crossing to the large populated areas which it will connect.

On the Hampton side of the Crossing, the approach highway will be located on a new right of way to be acquired for that purpose and will be constructed as a limited access facility. Such limited access construction is not feasible on the Norfolk side. Here, the approach highway will follow existing streets throughout a substantial portion of its length. The project, planned as a result of a series of conferences with your Department and Officials of the City of Norfolk, provides for widening and improvement of those existing streets in Norfolk and the construction of certain grade separation structures

where the approach road intersects major traffic arteries. Access to the approach road in Norfolk will thus be controlled at important intersections.

At its northern terminus, the project is connected at grade with U. S. Route 17. A full interchange is planned at the intersection with U. S. Route 258 (Military Highway). The next connection is with a new approach highway joining Victoria Avenue in Newport News with the main approach highway that will be about 2 miles in length and that will be constructed as a part of the project. Both this connection and the improvement and extension of LaSalle Avenue—also to be constructed as part of the project—will serve Newport News. The LaSalle Avenue interchange will also provide a connection with Route 194 (Black River Road) and will serve Hampton and Langley Air Force Base as well as Newport News.

At U. S. Route 60 (West County Street), a four-ramp interchange will serve traffic to and from Hampton and at National Avenue near the Shore of Hampton Roads, an off-ramp for northbound local traffic is provided.

On the Norfolk side, the project follows Ocean View Avenue along Willoughby Spit. Since the Spit is extremely narrow, cross traffic cannot create serious interference with traffic on the project. At the point where the project diverges from Ocean View Avenue grade separation of conflicting traffic movements is provided.

At Government Avenue a northbound access ramp is planned for the use of local traffic and at Peachtree Street an off-ramp southbound will provide access to the U. S. Naval Base. Grade separation with connecting ramps is provided at Granby Street, the principal artery leading to the business district of Norfolk.

Beyond Granby Street, the project follows, at grade, Cottage Toll Road to its intersection with Sewell's Point Road, which is also a major traffic artery. Cottage Toll Road will be widened and improved and grade separation will be provided at Sewell's Point Road. The project ends at grade on Cottage Toll Road just south of the Sewell's Point Road Underpass.

The main water crossing of Hampton Roads is approximately $3\frac{1}{2}$ miles long and is accomplished by means of short lengths of hydraulic embankments near the shore lines, bridges on either side of the main ship channel between the shores and the tunnel portal islands and a tunnel under the main ship channel that will be 7479 ft. long face to face of portals. The portal islands—both of which will be constructed under this project—will support the ventilation buildings located at each end of the tunnel and the open approaches on grades that provide transitions across the islands from the tunnel portals to the bridges connecting the islands with the shores.

The north and south bridges are 5250 ft. and 6110 ft. long respectively and they will have a 30-ft. roadway which is adequate for two moving lanes of traffic to by-pass in an emergency a standing vehicle. The width of roadway throughout the tunnel and its open approaches will be 23 ft. to furnish one lane of traffic in each direction.

The tunnel will be equipped with modern and adequate ventilating equipment together with controls for its operation, continuous fluorescent lighting, traffic lights, fire alarm stations, drainage systems, fire protection, crash trucks, patrolmen and operating personnel

on duty at all times, together with every other modern device or equipment needed for safe and efficient operation of the tunnel.

The portal islands will be constructed to a height of 11 ft. above mean sea level and in ample width and length to furnish complete effective protection to the ventilation buildings, the tunnel ends and portals and the open approaches from damage by any and all ships adrift or proceeding under power off-course, as well as protection from partial flooding due to wave action during storms. The islands will be surrounded by rip-rap so placed as to effectively protect them from erosion by water currents and wave action during storms.

Flooding of the tunnel and its open approaches during exceptionally high tides will be prevented by extending the side walls of the open approaches to a height of 14 ft. above mean sea level—a height at least 5 ft. above the highest tide of record.

The approach highways will be designed for four lanes of traffic, except for the portion of the Hampton Approach between U. S. Route 17 and U. S. Route 258, where the initial construction will consist of a two-lane single roadway. Elsewhere there will be two-lane dual roadways separated by a median. In Norfolk and in certain urban areas on the Hampton side, the median will be narrower than in the rural sections where right of way is inexpensive and a generous median width is desirable and can be obtained at low cost.

The highway approaches are planned in conformity with modern design criteria which are described in detail in our report of August 16, 1954. They are planned to serve adequately the volumes of traffic estimated by your Traffic Engineers, DeLeuw, Cather & Company and Wilbur Smith and Associates. The traffic volumes are given in their report to you of August 30, 1954.

Tolls charged for the use of this facility will be collected at a single toll station located near the north shore of Hampton Roads. Modern toll collection equipment will be installed to insure effective collection, classification and audit of the revenues. A sufficient number of traffic lanes through the toll plaza and sufficient toll equipment will be provided to insure a minimum of delay to the motorist. Provision will be made for future expansion of the toll plaza when needed.

Bus facilities will be provided for pedestrians. For the purpose of determining the project cost and costs of operation and maintenance it has been assumed that the buses will be owned and operated as a part of the project. It may be found advantageous at some later date to lease all or some portion of the bus operation.

It is estimated that a period of three years will be required for the construction of the tunnel which will be the governing factor in the over-all completion of the project. The preparation of the contract plans and specifications and the construction to be accomplished under the several construction contracts will be carefully scheduled to insure proper timing with the tunnel construction so that all other parts of the project will be completed and ready for traffic prior to or simultaneously with the completion of the tunnel.

In accordance with your authorization, we have completed the plans and specifications for the first two contracts for the Hampton Roads Crossing. Contract C-1 covers the construction of the structural elements of the tunnel between the ventilation buildings and the construction of the two portal islands. Contract C-2 covers the construction of the North and South Bridges between the shores and the portal islands.

These two contracts have been advertised and bids will be received early in October. Construction on that part of the project which will take the longest time to build can therefore be started immediately after the arrangements for financing the project are completed.

Plans and specifications for the finish work in the tunnel, the ventilation buildings and their equipment and the open approaches will be completed well in advance of the time when construction should be started in conformity with the over-all schedule.

Estimates of cost of the work covered by the first two contracts (amounting to more than half of the total construction cost of the Hampton Roads Crossing) have been based on contract plans and quantities. The data obtained from adequate subsurface exploration by borings and index piles have been available for the design and for the determination of contract quantities. The remainder of the construction cost has been carefully estimated from preliminary plans to determine quantities of grading, drainage, pavement and other items of highway work and to establish preliminary designs for all bridges, retaining walls and other structures.

Estimates of costs of right-of-way have been prepared by experienced appraisers familiar with local values of real estate.

The following is a condensed summary of the cost of the Hampton Roads Crossing:

Construction	\$51,835,000
Bus Facilities	315,000
Maintenance and Operating Equipment.....	350,000
Engineering	2,200,000
Borings, Including Supervision	150,000
Right-of-Way	3,000,000
Total	\$57,850,000
Contingencies 8.9%	5,150,000
TOTAL COST.....	\$63,000,000

All engineering work on this project, including supervision of construction, has been or will be performed by Parsons, Brinckerhoff, Hall & Macdonald.

Rappahannock River Bridge

The Rappahannock River Bridge will be located about 8 miles above the mouth of the river and will connect Grey's Point in Middlesex County and White Stone in Lancaster County. It will replace an existing ferry at the same location.

The total length of crossing between bridge abutments is 9885 ft. The bridge is a high-level-fixed bridge with a main span 648 ft. long having a vertical clearance over the navigation channel of 110 ft.

The superstructure consists of fifteen steel truss spans flanked on either side by steel girder and beam spans. The roadway is 22 ft. wide.

The bases of the piers which support the truss spans consist of open dredge caissons sunk to a maximum depth of 150 ft. below the surface of the river. The girder spans rest on pile-supported piers and the beam spans are supported by precast concrete pile bents.

An initial contract for the construction of a portion of this bridge is nearing completion. Plans and specifications for all of the remaining work have been completed and both

the substructure and superstructure contracts have been advertised. Bids will be received on them during October. The work can be started immediately after arrangements for financing are completed. Construction is estimated to be completed within approximately 30 months after the contract awards.

The estimated cost of construction is as follows:

Substructure	\$ 7,427,000
Superstructure	7,070,000
Construction Cost	<u>\$14,497,000</u>
Engineering, Borings, Right-of-Way, Plus a Contingency of 6½%	1,450,000
TOTAL, INCLUDING CONTINGENCIES.....	<u>\$15,947,000</u>

The engineering work on this bridge, including supervision of construction, has been or will be performed by Modjeski and Masters of Harrisburg, Pa., subject to our general review as Consulting Engineers serving in accordance with the Trust Indenture under which the proposed Revenue Bonds will be issued.

York River Bridge (George P. Coleman Memorial Bridge)

This bridge is an existing facility which carries U. S. Route 17 across the York River between Yorktown and Gloucester Point. Its total length between abutments is 3760 ft. The river crossing consists of steel deck truss spans having a total length of 2640 ft. Two of the spans are movable swing spans 500 ft. long which provide a clear opening for navigation 460 ft. wide between the pivot piers which support the swing spans. The truss spans are supported by piers having bases consisting of open-dredge caissons.

The approach spans over land consist of deck plate girder spans resting on pile-supported piers.

The bridge deck is 26 ft. wide and consists of reinforced concrete on the fixed spans and of open steel grating on the movable spans.

The bridge was completed and opened to traffic in May 1962. The engineering work, including supervision of construction, was performed by Parsons, Brinckerhoff, Hall & Macdonald.

James River Bridges

The James River Bridges are a two-lane facility built in 1928 which consists of bridges over the James River, Chuckatuck Creek and the Nansemond River together with the connecting highways. Each bridge contains a movable span: that in the James River Bridge is a vertical lift span 300 ft. long; those in the other bridges are bascule spans 110 ft. long.

The total length of the James River Bridge is nearly 6 miles. Tolls are now collected at each of the three bridges. It is expected that at some time in the future the toll collection points will be located at the two ends of the system rather than at the three bridges.

An extensive modernization and rehabilitation program for the three bridges is currently planned and partly constructed. The cost will be paid from existing funds and is not included in the proposed new financing. Further description of this work is contained in our report of August 16, 1954.

Maintenance and Operation of the Four Facilities

The four facilities described herein will be operated as a unified group under the supervision of the Director of Toll Facilities. An Administration Building to serve all four facilities will be located at the toll plaza on the Hampton Roads Crossing. Maintenance buildings and a yard for the maintenance of the four facilities, including the bus operation, will be located near the Route 258 interchange on the Hampton approach highway to the Hampton Roads Crossing. The costs of the buildings and equipment for administration and maintenance of all facilities are included in the cost of construction for the Hampton Roads Crossing.

The Annual Costs of Maintenance and Operation of all four facilities considered as a group have been studied and estimated. These are presented in detail in our report of August 16, 1954 and we will therefore summarize below only the costs of operation and maintenance estimated for the fifth year of operation.

Operation and Ordinary Maintenance	\$1,130,000
Insurance	170,000
Replacement Reserves	275,000
Bus Operation	<u>155,000</u>
TOTAL FOR FOUR FACILITIES—5TH YEAR OF OPERATION . . .	\$1,730,000

From an engineering viewpoint the Hampton Roads Project is entirely feasible. The tunnel and bridges which comprise the main water crossing present no problems in design or construction that can not be solved by well established and thoroughly tested methods. The bridges consist of relatively short trestle spans built in shallow water. The tunnel will be similar in design to that of the Elizabeth River Tunnel at Norfolk and the Baytown Tunnel at Baytown, Texas. We designed and supervised the construction of both of these tunnels. They have been completed and are now in operation.

Very truly yours,

PARSONS, BRINCKERHOFF, HALL & MACDONALD,

By M. N. QUADE.

**PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS**

FOUNDED BY WILLIAM BARDLEY PARSONS IN 1888
21 BROADWAY, NEW YORK 6, N. Y.

— MACDONALD
E. B. WATERBURY
R. GUARD
D. DOUGLAS
EDERFINK
ECKEL
RESENFELDER
H. BRUCE, JR.

CONSULTANTS
JOHN F. HOGAN
W. E. R. DOWELL

General J. A. Anderson
Commissioner
Virginia Department of Highways
Richmond 19, Virginia

October 11, 1954

Dear General Anderson:

Subsequent to the date of our engineering report and to our letter to you of September 15, 1954 summarizing this report, favorable bids have been received on the first two contracts on the Hampton Roads Project and on the remainder of the substructure and all of the superstructure on the Rappahannock Bridge. In view of the fact that the low bids on the two Hampton Roads contracts and on the substructure for the Rappahannock Bridge are considerably below the engineers' estimate, we are revising below the estimated project costs for these two projects:

**HAMPTON ROADS PROJECT
ESTIMATE OF PROJECT COST**

CONSTRUCTION:		
Section A — Structures	\$ 239,000	
Highway	1,017,000	\$ 1,256,000
Section B — Structures	\$ 5,085,000	
Highway	5,051,000	10,086,000
Section C — Tunnel	\$28,025,000	
Bridges	3,250,000	29,275,000
Section D — Structures	\$ 4,216,000	
Highway	2,102,000	6,818,000
BUILDINGS AND TOLL FACILITIES:		
Administration Building	\$ 260,000	
Maintenance Building and Yard	140,000	
Toll Facilities and Plaza	180,000	580,000
Total Cost of Construction		\$47,515,000
Buses, Terminals and Garages		315,000
Maintenance and Operating Equipment		350,000
Engineering		2,200,000
Borings, Including Supervision		250,000
Right-of-Way		3,000,000
Total		\$53,630,000
Contingencies 9.1%		4,870,000
Total Cost of Project		\$58,500,000

**RAPPAHANNOCK RIVER BRIDGE
ESTIMATE OF PROJECT COST**

Substructure	\$ 5,450,000
Superstructure	7,950,000
Construction Cost	<u>\$13,400,000</u>
Engineering, Borings, Right-of-Way	525,000
Total	<u>\$13,925,000</u>
Contingencies 11.3%	1,575,000
Total Cost of Project.....	<u>\$15,500,000</u>

Very truly yours,

PARSONS, BRINCKERHOFF, HALL & MACDONALD,

By M. N. QUADE.

MNQ:EN

Mr. Pershing explained to the Commission the provisions of the Trust Indenture relative to outstanding bonds and the redemption of the bonds anytime after thirty days' notice. Recommendations will be brought to the Commission by Mr. Pershing on October 27, covering action to be taken; whether to advertise redemption for thirty days now or wait until March of 1955.

General Anderson stated to Mr. Pershing that "on behalf of the Commission, we thank you warmly for the work you are doing for us; we appreciate you and we trust you explicitly. We will follow you all down the line".

The following telegram was sent by the Chairman today to the District Engineers with copies to the Division Heads and Assistant Engineers of the Department:

"The Commission at its meeting today warmly thanked all forces for the splendid job of restoring full highway service following the state-wide storm brought by Hurricane Hazel. Our personnel's devotion to duty and determination to keep traffic moving safely merit the highest praise. Please add my best thanks and heartiest congratulations for another big task well done".

An editorial in the Richmond Times-Dispatch of today was brought to the attention of the Commission. This also referred to the excellent work done by the State Road Crews following the Hurricane on October 15. The Chairman read to the Commission a letter he proposed to mail to Mr. Virginius Debnay, Editor of the Richmond Times-Dispatch expressing appreciation and gratitude for his knowledge of the Highway Department.

Senator Wright suggested that on possible controversial matters coming up that the Members be furnished with a brief on the subject.

Mr. Rawls continues interested in the removal of roadside trees. He would like most careful consideration given to all trees before being removed.

Mr. Flythe stated that it had been his observation over the years that the people of Virginia are proud of the road system and proud that the roads are paid for. He is glad to be a Member of the Commission.

There being no further business, the meeting adjourned at 10:50 A. M.

Approved-

J. G. Anderson
Chairman.

Attested-

D. W. Rawls
Secretary.