

Staff Report to NVTC Commissioners

THE IMPORTANCE OF THE  
WASHINGTON & OLD DOMINION RAILROAD  
IN THE DEVELOPMENT  
OF A RAIL TRANSIT SYSTEM  
FOR NORTHERN VIRGINIA

Northern Virginia Transportation Commission

Arlington, Virginia

7 September 1967

I. The Washington & Old Dominion Railroad is unique. No other right-of-way is available in the W&OD "corridor", and no new right-of-way could be created which would be as desirable from a planning or an engineering standpoint. After considering all suggested alternatives, the NVTC Commissioners adopted the entire W&OD railroad as a passenger route (except for a short section in Alexandria which would be retained for freight service) on July 7, 1966.<sup>1/</sup> This decision was reconfirmed on Dec. 8, 1966,<sup>2/</sup> and confirmed once more on Aug. 23, 1967 by the Commissioners.

II. Rail passenger service to much of northern Virginia can begin in two to three years at a very reasonable cost, but only if the W&OD remains in existence as a railroad.

If the railroad ceases to exist, each and every grade crossing would have to be grade separated before any service could start.<sup>3/</sup> If the railroad remains in existence, grade crossings would be separated in accordance with need. Major crossings would be separated first, and minor crossings would be protected with signals and gates until traffic increased to the point that separation was required.

If the W&OD ceases to exist, any subsequent use of the right-of-way for rail passenger service would be classified as a "new railroad". Federal-aid highway funds cannot be used in building railway-highway grade separations on a new railroad.<sup>4/</sup> This would substantially increase the cost to the transit district of beginning any kind of rail service.

If the railroad is abandoned, over five miles of the most critical section of the right-of-way will be used for highway purposes.<sup>5/</sup> Service could not start until this right-of-way was replaced, or the Wilson Blvd. or Columbia Pike rapid transit lines were built to connect to the remaining right-of-way. Neither alternative is financially feasible at this time.

1/ NVTC Minutes, p. 66

2/ NVTC Minutes, p. 87

3/ Statement of Charles E. Owen, Jr., Virginia Dept. of Highways, before the Interstate Commerce Commission (Finance Docket 23492), p. 18

4/ U.S. Bureau of Public Roads, Policy and Procedure Memorandum 21-10, "ELIMINATION OF HAZARDS OF RAILWAY-HIGHWAY CROSSINGS", par. 56 (4)

5/ 1 1/4 miles is to be used for I66, 4 miles is to be used for the Four Mile Run Parkway.

Shirley Highway would be rebuilt on an embankment blocking the right-of-way unless the W&OD remains in existence. To later attempt to build a new line at this point would be very expensive.

Interstate Route 66 would block the W&OD right-of-way at the Capital Beltway with two high embankments.<sup>6/</sup> To restore rail service at a later date would require rebuilding a long section of I66 to raise the grade, and to construct two overpass structures, while maintaining highway traffic.

III. The W&OD offers several routings which cannot be achieved by any of the other rail transit lines proposed for northern Virginia.

By building a connection between the W&OD and the RF&P Railroad in the Four Mile Run area of Alexandria, direct service could be given to the Crystal Plaza and SW Mall areas from northern Fairfax County, Vienna, Falls Church, the western and southern parts of Arlington County, the northwestern part of Alexandria and Loudoun County.

By using this same connection, direct express or limited stop service could be operated between Dulles and National Airports. A more direct route than the W&OD does not exist for this purpose.

The W&OD would provide the bulk of a route needed to provide "cross-county" service connecting Alexandria, Arlington, Falls Church, northern Fairfax County and Loudoun County together. This service would be especially important. The traffic forecasts developed for regional test systems A, B, and C all show that 42 percent of the work trips in the Arlington-Alexandria area are internal trips. This condition is already evident in the heavy traffic flows on Glebe Road, which is Arlington County's major cross-county highway and runs in generally the same direction as the W&OD.

IV. The W&OD now serves over twice the population of any other proposed rail line in northern Virginia, and will continue to do so in the future.

The population forecasts for 1985 and 2000, which were compiled into a population dot map for NVTC by the Northern Virginia Regional Planning Commission, show that twice as many people could be served by passenger service on the W&OD, both now and in the future, than by any other proposed rail line in northern Virginia. If the population served by the Fairfax City-Centreville branch is added, the W&OD becomes even more impressive in terms of population served.

Appendix I contains a population breakdown, by jurisdiction, for each of the proposed rail transit lines in northern Virginia, for the years 1965, 1985 and 2000. It shows in detail the superiority of the W&OD in terms of population served.

<sup>6/</sup> Virginia Dept. of Highways, "Plan and Profile of Proposed State Highway", Route I-66, project 0066-029-103, C502.

V. The cost of creating another right-of-way to Fairfax County is many times greater than the probable cost of purchasing the W&OD.

If the W&OD is abandoned, the first point at which the remains of the right-of-way would be available for rail transit service would be at the Arlington-Falls Church boundary.

The estimated cost of building the Wilson Blvd. line from Rosslyn to Falls Church is \$108,790,000 without escalation.<sup>7/</sup> The estimated cost with escalation would be \$161,114,000.<sup>8/</sup>

The W&OD crosses Columbia Pike at the Barcroft-Park Glen apartment complex. Assuming that the Four Mile Run Parkway was not built, so that the rail transit line could turn off of Columbia Pike onto the W&OD right-of-way, the estimated cost of building the Columbia Pike line from the Pentagon to the W&OD is \$83,699,000 without escalation.<sup>9/</sup> With escalation, the estimated cost would be \$123,957,000.

Several sales prices have been suggested for the W&OD. The "net salvage value", the lowest price which the Interstate Commerce Commission would stipulate if it inserts a salvage clause in the W&OD abandonment order, is \$169,170.

<sup>7/</sup> National Capital Transportation Agency, "Regional Systems Study, Part III - Estimate of Cost", July 1967, Sheet 48.

<sup>8/</sup> For escalation purposes, it was assumed that the basic system will reach Rosslyn in 1973 on schedule, and that the Wilson Blvd. line would be built as far as East Falls Church during the years 1973-77. The escalation factors developed by the Washington Metropolitan Area Transit Authority were used to determine the increase in construction cost due to inflation.

<sup>9/</sup> National Capital Transportation Agency, "Regional Systems Study, Part III - Estimate of Cost", July 1967, Sheet 102.

<sup>10/</sup> For escalation purposes, it was assumed that the basic system would reach the Pentagon in 1973 on schedule, and that the Columbia Pike line would be built as far west as the W&OD during the years 1973-77. The escalation factors developed by the Washington Metropolitan Area Transit Authority were used to determine the increase in construction costs due to inflation.

The Virginia Dept. of Highways has agreed to pay \$3,500,000 for 30.5 miles of right-of-way. The Virginia Electric & Power Company has options to buy the remaining 16 miles, based on a formula related to real estate prices at the time of purchase. No figure is available at this time, but if the same average price per mile as the Highway Dept. contract were applied, the total of the two amounts would be \$5,451,000. This is a high figure, because the State Corporation Commission of Virginia places the assessed value of the W&OD's land as of Jan. 1, '66 at \$654,832.<sup>11/</sup>

At the time negotiations begin for the purchase of the W&OD, the final price may quite possibly be determined by a court-appointed board of arbitration.

When the probable cost of acquiring the entire 48.5 mile W&OD railroad (certainly less than \$10 million, probably less than \$5 million) is compared to the estimated cost of building a new line either on Wilson Blvd. or Columbia Pike to replace the Arlington County portion of the W&OD, the result is overwhelmingly in favor of keeping the entire W&OD in existence. The difference in cost, at least \$151 million for Wilson Blvd. or \$114 million for Columbia Pike, would be four or five times the amount needed to begin rail passenger service on the W&OD.

VI. Rail passenger service on the W&OD would offer substantial savings in travel time over present bus service.

Rail service on the W&OD would get passengers to downtown Washington in one-third to one-half the time of present motor bus service, starting at the same points.

Time savings from points on the W&OD beyond Columbia Pike and SW Mall would be even greater than those to the Federal Triangle (W. V. & M. does not run direct service between the territory served by the W&OD and S. W. Mall).

Travel time comparisons of W&OD rail service and present bus service are given in Appendix II.

VII. The Route 66 median strip is a poor place for a rail transit line.

The routing of I66 bypasses existing and proposed concentrations of development. It has to do this in order to keep the cost of the highway down. This routing is also poor from a planning standpoint. Rapid transit in the median strip of a 10 lane expressway is less attractive to passengers than on its own right-of-way. It requires much longer walks from feeder buses and parking lots.

The grades and curves of Route 66 are not as favorable for rapid transit as those of the W&OD.

<sup>11/</sup> "Statement Showing the Assessed Value as of the Beginning of the 1st Day of January 1966 made by the State Corporation Commission of Virginia".

Maintenance costs will be increased by operating in the median strip. The Chicago Transit Authority, after 10 years experience with median strip operation is unhappy about the increased difficulty and expense of maintaining the track.

VIII. If the median strip of Route 66 is ever to be used for rapid transit, a large sum of money will have to be spent very soon, but the investment will sit idle for many years until the Wilson Blvd. line is built to meet the median strip alignment.

Rte 66 is behind schedule. The Dept. of Highways wants to proceed with construction. If rapid transit wants to be accommodated in the median strip, it must raise the money now for the cost of the following work:

A. The cost of preparing preliminary plans and estimates for Route 66 without rapid transit in the median. This will be used in figuring the extra costs of accommodating rapid transit.

B. The cost of the additional land needed to provide for a rapid transit median.

C. The cost of all additional construction caused by the presence of rapid transit in the median strip plus an extra 10 percent for administrative expenses.

The costs of land acquisition and construction are to be reimbursed by the transit authority as the work is performed at the request of the Highway Commissioner, but not oftener than every 90 days.

Based on discussions between the NVTC staff and the VDH staff, the cost of making all these changes would be well over \$5 million. A proposed 1963 contract between VDH and NCTA for providing a median strip in 1.1 miles of Route 66 set the cost at \$1,300,000, with a provision for increasing the amount if costs ran higher than expected. According to Mr. Owen, highway costs in northern Virginia are increasing at the rate of 10% per year.

Based on this increase of 10 percent a year, this same 1.1 mile section would cost at least \$1,850,000.

IX. There is no assurance that rapid transit will be allowed in the median strip of Route 66.

The presently approved design of Rte 66 does not provide for rapid transit. The apparent space for rapid transit exists only because the fifth lane in each direction will not be paved initially. The Federal Highway Administration must decide that rapid transit is more important than the fifth lane in each direction. Otherwise, the highway will have to be completely redesigned.

12/ Statement of Charles E. Owen, Jr., Virginia Dept. of Highways, before the Interstate Commerce Commission (Finance Docket 23492), p. 21.

SUMMARY:

The W&OD is the best route for rail transit service to northern Fairfax County.

It is by far the cheapest route to develop.

It serves more than twice the population of any other proposed route in northern Virginia.

It can be put into operation in two or three years, compared with 10 years for any other proposed route to serve the same area.

It is the only way that a high speed service can be developed between Dulles and National Airports.

It offers routings not available with any other proposed route.

The probable cost of buying the whole railroad is equal to or less than the cost of getting rapid transit in the median strip of Rte 66 between Glebe Road and the Capital Beltway.

Rail service on the W&OD via Crystal Plaza would reduce travel time one half to two-thirds that of present motor buses, and provide direct service to Crystal Plaza and SW Mall, which is not offered by bus now.

IT IS THE KEY TO ORDERLY RAIL TRANSIT DEVELOPMENT IN NORTHERN VIRGINIA!!!

APPENDIX I

POPULATION IN NORTHERN VIRGINIA TRANSPORTATION  
COMMISSION CORRIDORS  
(Compiled from NVRP&EDC Map of Present and Future  
Population Densities)

A. Short Haul Corridors  
(Population within one-quarter mile of centerline)

Corridor

No. 1: Mt. Vernon - Woodlawn to Long Bridge

	<u>1965</u>	<u>1985</u>	<u>2000</u>
Arlington County	1,800	2,400	11,200
Alexandria	10,200	11,600	14,400
Fairfax County	<u>13,600</u>	<u>26,000</u>	<u>31,200</u>
Totals	25,600	40,000	56,800

Note: NVTC's tentative alignment in the Mt. Vernon district of Fairfax County would serve 20,466 apartment units built, under construction or authorized, with a potential population of 61,000. Rezoning applications are pending for an additional 7,000 units. If granted, the potential apartment population would be 82,000.

No. 2: Shirley Highway - S. Van Dorn St. to Pentagon

	<u>1965</u>	<u>1985</u>	<u>2000</u>
Arlington County	13,400	22,800	22,800
Alexandria	<u>8,200</u>	<u>43,200</u>	<u>46,200</u>
Totals	21,600	66,000	69,000

No. 3: Columbia Pike - Americana Fairfax Apts. (Annandale) to Pentagon

Arlington County	26,000	31,200	31,200
Fairfax County	<u>12,800</u>	<u>24,600</u>	<u>28,000</u>
Totals	38,800	55,800	59,200

No. 4: Wilson-Arlington Blvds. - Fairfax Hospital - Rosslyn

Arlington County	25,400	33,200	33,200
Fairfax County	<u>14,800</u>	<u>19,400</u>	<u>24,400</u>
Totals	40,200	52,600	57,600



Population in NVTC Corridors - 2 -

B. Long Haul Corridors  
 (Population within one-half mile of centerline)

Corridor  
 No. 6: RF&P Railroad - Featherstone to Long Bridge \*

	<u>1965</u>	<u>1985</u>	<u>2000</u>
Prince William County	5,200	11,600	21,000
Fairfax County	5,800	28,400	48,200
Alexandria	19,000	21,000	21,600
Arlington County	<u>6,000</u>	<u>10,600</u>	<u>19,200</u>
Totals	36,000	71,600	110,000

\* Excludes W&OD overlap in Alexandria.

Also excludes Ft. Belvoir Utility RR:  
                                   9,400                  9,400                  9,800

No. 7: Southern Railway - Gainesville to RF&P RR

Prince William County	5,800	19,000	33,600
Fairfax County	<u>10,200</u>	<u>27,200</u>	<u>40,800</u>
Totals	16,000	46,200	74,400

No. 8: Washington & Old Dominion Railway - Purcellville to Alexandria

Loudoun County	7,600	19,800	34,200
Fairfax County	16,200	44,200	64,800
Falls Church	6,800	8,000	8,800
Arlington County	56,400	66,200	66,600
Alexandria	<u>32,400</u>	<u>33,400</u>	<u>38,200</u>
Totals	119,400	171,600	212,600

No. 8(b): Fairfax City and Centreville Branch of W&OD Corridor

Fairfax County	8,000	29,800	44,400
Fairfax City	<u>9,200</u>	<u>13,000</u>	<u>14,000</u>
Totals	17,200	42,800	58,400

Comparison of Rush Hour Travel Times of Present Virginia Bus Service  
VS Rail Commuter Service on The W&OD

I - W. V. & M. Coach Company Lines

Route No.	Type of Service	Origin	Destination	Running Time	
				Present	W&OD
3S	Limited	Herndon	11th & E NW	75	33
3S	Limited	Reston	11th & E NW	69	30
7	Local	Vienna	11th & E NW	67	23
3V	Express	Vienna	11th & E NW	67	23
3	Limited	Dunn Loring	11th & E NW	63	21
3F	Limited	W. Falls Church	11th & E NW	44	17
3E	Local	E. Falls Church	9th & Const. NW	43	15
2	Local	E. Falls Church	11th & E NW	52	15
1	Local	Wilson Blvd & W&OD	11th & E NW	48	12
4D	Local	Carlyn Springs Rd & W&OD	11th & E NW	44	12
6&9	Limited	Arlington Blvd & W&OD	9th & Const. NW	32	12

II - A. B. & W. Transit Company Routes

Route No.	Type of Service	Origin	Destination	Running Time	
				Present	W&OD
16	Local	Columbia Pike & W&OD	12th & PA Ave NW	35	10
16	Express	Columbia Pike & W&OD	12th & PA Ave NW	29	10
16D	Local	Shirlington	12th & PA Ave NW	53	8
5	Local	Shirlington	12th & PA Ave NW	50	8
6	Local	Shirlington	12th & PA Ave NW	30	8
7	Express	Shirlington	12th & PA Ave NW	30	8
8	Express	Shirlington	12th & PA Ave NW	30	8

Bus Running Times are based on current timetables. Rail running times are taken from Appendix F, "Potential Rail Transit Corridors in Northern Virginia", Northern Virginia Transportation Commission, April 1966, and are based on the performance data of modern rail passenger equipment currently in use in this country.