

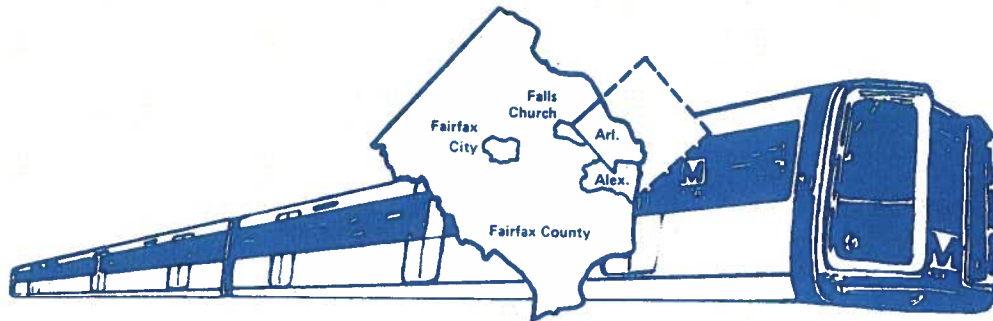


Northern Virginia Transportation Commission

REPORTS ON THE
SECOND ANNIVERSARY OF THE
TRANSIT SERVICE IMPROVEMENT ELEMENT
OF THE SHIRLEY HIGHWAY
EXPRESS BUS-ON-FREEWAY PROJECT



Under present rush hour auto occupancy counts the first two buses could eliminate all cars in the regular outbound lanes of traffic.



Northern Virginia Transportation Commission

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■ ARLINGTON, VIRGINIA 22201

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**VIRGINIA DEPARTMENT
OF HIGHWAYS**
John P. Mills, Jr.

June 18, 1973

Mr. Frank C. Herringer
Administrator
Urban Mass Transportation
Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Mr. Herringer:

On behalf of the Northern Virginia Transportation Commission I am pleased to submit this report summarizing the first two years of operation for the Shirley Highway Express Bus-On-Freeway Demonstration Project.

The second full year of operation for this nationally acclaimed project reflected a continued growth in patronage. I am happy to report that since its inauguration in June 1971 daily ridership using some portion of the busway has increased from 14,200 to over 28,000. In this past year approximately 3,400 additional patrons were attracted to buses using the Shirley busway.

Equally important to the increased ridership is the decrease in the number of private autos using Shirley Highway during the morning rush hour. Today there are approximately 1,600 fewer autos on Shirley Highway during the 6:30 - 9:00 A.M. peak period than there were in June of 1970 just prior to the formal opening of a major portion of the busway. The Northern Virginia Transportation Commission sincerely believes that this project is not only contributing to the rapid, comfortable movement of people, but is also helping in the continuing battle for a cleaner environment.

Mr. F. C. Herringer
Page 2
June 18, 1973

The success of this project is the result of a high degree of cooperation among all participants at Federal, State and local levels. As Chairman of the Northern Virginia Transportation Commission, local sponsors of the Shirley Project, I wish to thank you and the staff members of The Urban Mass Transportation Administration for your assistance and to assure you of our continued cooperation during the coming year.

Very truly yours,

Rufus Phillips
Chairman

RP:clg

THE SHIRLEY HIGHWAY EXPRESS BUS-ON-FREEWAY
DEMONSTRATION PROJECT

A SUMMARY OF THE FIRST TWO YEARS OF OPERATION
June 1971 - June 1973

Sponsored by
THE NORTHERN VIRGINIA TRANSPORTATION COMMISSION
Under a Demonstration Grant from
THE U.S. DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION

June 18, 1973

THE SHIRLEY HIGHWAY EXPRESS BUS-ON-FREEWAY
DEMONSTRATION PROJECT

A Summary of the First Two Years of Operation

On June 27, 1972, the Northern Virginia Transportation Commission transmitted to the Secretary of Transportation a summary report of the first year of operations for the Shirley Highway Project. At the conclusion of the cover letter transmitting that report it was stated that "We look forward to another year of unprecedented progress in transit".

Now, one year later, all participants in the Shirley Project can look with satisfaction at what was indeed "unprecedented progress in transit" for the commuting public of Northern Virginia.

The Northern Virginia Transportation Commission is pleased to submit the following report which summarizes progress during the two years of Shirley Highway operations. Emphasis is placed on the transit service improvement element of the project, as well as some of the highlights of the past year.

RIDERSHIP

By the beginning of June 1973 over 28,000 persons were patronizing Metrobus on some portion of the Shirley Busway. This compares with 24,600 persons using the same portions of the busway a year ago this time and

14,200 persons who rode buses on some portion of Shirley Highway at the time the busway was fully opened in April of 1971.

In addition to Metrobus patrons, over 5,000 daily inter-city riders using Trailways, Greyhound and Colonial Transit buses have the advantage of the exclusive bus lanes.

During the course of the project the Northern Virginia Transportation Commission has attempted to use comparable figures when discussing patronage increases. In this way a fair and accurate appraisal of ridership can be rendered. Such a comparison is made difficult, however, by the fact that the exclusive bus lane was opened in increments over a seven month period of time. One of the most valid "before" and "after" comparisons can be found on Table I following this page. The figures shown on Table I compare the number of passengers using the exclusive bus lanes South of Shirlington Circle during the 6:30 to 9:00 A.M. rush hours. As can be readily seen, the patronage has climbed dramatically from 1,914 in September of 1969 to 9,473 in May of 1973. This represents a 395 percent increase since the start of the project. From July 1972 to May 1973 there were 2,428 additional riders attracted to this service. Similarly, the number of bus trips has also increased sharply from 38 in September of 1969 to 202 in May of 1973. Over 50 additional bus trips were added on this portion of the roadway during the past year.

Table II also provides a reliable "before" and "after" comparison. This table shows the number of patrons carried by the former AB&W Transit

TABLE I

COMPARISON OF PASSENGERS USING EXCLUSIVE BUS LANES
BUSES ENTERING SOUTH OF SHIRLINGTON A.M. RUSH HOURS (6:30 - 9:00)

<u>DATE</u>	<u>NUMBER OF PASSENGERS</u>	<u>NUMBER OF BUS TRIPS</u>	<u>AVERAGE PASSENGERS PER TRIP</u>	<u>% INCREASE IN PASSENGERS FROM SEPT. 1969</u>
SEPTEMBER 1969	1,914	38	50.4	--
OCTOBER 1970	2,622	53	49.5	37%
MARCH 1971	3,313	62	53.5	73%
JUNE 1971	3,641	68	53.5	90%
AUGUST 1971	4,697	107	43.9	145%
SEPTEMBER 1971	5,107	108	47.3	167%
OCTOBER 1971	5,551	109	51.0	190%
NOVEMBER 1971	5,967	112	53.2	211%
JANUARY 1972	6,223	114	54.6	225%
MARCH 1972	6,666	133	50.1	248%
MAY 1972	6,891	136	50.6	260%
JULY 1972	7,045	148	47.6	268%
AUGUST 1972	7,722	151	51.1	303%
OCTOBER 1972	8,497	170	50.0	344%
DECEMBER 1972	9,029	178	50.7	372%
MARCH 1973	9,223	198	46.6	382%
MAY 1973	9,473	202	46.9	395%

TABLE 11

SHIRLEY HIGHWAY EXPRESS BUS PROJECT

Comparison of Passengers Using Busway
Preceding and Following Inauguration of
NVTc Service on June 14, 1971

	<u>June 1, 1971</u>		<u>May 16, 1973</u>			<u>Net Increase in Passengers</u>	
	<u>AB&W</u>		<u>WMATA</u>	<u>NVTc</u>	<u>COMBINED</u>	<u>Since June 1, 1971</u>	
<u>A.M. Rush</u>							
Springfield	0		0	724	724	724	
Turkeycock	600		682	2,026	2,708	2,108	
Seminary Road	3,041		2,608	3,433	6,041	3,000	
Shirlington	<u>2,016</u>		<u>2,018</u>	<u>215</u>	<u>2,233</u>	<u>217</u>	
TOTAL	5,657		5,308	6,398	11,706	6,049	
<u>P.M. Rush</u>							
Springfield	0		0	660	660	660	
Turkeycock	514		529	1,784	2,313	1,799	
Seminary Road	2,585		2,489	3,109	5,598	3,013	
Shirlington	<u>1,615</u>		<u>1,575</u>	<u>206</u>	<u>1,781</u>	<u>166</u>	
TOTAL	4,714		4,593	5,759	10,352	5,638	
TOTAL A.M. & P.M.	10,371		9,901	12,157	22,058	11,687	

Company (now Metrobus) just prior to the addition of 30 project buses in June 1971, and the number of persons now being carried over like routes by NVTC and Metrobus. The figures show a net increase of 11,687 patrons for the two year period.

The number of autos using Shirley Highway during the A.M. rush period had shown a continued decrease from June of 1971 through March of 1972. As shown on Table III this decrease remained fairly constant during the four month period June 1972 through October 1972. However the most recent survey in March of 1973 shows an increase of 420 autos since the October survey. Some of this increase must be attributed to the population growth in the corridor, while some can possibly be given to the slightly improved travel times resulting from completion of construction on portions of the roadway. On May 11, 1973 the Virginia Department of Highways opened most of the permanent northbound roadways in the Mixing Bowl area. With this opening there has been a noticeable change in level of service for auto commuters, particularly those going to the Pentagon. The long queue of cars which previously occurred south of the Mixing Bowl has been reduced considerably thus reducing the travel time advantage afforded the buses by the busway.

By February 1973 the entire 90 bus fleet purchased under the demonstration grant had been put into service. The buses, which must be considered deluxe when compared with most transit buses in operation throughout the country, continue to draw high acceptance from the users. One of the objectives of the project was to determine whether people would change from auto

**TABLE III
SHIRLEY HIGHWAY CORRIDOR TRAVEL, 6:30 - 9:00 A.M. INBOUND**

Autos	June 1970		October 1970		March 1971		June 1971		October 1971		March 1972		June 1972		October 1972		March 1973	
	Shirley Highway	Other Radial Hwys 1/	Total Corridor	Shirley Highway	Other Radial Hwys 1/	Total Corridor	Shirley Highway	Other Radial Hwys 1/	Total Corridor	Shirley Highway	Other Radial Hwys 1/	Total Corridor	Shirley Highway	Other Radial Hwys 1/	Total Corridor	Shirley Highway	Other Radial Hwys 1/	Total Corridor
Autos	8,029	26,552	34,581	8,906	27,818	36,724	7,262	26,329	33,591	5,662	26,078	31,740	5,604	27,192	32,796	5,930	26,933	32,863
Auto Persons	11,942	37,120	49,062	12,210	39,834	52,044	10,260	35,981	46,241	7,564	35,373	42,937	7,768	36,225	44,764	7,909	34,815	42,724
Bus Persons	4,392	9,508	13,900	4,302	9,895	14,197	5,400	9,443	14,843	7,824	8,484	16,308	9,121	7,722	17,275	10,772	7,868	18,640
Total Persons	16,334	46,628	62,962	16,512	49,729	66,241	15,660	45,424	61,084	15,388	43,857	59,245	16,889	43,947	62,039	18,681	42,683	61,364
Auto Occupancy	1.49	1.40	1.42	1.37	1.43	1.42	1.41	1.37	1.38	1.34	1.35	1.35	1.39	1.33	1.35	1.33	1.29	1.30
% Persons on Bus	26.9	20.4	22.1	26.1	19.9	21.4	34.5	20.8	24.3	50.9	19.3	27.5	54.0	17.6	27.8	57.7	18.4	30.4

1/ Arlington Blvd., Columbia Pike, Army-Navy Dr., Arlington Ridge Rd., Jeff. Davis Hwy., G-W Parkway

to bus if they were provided with rapid, convenient service. The increasing bus ridership, as well as the decreases in the number of autos on Shirley support the concept that an exclusive busway, coupled with a comfortable bus will attract the motorist from his auto.

Revenue and Costs

Upon review of the revenue and costs associated with the project it becomes readily apparent that despite its overwhelming success in moving the commuter to and from work, the project is unable to meet operating costs from the farebox.

For the first 12 months of the project from June 1971 through May 31, 1972, the project showed farebox revenues of \$827,237 and operating expenses of \$1,238,053 for a deficit of \$410,816. It should be noted, however, that of this deficit, \$276,422 was for diversion payment made to the AB&W Transit Company under the terms of an operating agreement between AB&W and NVTC.

For the eight month period June 1972 through January 1973 the operating deficit was \$430,641, of which \$320,420 were in diversion payments.

Total operating costs for the period of February 1973 through May 31, 1973, have not been completed pending the finalization of a transit service agreement between NVTC and the Washington Metropolitan Area Transit Authority. It has been agreed, however, that WMATA would not receive diversion or fee payments commencing with the WMATA bus takeover in February of 1973. Thus, with the elimination of diversion, deficits should decrease slightly or at least remain constant for a short while. It can be expected, however, that

higher wages and other inflationary increases will continue to force the deficits higher.

In May of 1973 farebox revenues for the project hit an all time high of \$208,405.

Marketing and Public Information Program

An innovative and active marketing program continued to keep the public informed about new service, schedule changes and key opening dates for the project facilities. In addition, emphasis has been placed on the benefits of using mass transit and the adage "highways are for moving people not autos". Among the more significant public information events of the past year are the following:

- A pool party complete with band and prizes to mark the inauguration of new service to Skyline Center.
- A 30,000 piece mailout announcing the opening of the Springfield Park-Ride Lot. The mailout contained schedule information, as well as a map showing how to get to the Lot. Tied in with the mailout was a "free ride" coupon which permitted one free trip to users of the lot on the first two days of operation.
- During Thanksgiving week six turkeys were given away to riders who used the Park-Ride facility. Advance publicity was given to the event and follow-up publicity was carried by a number of local newspapers.
- A descriptive brochure giving information on mid-day service was prepared and distributed along the mid-day route. The handout showed the location of major shopping centers and apartment complexes along the various mid-day routes served by the project buses.
- A 20,000 piece second mailout promoting the Park and Ride Lot was sent to areas in the Shirley corridor beyond the extent of regular route service. Flyers with schedules were distributed to commuters parked at the Lot and several other fringe parking areas in Springfield. The Park and Ride promotional material was also placed at the Pentagon information and parking offices and at the Northern Virginia bank offices which sell commuter tickets.

Other 1972 - 1973 Highlights

A number of operational improvements relating to the Project were undertaken during the past year. Those of greatest significance are described below.

- On October 2, 1972 a 410-car Park-Ride Lot was opened at the site of the future Springfield Metro station. In addition to the parking area there is a 20-car kiss-ride area immediately adjacent to the bus boarding platforms. A bicycle rack is provided for those wishing to "cycle and ride". Patronage, spurred by an aggressive advertising and direct mail program, has climbed steadily since opening day to the present 300 riders being served by this facility.
- During the year construction was begun on a new four-bay maintenance facility at the Four Mile Run Metrobus garage. This much needed facility costing \$207,159 is being funded with a Capital Grant from the Urban Mass Transportation Administration. The garage is expected to be completed in summer 1973 and will provide the necessary space to maintain the 90 buses purchased for the conduct of the demonstration project.
- With the addition of 50 new buses to the fleet during the past year it was possible to extend service to areas where service either did not already exist or where service was below the desired level. The NVTC is particularly pleased with the interest and cooperation of the local citizens in selecting the most desirable routes through their respective communities. This partnership in transit (to include Federal, State and local governments) has been the hallmark of the Shirley Project and must be given much credit for the success of the project.
- A 5,000 piece mailout publicizing the new Route 8Y was sent to areas adjacent to the new service. This same flyer was also handed to patrons boarding other routes in the same area, and distributed to nearby apartment rental offices.
- A 6,000 piece mailout for the Route 29 described the expanded midday service and additional peak period trips. This was also given to current riders and posted at two universities served by the route.

- A personal approach was used wherever possible during the changing of a route or the adding of service. This consisted of placing NVTC staff members at critical locations in the affected area. Questions could then be answered first hand and schedules passed out to patrons before they boarded their bus.

Participating Organizations

It has been noted on a number of occasions that the Shirley Express Bus Demonstration Project is in every sense a partnership in transit. It would not have been possible to reach the present achievements of the project without the cooperation and assistance provided by the Urban Mass Transportation Administration and the Federal Highway Administration. These Federal Agencies were given project support by State agencies represented by the Virginia Department of Highways and the District of Columbia Highway Department. Local participation was provided through the Northern Virginia Transportation Commission representing the jurisdictions of Fairfax and Arlington Counties, the Cities of Alexandria, Falls Church and Fairfax. Private industry contributed significantly through the participation of the AB&W Transit Company; while WV&M Coach Company assisted in the planning phase of the project. In February of 1973 the Washington Metropolitan Area Transit Authority assumed operating responsibility for these two privately owned transit companies and extended the fullest cooperation of its staff in continuance of the project. Rounding out the project team were the Washington Metropolitan Council of Governments and the Washington Metropolitan Area Transit Commission.

1971 - 1973 HIGHLIGHTS OF SHIRLEY HIGHWAY EXPRESS BUS PROJECT

1971

- March Counts show a 73% increase in A.M. passengers riding the busway from points south of Shirlington Circle.
- April Final section of Busway opened from Mixing Bowl across 14th Street Bridge. (Total of 9 miles of busway.)
- June First increment of 30 NVTC deluxe buses placed in service. "Great Race" held between a bus and auto to demonstrate the time advantage of taking an express lane bus.
- August Ridership south of Shirlington shows a 145% increase since the September 1969 opening of the busway.
- October U.S. Department of Transportation approves NVTC Phase II of the Project to purchase 30 additional buses.
- October Shirley Highway use by autos in the morning rush hours shows a 33% decline over the 1970 daily average (5,662 vs. 8,405).

1972

- January A.M. Peak hour ridership south of Shirlington shows a 225% increase over September 1969. Opening of the roadway (1,914 passengers in 1969, 6,223 passengers in 1972).
- January Net increase of 5,629 in total Shirley Highway ridership since June 1, 1971.
- February Inauguration of 20 additional buses on Shirley Highway, and new service into S.W. Mall Bus Terminal.
- March Statistics show that 54 percent of A.M. rush hour commuters on Shirley were being transported by bus.
- May UMTA approves funding for additional 16 project buses scheduled for service in September 1972.
- June Ten additional project buses placed in service. New service provided to Skyline Center, Kings Park West and Fairfax City. Additional mid-day service provided to major corridor shopping centers.

1972 (cont.)

- June Umta approves a \$207,159 Capital Grant for construction of a four bay bus maintenance facility.
- October A 410-car Park-Ride lot is opened at the future Springfield Metro Station site.
- September The first of five prototype bus shelters is erected in the Shirley Corridor.
- December Bus ridership on the Shirley busway south of the Mixing Bowl exceeds 20,000 persons a day, more than double the number of persons using this portion of the busway at the start of the project.

1973

- February Washington Metropolitan Area Transit Authority completes assumption of the operational responsibility for the Washington area bus system.
- February Final increment of buses purchased under the 90 bus demonstration grant are placed in service.
- May Bus maintenance facility reaches 65% completion.

SHIRLEY HIGHWAY BUSWAY IN VIRGINIA AND BUS PRIORITY LANES IN D.C.

