Northern Virginia Transportation Commission

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SIXTH ANNUAL
TRANSIT SERVICE COORDINATION PLAN

--September 1990--

ABSTRACT

The sixth annual report on the transit service coordination planning activities of the Northern Virginia Transportation Commission (NVTC) describes regional and local initiatives to improve commuting alternatives despite increasing budget pressures.

Successful initiatives to unify diverse levels of government and the private sector include the Virginia Railway Express (almost 100-miles of commuter rail service due to begin service in October, 1991) and the proposed Transportation Coordinating Council (a joint committee of NVTC and its sister commission--the Potomac and Rappahannock Transportation Commission). Also, NVTC is leading a regional task force to develop a transit plan (and method of finance) for the Smithsonian Institution's proposed National Air and Space Museum Extension to be located at Dulles Airport.

Locally, NVTC's member jurisdictions also are pursuing innovative solutions to transportation problems, such as Fairfax County's efforts to initiate new park-and-ride lots in the Dulles Corridor to be served initially by express buses (and, perhaps eventually, by new rail service).

Despite the important successes evidenced by these new transportation initiatives, there is a striking divergence between the identified transportation funding needs (well over $10 billion in Northern Virginia by the year 2010) and the available financial resources (less that $3 billion over the same time). Financial cooperation and innovation are clearly needed, especially given the shortfalls being experienced by the Commonwealth of Virginia that mirror the Federal budget situation.

To meet the financial challenge, innovations such as the proposed $330 million contract revenue bond issue by NVTC for Fairfax County to complete the Fairfax County Parkway are described. Also, a private toll road corporation will seek to extend the existing Dulles Toll Road west to Leesburg without relying on government funding.

NVTC's report contains several appendices that specify details of the VRE and Museum Extension projects, list ridesharing contacts by jurisdiction, and provide summaries of operating results and system maps for each local transit system.

During the next year, the greatest challenges to regional cooperation will be setting priorities for pledge bond and other financing, implementing the Virginia Railway Express commuter rail project, and cooperating to restructure transit service for the opening of Metrorail's Blue Line Station at Van Dorn Street on the Alexandria/Fairfax County Line.

In addition, NVTC's jurisdictions will be called upon to agree on a formula by which to apportion State and Federal financial assistance that may fall short of current expectations.

Also, the financial implications of the recently adopted Americans With Disabilities Act are enormous, and a Federal Clean Air Act may also impose substantial new costs on transit systems (which may need to eliminate the use of diesel fuel).

Finally, NVTC's report reviews new technologies that offer potential breakthroughs for the future, but again, pose significant short term financial burdens for research and development before the promise of future savings can be realized.

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SECTION I:

Introduction

In early 1984 the Northern Virginia Transportation Commission initiated a formal process for creating a Bus Service Coordination Plan by adopting a set of goals:

- Improve transit information sharing within the region;
- Provide better coordination of bus planning and service; and
- Improve bus service benefits relative to costs.

To accomplish these goals, the Commission has since implemented a rigorous coordination process and established an annual reporting mechanism. This is the sixth in the series of reports on NVTC's Bus Service Coordination Plan. Since the focus of the planning process has expanded beyond buses to include commuter rail and other High Occupancy Vehicle (HOV) strategies, the report has been renamed to include transit service.

The first annual report (September 1985) described the data that NVTC had gathered to initiate its planning process. The report also defined new processes and introduced new products. For example, computerized tools for analyzing and improving transit performance were developed, such as an automated ridership reporting system. Primary emphasis was on effective planning for restructuring bus service in the corridor served by Metrorail's Orange Line extension to Vienna.

The second annual report (September 1986) built on the base of its predecessor, by applying the tools developed earlier to specific issues, such as the problems pertaining to passenger connections between transit systems, information needs of passengers and policymakers, efficient operations and performance, and existing and future financial conflicts. The Commission's series of planning sessions and public hearings on bus service adjustments in the Orange Line corridor culminated in a highly successful opening of new Metrorail service in June 1986, with Metrorail ridership exceeding expectations.

For its third annual report (September 1987), NVTC's planning efforts focused on more effective transit marketing, assimilating substantial increases in state financial assistance, debating revised financial aid allocation formulas, furthering the commuter rail project and balancing accelerated construction of the Franconia/Springfield Metrorail station against competing financial needs. Given the serious and growing problem of traffic congestion and public demands for relief, the report systematically reported on activities of 22 agencies with some role in transportation in Northern Virginia. An appendix summarized over 30 recent and ongoing transportation planning studies.

In the fourth annual report (September 1988) an effort was made to bring together ridership and route information for all public transit systems in the region in order to facilitate public understanding of connections between the systems. Also, a detailed listing of transportation services for mobility-impaired persons was prepared.

In the fifth annual report (September 1989), the focus was placed on alternatives for financing the transportation improvements that have been identified in the recently completed Northern Virginia Transportation Plan. Special efforts to combine public and private resources are necessary to reduce the $7 billion shortfall of transportation funding identified between now and the year 2010. To that end, new studies are underway to define priorities and establish new sources of revenue. New institutional arrangements also are being actively pursued. NVTC's report also emphasized better marketing of public transit and ridesharing to improve the performance of existing systems.

For this sixth report, the goal is to review and re-examine the major regional issues and projects that either currently affect public transportation or will influence the region in the near future. Transit activities within each jurisdiction along with a brief review of legislative action that will have an impact on the region are presented. To carry forward the theme established at the 25th anniversary meeting of the Commission in December, 1989, an examination of technological innovations that could be applied in the region is presented. Given the enormous financial demands placed on the public transit infrastructure (as Federal and State assistance shrink and ridership and needs to rehabilitate systems grow), regional coordination has become more important than ever.

The target audience for these reports, in addition to NVTC Commissioners, includes State and local government officials, citizens

groups, and consultants (who may need a ready baseline of transit and ridesharing data from which to begin their studies).

NVTC's Transit Service Coordination Plan is not a typical government plan, in which routes are drawn on a map or specific equipment needs identified. Rather, the Commission's plan is a process which seeks to accomplish improvements by changes in the way local and State governments and the private sector think about, address and solve transportation problems. Thus, the NVTC plan can never be "complete;" the process must be continually enhanced and revised to accomplish steady progress toward its objectives. The annual reports that describe the process and the progress are, therefore, more on the order of dynamic proposals rather than static blueprints. The reports set forth strategies across a broad front for coping with congestion and coaxing more productivity from scarce transportation resources.

The genesis of the Commission's planning process was Virginia Senate Resolution #20, passed in 1983, that directed NVTC and the former Virginia Department of Highways and Transportation (VDH&T, now VDOT) to conduct a thorough study of bus transportation in Northern Virginia. The resulting 1983 study (Report on the Feasibility and Desirability of Locally Sponsored Bus Service in Northern Virginia) concluded that while NVTC should not promote decentralization of bus service outside the regional network operated by Metro, it should take an active role by developing a bus service management plan. That plan should examine feasible options for planning, routing, scheduling, establishing fare structures, operating, marketing, and coordinating a diverse set of public transportation services in Northern Virginia.

Figure 1

NVTC OFFICERS AND COMMISSIONERS

--1990--

James P. Moran, Jr., Chairman
Ellen M. Bozman, Vice Chairman
Sharon Bulova, Secretary-Treasurer

Arlington County

Ellen M. Bozman
Albert C. Eisenberg
Mary Margaret Whipple*

City of Alexandria

James P. Moran, Jr.
T. Michael Jackson**

Fairfax County

Joseph Alexander*
Sharon Bulova
Katherine K. Hanley**
Audrey Moore
Lilla Richards

City of Fairfax

John Mason

City of Falls Church

Phillip J. Thomas

Loudoun County

Betty W. Tatum

Virginia Department of Transportation

Sally H. Cooper

General Assembly

Senator Joseph V. Gartlan, Jr.
Senator Edward M. Holland
Delegate James F. Almand
Delegate Bernard S. Cohen
Delegate Robert E. Harris

* Principal member of Metro Board
** Alternate member of Metro Board

It is toward those goals that NVTC's series of reports on its Transit Service Coordination Plan is focused.

Role of the Northern Virginia Transportation Commission

NVTC was created by the Virginia General Assembly in 1964, and consists of 19 Commissioners representing six Northern Virginia jurisdictions and the Virginia Department of Transportation. Figure 1 shows the current membership.

NVTC provides a public transportation policy forum for the region, and is charged with allocating $70 million in State, regional and Federal aid each year among its member jurisdictions. The Commission also appoints Virginia's two principal and two alternate members of the Board of Directors of the Washington Metropolitan Area Transit Authority (WMATA or METRO). WMATA operates Metrobus and Metrorail service in the District of Columbia, Maryland, and Northern Virginia.

While NVTC does not yet operate permanent transit service, it does sponsor demonstrations, such as private taxis serving Metrorail stations in lieu of more expensive bus service. As evidenced by this Plan, the Commission has assumed an active role in coordinating transit and ridesharing services in Northern Virginia, and is working with local governments to maintain stable and reliable funding for these services. NVTC also seeks to improve transit connections and provide better

Figure 2

NVTC WORKPLAN FOR 1990

FINANCING

- File state assistance grants by February 15, 1990 for administrative, operating, capital, construction and experimental costs of public transit (including WMATA and local systems).
- File timely Federal grant applications on behalf of Transportation Management Associations that seek NVTC's help.
- Submit a revised six-year transit capital needs report to VDOT by December 15, 1990.
- Coordinate regional efforts to obtain additional funding and disseminate NVTC's Study of Financial Resources for Transportation in Northern Virginia.

MARKETING

- Place new Connections Regional Map Posters in Metrorail stations and at significant transfer locations.
- Create new local area transit guides.
- Assist Ballston Transit Store and help establish similar outlets throughout Northern Virginia.
- Implement NVTC marketing plan.

WMATA

- Assist Board Members and jurisdictions in controlling transit costs and promoting ridership.
- Continue to manage financing of a special project providing environmental analysis of the Franconia/Springfield site.
- Monitor progress in Four-Mile Run Bus Garage enhancement.
- Monitor progress in I-66 Falls Hill Noise Wall project.
- Coordinate local review of WMATA budget.

LEGISLATIVE AND POLICY AGENDA

- Implement approved agenda at the state and Federal levels, including letters and visits to legislators and work to establish coalitions.

REGIONAL COOPERATION

- Work with PRTC and others to establish a cooperative process for reviewing and implementing the Northern Virginia Transportation Plan, beginning with discussion of a staff paper in January, 1990.
- Publish Sixth Annual Transportation Service Coordination Plan in September, 1990.
- Work with Loudoun County elected officials and staff to integrate the County into NVTC's programs.

VRE COMMUTER RAIL

- Consummate bond issue and railcar order in January, 1990.
- Order locomotives by March, 1990.
- Implement tasks on PERT Chart including construction of terminals, platforms and parking lots.
- Work to expand participating jurisdictions (e.g. Fredericksburg, Manassas Park, Spotsylvania County, Fauquier County).
- Publish quarterly newsletter: Track Record.
- Convene monthly Operations Board meetings.
- Maintain separate accounting records.

information for passengers, while upgrading performance of transit operators. Marketing transit services is an area of intense current interest on the the part of the Commission, as is leveraging public transit assistance through cooperation with the private sector.

Figure 2 provides a detailed listing of the Commission's 1990 work program, which it accomplishes with the assistance of its own staff and that of its member jurisdictions. More information about NVTC, its statutory mandate, history, and accomplishments is available in the Commission's 1990 Handbook. This document, as well as the 1985, 1986, 1987, 1988 and 1989 reports on the Transit Service Coordination Plan, are available on request to the Commission.

Overview of the 1990 Report

This year, the Transit Service Coordination Plan emphasizes that solutions to commuting problems require regional financial and service coordination. The next section will start by reviewing the region's financial needs and then review some of the major regional financial and service initiatives and achievements in Northern Virginia.

Section III reviews the major transit activities which are occurring at the jurisdictional level.

The fourth section surveys three pieces of federal legislation that will affect the region's public transit infrastructure, primarily through increasing the costs of these services. The fifth part of the TSCP

reviews some innovative technologies that may be applied to help meet the region's mounting transit demands. The appendices, as in the past, contain a rich range of transit facts, figures, and telephone numbers for the various transit options available to commuters in Northern Virginia.

SECTION II:

Regional Transit Issues and Topics

NVTC Financial Study

The Northern Virginia Transportation Commission hosted a special briefing on January 3, 1990 on an important new consulting study of financial resources for transportation in Northern Virginia. Representatives of KPMG Peat Marwick described the results of their firm's four-month study* for the Commission, the Northern Virginia General Assembly Delegation, and members of policy, technical and citizen committees that are guiding the continuing Northern Virginia Transportation Planning Process.

NVTC managed the study which was paid for by the Commonwealth of Virginia and local governments in the region. The results of the study should be useful in devising strategies to obtain new funding opportunities from Federal, State, local and private sources. The study provides, for the first time, an objective compilation of data about who pays taxes for transportation (as of 1988) and how the proceeds are spent. Also, the study forecasts the impacts of various realistic funding scenarios so that elected officials can weigh benefits and costs in meeting the serious transportation revenue shortfall facing the region through 2010.

The key assumptions and findings of the study are as follows:

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* A Study of Financial Resources for Transportation in Northern Virginia; January 3, 1990.

o In the next two decades, according to the Northern Virginia Transportation Plan, over 10 billion in 1988 dollars is needed to fund highway and transit improvements that will allow Northern Virginia to hold the line on traffic congestion despite sharp growth in population, jobs, and travel. Without such investments, average speeds could decline as much as 25 percent during peak hours. This total excludes other enormous potential projects such as $900 million for the Capital Beltway, $1.7 billion for a western bypass and another $1.5 billion for an eastern bypass. Several of these major potential projects are part of the existing Interstate Highway System or otherwise serve traffic that has traditionally been a Federal funding responsibility.

o Existing sources of State and Federal revenue will yield only $2.75 billion using current funding formulas and programs, leaving a shortfall of $7.3 billion.

o The shortfall is $2.8 billion for highway and high-occupancy-vehicle facilities; $2.4 billion for transit capital (such as rail extensions to Centreville and Leesburg); and $2.0 billion for transit operating costs. In percentage terms, transit capital experiences the greatest relative shortfall, with only 9.5 percent of needed funds likely to be available from existing State and Federal programs over the next 20 years. By contrast, 38 percent of highway and HOV costs may be available from those sources.

o Combined spending on transportation in Northern Virginia (as of FY 1988) was over a half billion dollars annually for highways and transit, up 20 percent since FY 1986. The combined spending was split almost equally between highway and transit programs, although local governments spent two-thirds of their total on transit (the total does not include highway maintenance).

o Of the $528.2 million spent in FY 1988 in Northern Virginia, 42.1 percent was from the State. Another 23.2 percent was from the Federal government. The remaining 34.7 percent was from local sources, including 13.3 percent raised by fares and tolls (11.4 percent from fares paid by Metro passengers), 18.2 percent from cities and counties (9.0 percent from the property tax) and 3.2 percent from regional authority sources other than fares.

o Of the $528.2 million total transportation spending in Northern Virginia, 59.5 percent came from user-related fees (e.g. tolls, fares, motor fuels taxes) and 40.5 percent from other sources (e.g. local general revenues, bond proceeds, State general sales taxes).

o The total value of off-site transportation proffers--usually of local significance--provided by developers, could not be quantified by the consultants, but it was clear that proffers do not represent a major contribution to the work envisioned in the Northern Virginia Transportation Plan.

o Allocations of tax revenues are usually based on factors of use, geography or need (such as population, vehicle-miles traveled, or lane-miles). On the other hand, taxes are often collected based on economic factors such as income or sales. Consequently, tax allocations and collections are not equal for Northern Virginia.

o For 1988, $490 million of transportation revenues were paid by Northern Virginians to the State and Federal governments. Approximately, two-thirds of every dollar paid by Northern Virginia's citizens and businesses to the State for transportation purposes was returned to the region. Almost three-quarters of State motor fuel tax collections are returned to Northern Virginia. A much lower proportion (slightly more than half) was returned to the region from Federal motor fuel taxes.

o Overall, 72.8 percent of total transportation-related taxes paid by Northern Virginians had their initial impact on individuals, and 27.2 percent on businesses.

o Only 6.8 percent of transportation revenues generated by all levels of government in Northern Virginia came from transients.

o Several scenarios for future funding sources to meet the $7.3 billion shortfall show potential unfunded needs from $6.9 billion to $4.2 billion.

o To help meet these funding requirements, several tax sources were examined, including increased amounts from Federal, State and local sources. At the local level, potential sources include a 0.5 percent local option sales tax yielding $1.9 billion through 2010; a five-percent local motor fuels tax yielding $1.0 billion; a one percent real estate transfer tax yielding $2.8 billion; special assessment districts for rail extensions yielding $1.3 billion; local individual income tax surcharges of one percent yielding up to $5.1 billion; and a local corporate income tax of up to one percent yielding $0.6 billion.

o The study reveals that, in order to meet Northern Virginia's transportation needs, a partnership is required of all levels of government, users, and the private sector. For example, one scenario showed the positive effects on local taxpayers of more Federal funding than current programs would provide. This increase in Federal funding might be achieved in the 1991 Federal reauthorizations of highways and transit funding legislation. Other scenarios showed similar positive effects for increased funding roles for the State and the private sector.

The study was directed by a select committee of elected and appointed officials, including Secretary of Transportation and Public Safety Vivian Watts, State Senator Joe Gartlan, Delegate Robert Andrews, Delegate David Brickley, Prince William County Board of Supervisors Chairman Ed King, Arlington County Board member John Milliken, Fairfax County Board of Supervisors Chairman Audrey Moore, Alexandria Mayor James P. Moran Jr., NVTC Chairman and Fairfax County Supervisor Lilla Richards, and Loudoun County Board Chairman Betty Tatum.

Figure 3

COMMUTER RAIL STATIONS EXPECTED TO OPEN IN OCTOBER 1991

WESTERN ROUTE (on Norfolk Southern tracks)

10W. Manassas Airport

The exact site is still in doubt, but it probably will be on the east side of the tracks north of Piper Lane. The site could be as far south as Route 619. This will be the train yard and will have 400 to 500 parking spaces.

9W. Manassas

At the existing depot, between West and Battle. The city will build up to four parking lots with up to 281 spaces.

8W. Manassas Park

East of the tracks at Blooms Road. The Signal Hill development company will build this station and a 300-space parking lot. City officials also hope to create a "town center" with small shops in that area.

7W. Burke Center

South of the tracks and east of Roberts Parkway. There is a 400-space commuter parking lot on the site.

6W. Rolling Road

South of the tracks in the triangle formed by Shana Place and Burke Road. A 420-space parking lot has been designed.

5W. Backlick Road

South of the tracks and east of Backlick Road. A 220-space parking lot already has been designed.

4. King Street

In Alexandria's Union Station. Commuter rail officials are going to improve connection to the King Street Metro station, currently a three-minute walk away. There will be no parking.

3. Crystal City

South 15th Street and Crystal Drive. No parking.

2. L'Enfant Plaza

Between Sixth and Seventh streets SW. No parking.

1. Union Station

EASTERN ROUTE (on RF&P railroad tracks)

5E. Lorton/Pohick

The exact site is uncertain, but it will be east of the railroad, between Pohick Road and Lorton Road. Depending on the site, the station probably would have 200 parking spaces.

6E. Woodbridge/Dawson Beach

East of the railroad and north of Dawson Beach Road. Prince William officials anticipate a 600-space parking lot.

7E. Rippon

West of the railroad, and at the southern end of Farm Creek Drive. Access will initially be down Farm Creek Drive, and eventually on Rippon Boulevard extended. A 300-space lot is planned.

8E. Quantico

At the existing rail station on Potomac Avenue. An existing 75-car gravel parking lot will be covered with asphalt.

9E. Leeland Road

South of the rail line and west of Leeland Road. Stafford County is still negotiating to buy the land.

10E. Fredericksburg

At the existing rail station. The city is discussing a 200-car parking lot. The trains will be stored in Spotsylvania at Crossroads Business Park (on Route 17 bypass.) No passengers will be allowed to get on and off there.

POSSIBLE FUTURE STATIONS

WESTERN LINE

Fairfax Station

Between Manassas and Burke. Fairfax County officials are looking at putting a station at Fairfax Station, perhaps near the Fairfax County Parkway.

EASTERN LINE

Franconia/Springfield

Between King Street and Lorton/Pohick. At the planned transportation center southeast of Springfield Mall. A Metro station and a 1,500-car lot are also planned for this site.

Cherry Hill

Between Rippon and Quantico, on the Cherry Hill peninsula.

Widewater/Arkendale

Between Quantico and Leeland. East of the tracks and north of Brent Point Road.

Brooke

A station has been designed on Route 608, but only 1.5 acres are available. Stafford County is looking at other sites.

Spotsylvania

If Spotsylvania agrees to participate, a station would be built in the train yard.

The Virginia Railway Express

The Virginia Railway Express (VRE) is exemplary of the type of coordination, cooperation, and innovative thinking that will be increasingly needed to meet the region's transportation demands. The opening day of this eagerly awaited commuter line connecting the District of Columbia with Fredericksburg and Manassas should be in October, 1991. (Figure 3 contains a route map.*)

With the congressional passage and presidential signature of the AMTRAK Reauthorization Bill (Public Law 101-322), VRE operations into the District of Columbia's Union Station are assured. A provision of the Bill satisfied Conrail's indemnification concerns, thereby providing VRE access to Conrail's tracks into the District.

Service into Union Station was shown in studies to be quicker and more desirable than a commuter line terminating at Crystal City, requiring transfers to Metrorail for many riders. Accordingly, patronage estimates indicate that there will be nearly 4,200 daily riders, rather than the predicted 2,800 for service ending in Arlington County.

Thirty-eight railcars and 10 rebuilt locomotives, costing approximately $25.7 million and $10.8 million respectively, are on order. Delivery of this equipment is expected to begin in August of 1991 and construction of the various stations should be well underway by Spring, 1991 for completion by October of that year. Award of a contract for

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manufacture of the fare machines the system will use should occur in October, 1990.

The Virginia Railway Express Operations Board, comprised of members of NVTC, the Potomac and Rappahannock Transportation Commission (PRTC) and a representative from the Virginia Department of Transportation, will oversee the commuter line's operations. A Rail Manager, who will be responsible for the day-to-day activities associated with the VRE, has been retained by the Operations Board. The trains will be operated by AMTRAK personnel.

The fare structure is in the process of being finalized. The basic parameters that will guide policy in this area include:

- Passenger revenue is expected to recover no less than fifty percent of operating expenses.
- Fares will not be less than comparable Metrorail fares.
- Fares will not exceed the cost of commercial parking in the Commercial Business District (CBD).

Virtually each station south of Crystal City will have some parking available to commuters. Any charges for parking will be determined by each jurisdiction involved in the project.

Persistent regional coordination among many groups has been the key to the success of this endeavor. Agencies, such as NVTC and PRTC, the

various local governments, Virginia's Governors, Virginia's congressional delegation, and other groups all worked cooperatively toward improving the options available to the commuter by implementing this project.

VRE's Operations Board has adopted a marketing plan which sets forth a range of cooperative activities required before service begins in October, 1991. These include establishing the fare structure, selecting the fare vending machines, identifying retail fare outlets, and providing toll-free customer service lines and mail-order networks, as well as developing brochures, system maps, and survey procedures to educate the public and, in turn, learn from riders.

Appendix VII provides more details about the financial structure of the VRE project, which has included a $79 million bond issue to help finance the acquisition of rolling stock and construction of stations and parking lots.

Transportation Coordinating Council

For the past several years, NVTC has been engaged in dialogues with its members and neighboring jurisdictions about forming a regional body to review progress in meeting the targets established in the Northern Virginia Transportation Plan. Concerns ranged from those who feared such a group would have too much power to those who believed it would not be strong enough to provide meaningful leadership. All agreed that transportation needs far exceed currently identified financial resources, however.

By September, 1990, local staff had reached consensus on a mechanism to use NVTC (and its sister organization, PRTC) as the basis for a "Transportation Coordinating Council." The two Commissions and all local governments will be asked to approve this proposal in Fall, 1990. The two Commissions would meet jointly , to be chaired by Northern Virginia's member on the Commonwealth Transportation Board, and augmented with another voting representative from Loudoun County and ex officio membership from representatives of citizens groups and towns.

The agenda for the TCC would be first to help set priorities for a possible pledge bond initiative. The voters of the Commonwealth will be offered in November, 1990, the opportunity to amend the Constitution to permit such bonds to be issued. The General Assembly could then establish the projects and the State sources of revenue by which to repay the borrowed funds.

The TCC offers an excellent opportunity for Northern Virginia's governments to consider priorities for potential pledge bond (and other) projects in the current environment of needs that far exceed ability to pay from current financial sources.

WMATA Services in Northern Virginia

The Northern Virginia area is well served by both bus and rail systems which are operated by the Washington Metropolitan Area Transit Authority (WMATA). Together, they form an effective public transit network which provides the commuter with an efficient transit alternative to the single occupant vehicle.

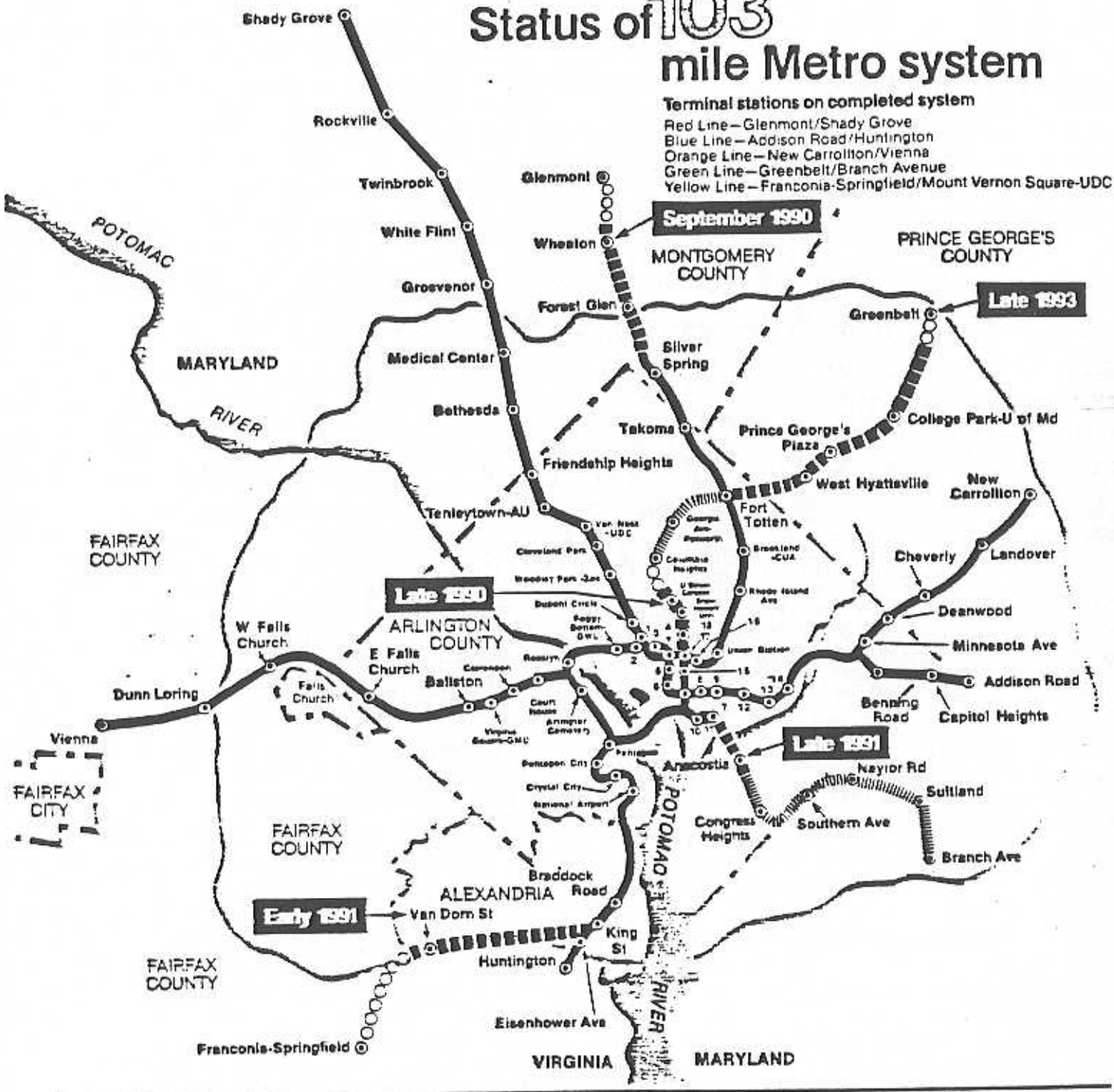
Figure 4

August 1989

Status of 103 mile Metro system

Terminal stations on completed system

Red Line—Glenmont/Shady Grove
Blue Line—Addison Road/Huntington
Orange Line—New Carrollton/Vienna
Green Line—Greenbelt/Branch Avenue
Yellow Line—Franconia-Springfield/Mount Vernon Square-UDC



LEGEND

Operating Lines	69.57 miles	64 stations
Under Construction	19.24 miles	13 stations
Under Final Design	5.47 miles	3 stations
Remainder of System	8.71 miles	7 stations

Early 1991 — Projected start of operations for this segment based on approved schedule. Applies to all stations inbound from this point.

Total Mileage—102.99

Total Stations—87

1. Farragut North
2. Farragut West
3. McPherson Square
4. Metro Center
5. Federal Triangle
6. Smithsonian
7. L'Enfant Plaza
8. Federal Center SW
9. Capitol South
10. Waterfront
11. Navy Yard
12. Eastern Market
13. Potomac Ave
14. Stadium-Armory
15. Archives-Navy Mem'l
16. Judiciary Square
17. Gallery Pl-Chinatown
18. Mt Vernon Sq-UDC

Washington Metropolitan Area Transit Authority
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Office of Public Affairs

Metrorail

The Washington Metropolitan Area Transit Authority (WMATA) operates three Metrorail lines in Northern Virginia: the Orange, Blue and Yellow lines. With the opening of the Van Dorn Street station in the Spring of 1991, the region will be served by nineteen Metrorail stations; eleven are located in Arlington County, four in Fairfax County and four in the City of Alexandria. Metrorail stations often serve as connection points for various local bus systems as well as WMATA bus service. Approximately 123,000 passengers boarded Metrorail on an average weekday in Northern Virginia during the Spring of 1990.* Figure 4 shows the current and planned Metrorail system as of 1990.

Metrobus and rail fares increased on July 1, 1989 for the first time in five years. The maximum rail fare is now $2.55 during rush hours and $1.25 the rest of the time. The minimum price for a subway ride has increased by five cents to 85-cents, and the additional rush-hour fare is about 15-cents per mile. The minimum price for a Metrobus ride using a Metrorail transfer is fifty cents (except where special discount feeder bus fares apply). The maximum price with a transfer is $2.20, excluding routes that have special surcharges.

Metrorail is in operation from 5:30 A.M. to midnight on weekdays. On Saturday, hours are from 8:00 A.M. to midnight, and Sunday from 10:00 A.M. to midnight. The weekday evening rush-hour fare was extended from 6:30 to

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* 1990 Spring Metrorail Survey, Washington Metropolitan Area Transit Authority.

Figure 5

METRORAIL PARKING IN NORTHERN VIRGINIA

	Name	Location	Spaces
1.	Huntingston	Huntington Ave. at Fenwick Dr. Kings Highway north of Fort Dr.	1,810[1]
2.	Vienna	Median of I-66 at Nutley Rd.	3,567[2]
3.	Dunn Loring	Median of I-66 at Gallows Rd.	1,203
4.	West Falls Church	Median of I-66 at Leesburg Pike	979
5.	East Falls Church	Median of I-66 at North Sycamore Rd.	391

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1. All-day parking spaces available at Huntington Metrorail station during construction of a new parking structure. Another 526 replacement parking spaces are available across from the station on Huntington Avenue.

2. Total all-day parking spaces available upon completion of new parking structure on October 1, 1990.

7:00 P.M. on July 1, 1989. Accordingly, rush-hour fares are now in effect from 5:30 A.M. to 9:30 A.M. and from 3:00 P.M. to 7:00 P.M. on weekdays. Trains generally operate every three to six minutes during rush hour, and every six to 12 minutes during non-rush hours. Late-night and Sunday service is every 15 minutes. From Rosslyn into the District of Columbia, rush-hour service is every two minutes.

Metro currently provides parking at five of its stations in Northern Virginia for Metrorail users. These stations are as follows: Huntington, Vienna, Dunn Loring, West Falls Church and East Falls Church. Each of these parking areas includes spaces for disabled persons. (See Figure 5).

Bicycles are allowed on Metrorail by permit only after 7:00 P.M. weekdays and on weekends.

Metrobus

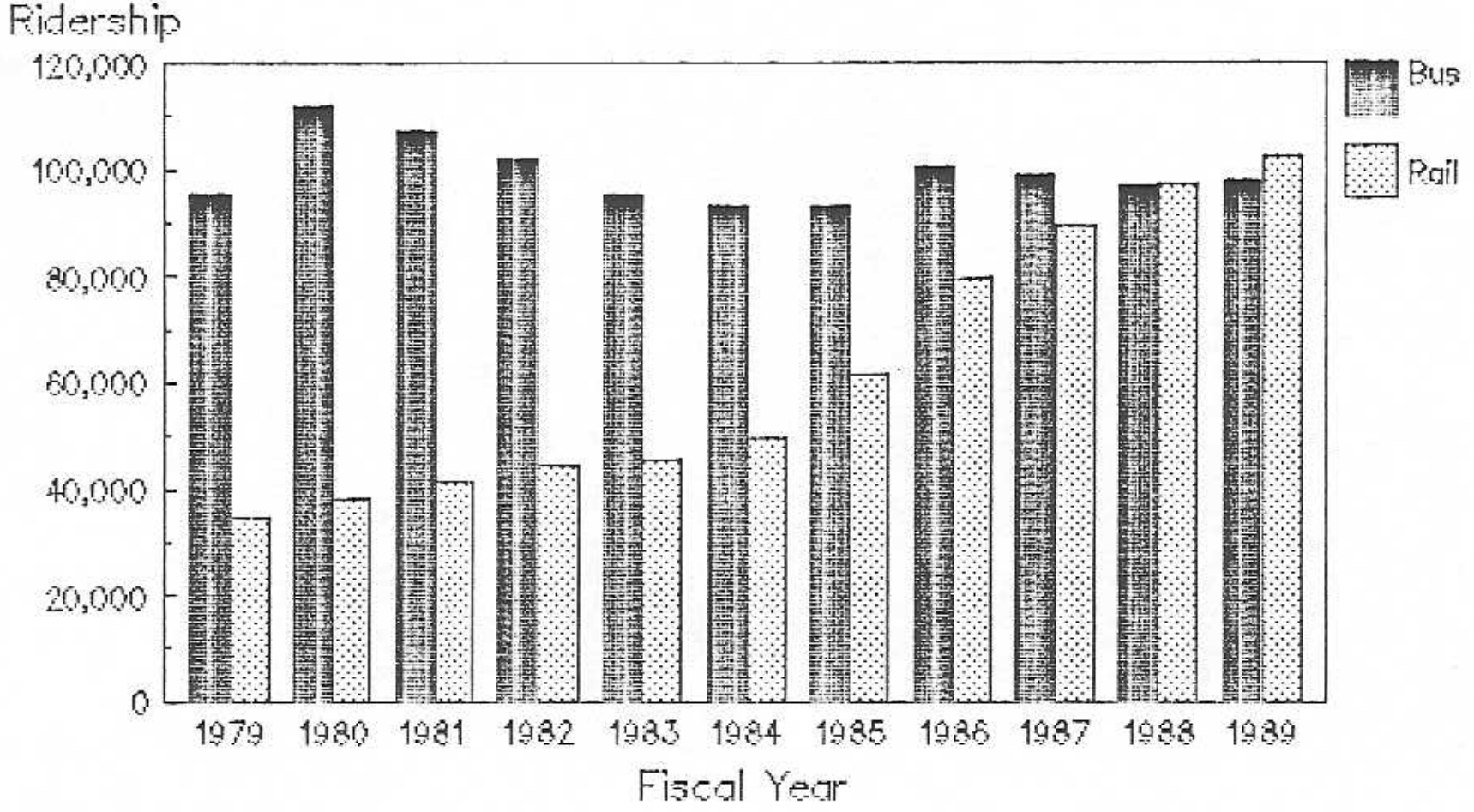
Peak-period buses serve approximately 60,000 people per day in Northern Virginia; off-peak buses serve approximately 21,500 people per day. Peak-period Northern Virginia Metrobus service consists of seven crosstown lines, 20 local lines and 22 express lines. Off-peak service is provided by six crosstown lines, 16 local lines and six express lines.

On Saturdays Metrobus provides five Northern Virginia crosstown lines and sixteen local lines. Sunday service consists of four crosstown lines and 14 local lines.

Currently 35 per cent of the Metrobus fleet is wheelchair lift-equipped. Metrobus also provides an On-Call bus service for

Figure 6

Ridership by Fiscal Year, 1979 - 1989
(In Thousands)



Source: 1989 Washington Metropolitan Area Transit Authority, Annual Report

mobility-impaired persons who use routes not regularly serviced by lift-equipped buses.

The peak Metrobus boarding charge has increased by 5-cents in Virginia, Maryland and the District of Columbia, and it has increased by 10-cents in the District during off-peak hours, effective July 1, 1989. The base fare for riding Metrobus is now 85-cents throughout the region. There is a 30-cent surcharge for crossing a zone during the peak hours of 5:30 A.M. to 9:30 A.M. and from 3:00 P.M. to 7:00 P.M. on weekdays. Crossing the Potomac River costs an additional 80-cents, although most river crossings are made using a special reduced fare for Arlington for only 30-cents extra. During off-peak hours, the maximum fare is 85-cents for trips anywhere within Northern Virginia. (A comparison of Metrorail and Metrobus ridership for the entire system--Maryland, D.C. and Virginia--since FY 1979 is presented in Figure 6. Annual ridership has increased by 50 percent to 200,000,000 from 133,000,000.)

Financial Obstacles

While providing excellent service that is widely used and appreciated, the Metrorail and Metrobus systems are expensive to operate. About three-quarters of Metrorail operating costs are recovered from fares, but less than two-fifths of Metrobus operating costs are paid by riders. In addition, rehabilitation costs for Metrorail loom large in the near future (included in the $10 billion cost of transportation improvements identified in the Northern Virginia Transportation Plan) and new handicapped accessible buses, bus garages, and Metrorail stations are needed.

Shortfalls of Federal and State financial assistance pose a serious obstacle to maximizing the effectiveness of this regional transit system. NVTC's jurisdictions have set up an escrow account at WMATA as a downpayment on future bills to fund rehabilitation, replacement and restoration of the Metrorail system. Of very great significance to the financial health of the regional transit system is pending congressional action on reauthorization of over $2 billion to complete the 103-mile Metrorail system. In Virginia, the fate of the Franconia/Springfield Metrorail station is awaiting this crucial Federal consideration.

Further, NVTC's jurisdictions must agree on a formula by which to share the $70 million in State and Federal aid expected to be received annually to help fund public transit. While State and Federal assistance for Metro may not be as much as anticipated, current increases in motor fuel prices suggest that NVTC's two percent motor fuels tax proceeds may increase somewhat.

Regional Park-and-Ride Network

A network of park-and-ride lots greatly facilitates the success of High Occupancy Vehicle lanes, commuter bus and commuter rail operations. This regional network is central to affording commuters living in the low-density suburbs access to high-occupancy modes of commuting. At these sites the early morning commuters find convenient staging areas for car and van pools, commuter bus, and shortly, commuter rail service.

Figure 7

PARK AND RIDE LOTS IN NORTHERN VIRGINIA

JURISDICTION	NAME	ADDRESS	CAPACITY
Arlington	o Ballston Commons Garage	Wilson Blvd & Glebe Rd	575
	o East Falls Church Metrorail	N. Sycamore & Washington Blvd	391
	o Four Mile Run Parking Lot	Columbia Pike & Four Mile Run	35
	o Washington-Lee Parking Lot	N. Quincy & N. 15th Street	300
Fairfax City:	o Kutner Park	Germantown Rd & Main Street	50
	o Fairfax City Municipal Parking	Old Lee Highway & North Street	100
Fairfax	o Burke Center Park & Ride Lot	Roberts Pkwy, north of Burke Center Parkway	50
	o Chi Chi's	Bland & Agusta	65
	o Dunn Loring Metrorail	I-66 & Gallows Road	1203
	o Fair Lanes Bowling Center	13814 Lee Highway	125
	o Fair Oaks Shopping Center	North of Hecht's	150
(temporary)	o Holiday Inn	Bland & Agusta	50
	o Huntington	Huntington Avenue, between Telegraph & Richmond Hwy)	1810
(temporary)	o Huntington Metro Plaza	Huntington Avenue at North Metrorail Entrance	526
	o Lorton Park & Ride	S. of Lorton Rd, across from AMTRAK station	30
(temporary)	o MJ Design	Bland & Agusta	23
	o Reston Park & Ride	Sunset Hills Rd & Wiehle Ave	230
	o Rolling Valley Park and Ride	Old Keene Mill Rd, East of Shiplett Blvd	340
	o Springfield Mall	Spr. Mall Rd & Frontier Drive	400
	o Springfield Plaza	Bland St, between Old Keene Mill and Amherst	133
	o Springfield United Methodist	7047 Old Keene Mill Road	101
	o Vienna Metrorail	I-66 and Nutley St	3567
	o Wakefield Chapel Rec. Center	Queensberry Drive	-
	o West Falls Church Metrorail	Rt 7 and Haycock	1034
	o Zayre's Annandale	6457 Edsall Rd (Edsall & I-395)	50
Prince William County	o Horner Road	Horner Road (Rt 639)	375
	o Lake Ridge	Rt 640 & Harbor Drive	200
	o Minnerville Road	Minnerville Rd (Rt 640)	555
	o Gordon Blvd	Gordon Blvd (Rt 123)	180
	o Dumfries Road	Dumfries Rd (Rt 234)	97
	o Potomac Mills	Potomac Mills Shopping Center	200
	o Pr. William Square	Smoketown Road	45
	o NVCC Commuter Lot	Manassas Campus (Rt 234 & I-66)	226
	o Hillendale	Hillendale & Rt 784	200
	o Manassas Mall	Rt 234 & Sudley Road	200
Spotsylvania County	o Fredericksburg	Rt 3 and Rt 95	493

The region's first park-and-ride lot was established in 1955 at the Carter Baron Ampitheater in the District. The 800 space facility was used by commuters to park their cars and take express buses into the Central Business District.

A central feature of NVTC's Shirley Highway Express-Bus-On-Freeway Demonstration Project that occurred between 1971-1974 was the three park-and-ride lots. By 1972, there was a total of six formally designated park-and-ride lots. The commuting public quickly grasped the benefits of these lots. By 1973 there were 20 additional, unofficial park-and-ride locations in Northern Virginia. Users of these lots accounted for 80% of all the commuters who used park-and-ride lots to gain access to the Shirley Highway bus service. Since 1977, the number of spaces available to commuters in Northern Virginia increased from 1,785 to 23,281 (by late 1989). More than 81% of these spaces are occupied (18,858 cars) on an average day.

An interesting outgrowth in this area has been the "instant carpool" phenomenon. Here, commuters park in the Springfield area and the Rolling Valley Park-and-Ride lot (both in Fairfax County) and form lines with drivers pulling up and announcing their destinations. The commuters at the head of the line jump in when they locate the proper carpool. Central to the success of "instant carpooling" are these lots and quick access to the Shirley Highway HOV lanes. A total of about 2,600 daily commuters use this informal network of lots and instant carpools. Figure 7 presents a summary of the park-and-ride facilities located throughout the region.

High Occupancy Vehicle Lanes

The Northern Virginia region has been and continues to be a national leader in the use of High Occupancy Vehicle (HOV) lanes. A number of projects are underway that will provide a greater opportunity for the commuter to benefit from this effective way of moving people.

I-95 Corridor

In the Spring of 1989, the Virginia Department of Transportation started extending the reversible High Occupancy Vehicle lanes from the Shirley Highway down the I-95 corridor. The 19.3 mile extension from Springfield to Quantico Creek will cost $237 million, and the Federal government has agreed to pay 95 percent of the cost of the project.

Governor Wilder's administration recently secured $300 million in aid from the Federal government for highway construction. Part of these funds will be used on projects in the Richmond and Norfolk areas, and the remainder will pay for the entire HOV construction effort in this corridor. This infusion of Federal Funds (Virginia normally would have received only $13 million annually for new interstate highway construction from the Federal authorities) will also free monies for other projects.

The I-95 HOV extension project will consist of five phases:

- Spring 1989 - Summer 1992: 0.6 miles of road straddling both sides of Route 644 (Franconia Road).

- Summer 1990 - Summer 1992: Edsall Road to Accotink Creek—a 5.6 mile stretch of road.
- Summer 1992 - Summer 1994: 4.5 miles from Accotink Creek to Prince William County line.
- Summer 1992 - Summer 1994: Fairfax County line to Opitz Boulevard, a distance of 3.9 miles.
- Summer 1993 - Summer 1994: From Opitz Boulevard to Quantico Creek, a 5.2 mile stretch of road.

This HOV extension will incorporate the Traffic Management System (TMS) which consists of a series of cameras, computerized signs, entrance ramp metering, and closed circuit television.

I-66 Corridor

Progress toward an interim HOV extension along the I-66 corridor is well underway. Plans for this $20 million project have been finalized, sources of funding have been identified and the construction package was advertised in July, 1990. The approval of the Commonwealth Transportation Board is expected to be secured by October, 1990, with notice to proceed given to the contractor sometime in November, 1990.

The HOV lanes in this corridor will be extended from their current terminus at the Capital Beltway, westward to Route 50. The actual configuration will be identical to the diamond lanes on I-95 south of Springfield. The inside diamond lane will be reserved for HOV use while the new lane (where the current shoulder exists), will be open to all

traffic during the peak period. At other times, this outside lane will be closed to traffic and there would be no restrictions on the use of the inside lane.

In order to reserve the inside lanes for HOV traffic, two major interchanges will have to be modified where the Beltway and I-66 intersect. The exit from I-66 eastbound to the inner loop of the Beltway currently occurs from the left inside lane and will have to be turned into a right lane exit. Once again, the exit from the inner loop to I-66 westbound will have to be modified so the entrance ramp merges into the right-hand lane. The cost of reconstructing these interchanges will be $1 million and $2.5 million respectively. The project is expected to be completed by December, 1991.

Although this project is described as an "interim" project, no date has been established for the construction on I-66 of the reversible type lanes found on the Shirley Highway (I-395). A study conducted several years ago concluded that virtually each interchange between the Beltway and Centreville on I-66 would require extensive reconfiguration and cost millions of dollars to allow such dedicated, reversible HOV lanes. Consequently, this may be a lengthy interim solution. Possible rail service has been recommended for this corridor in Northern Virginia's Transportation Plan.

Dulles Toll Road Corridor

In mid-July of 1990, the Commonwealth Transportation Board gave its unanimous consent to establishing rush-hour car pool restrictions for the new inside lanes of the Dulles Toll Road. The use of these diamond lanes,

Figure 8

HIGH OCCUPANCY VEHICLE (HOV) HOURS AND USE

HOV FACILITY	PERSONS	DIRECTION	RESTRICTED HOURS	VEHICLES	PEOPLE
I-95 (inside diamond lane)	HOV-3	Northbound Southbound	6:00 a.m. - 9:00 a.m. 3:30 p.m. - 6:00 p.m.	3959	14940
I-395 (reversible lanes)	HOV-3	Northbound Southbound	6:00 a.m. - 9:00 a.m. 3:30 p.m. - 6:00 p.m.	6066	35456
I-66 (inside the Beltway)	HOV-3	Eastbound Westbound	6:30 a.m. - 9:00 a.m. 4:00 p.m. - 6:30 p.m.	1725	5729
Alexandria:					
Washington Street	HOV-3 HOV-2	Northbound Southbound	7:00 a.m. - 9:00 a.m. 4:00 p.m. - 6:00 p.m.	141 223	508 673
Patick Street/Rte 1	HOV-2 HOV-2	Northbound Eastbound	6:00 a.m. - 9:00 a.m. 3:00 p.m. - 7:00 p.m.	499	1038

Sources: Virginia Dept. of Transportaion
Alexandria Dept. of Transportation & Env. Services

scheduled to open in the Fall of 1991, still must meet the approval of the Metropolitan Washington Airports Authority, which controls the right-of-way for the Toll Road.

The inside lane will be open to cars with three or more occupants from 6:30 A.M. to 9:00 A.M. eastbound, and from 4:00 P.M. to 6:30 P.M. westbound on weekdays. To accommodate these HOV lanes, an estimated $3 million in interchange improvements at Route 7 will be needed immediately to eliminate possible safety hazards. (Figure 8 provides a listing of HOV lanes, hours, and usage.)

Dulles Toll Road Extension

The Toll Road Corporation of Virginia has been given the final go-ahead by the State Corporation Commission for the Nation's longest privately operated toll road. The 14-mile roadway, costing an estimated $227 million, will stretch from the western terminus of the Dulles Toll Road at Washington Dulles International Airport to Leesburg. The extended Toll Road will help relieve the congested Route 7 corridor. Although it is not an HOV facility, the Northern Virginia Transportation Plan designates its route as a possible HOV and/or rail corridor, extending to Leesburg.

Although the Toll Road is not slated to be completed until the Spring of 1993, the State Corporation Commission has approved the initial toll charges for automobiles. These initial fees are expected to be $1.50 at the time the road is completed in April, 1993, $1.75 by January 1994, and $2.00 by January 1996. The Commonwealth presently charges 85-cents to travel the current 15-mile toll road from the Capital Beltway to the Airport. This stretch of road provides the State with excess revenues, some of which will be used to fund public transit projects in the Dulles Corridor. It is expected to cost a person driving by car from Leesburg to the Beltway by way of the Toll Road extended and existing Toll Road $2.40 on the opening day of the Extension.

Many areas of the country are watching the developments of the first private toll road in Virginia since 1816 with keen interest. Since much of the right-of-way is donated by developers who feel the cost of the land they give to the Toll Road Corporation will be more than offset by rising land values on their remaining properties, the actual cost of the project should be less than if the State had to purchase the right-of-way. Further, it seems apparent that the State does not have sufficient funds to build the roadway at this time without jeopardizing other needed projects. If this project goes ahead as planned, there are several other proposals within the State that may invite similar private sector participation and the success of the Toll Road Corporation could encourage similar projects in other regions of the Nation.

Additional Dulles Corridor Issues

After several years of rapid growth, the Dulles Corridor area has grown beyond existing public transit service and now is the center of a number of transit initiatives. The goal over the next few years is to catch up with the expanded commuter demand in this area and respond to its projected growth.

Public transit options at this point, however, are severely limited. Workers at the Washington Dulles International Airport have only two options: to drive or to use the Washington Flyer with one-way fares ranging from $5.00 to $8.00. There is no inexpensive mass transit serving the Airport. Consequently, executives at United Airlines and Marriott estimated that 99% of their employees use private vehicles to get back and forth to work. Some officials, according to a study*, felt this lack of service has caused more of a labor shortage than there would otherwise be if transit service from other areas was available. Most of the employees in the corridor commute from nearby suburbs along Routes 7, 28, 50 and I-66. These roads, however, are becoming more congested with each passing year.

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* "Task A-2 Working Paper—Market Research for the Dulles Airport Area Transit Feasibility Study," prepared by Catherine Bryant & Associates, Inc. For ATE Management & Service Company, Inc. and the Metropolitan Washington Council of Governments; January, 1990.

One proposal (which is included in the Northern Virginia Transportation Plan) for easing the pressure on the roadways and opening the Corridor has been a rail extension to the airport. A group called Dartrail has been exploring this option that would link the West Falls Church Metrorail Station with Dulles Airport by operating some sort of train in the median of the Dulles Access Road. If it is not feasible to operate on Metrorail's tracks, patrons would have to transfer at the connection between the two systems. Dartrail estimates the capital costs for the project will approach $302 million with first year operating costs in the area of $13 million. If a financing plan can be assembled by the Fall of 1990, Dartrail hopes to be in service by 1995. NVTC has been suggested by Dartrail as a possible owner/operator for the system, but has not been approached by Dartrail for support.

Also in 1995, the Smithsonian Institution's National Air and Space Museum plans to open an "Extension" at Dulles Airport. NVTC has organized a multi-agency task force to develop and coordinate public transit access to the new facility which will house the space shuttle "Enterprise", the U.S. Air Force SR71 "Blackbird", and the Boeing B-29 "Enola Gay", all of which should draw a large number of tourists visiting the Washington area. The transit link to the Museum Extension, whatever the final form, is expected to handle 2,000 to 4,000 passenger trips each day.

Such alternatives as direct motor coaches from the Mall to the Airport, or from one or more of the Metrorail stations (East or West Falls Church, Vienna), are being examined. Service frequencies, hours of operation, and other areas needed to make this an attractive service for the user are all being evaluated.

A number of opportunities for financing this project are in the preliminary stage of inquiry. The Commonwealth's Secretary of Transportation has indicated his willingness to commit 15% of the excess revenues derived from the Dulles Toll Road each year to public transit in the corridor. Other funding sources as Federal grants, State assistance, tax districts and private funding are also being examined.

In considering the service and finance options developed by the staff task force, NVTC identified several principles for effective and affordable transit service. These principles are being applied by staff and the Commission in crafting a set of final recommendations.

1) Avoid duplication of service: The region, with its State and Federal partners, has invested in an effective network of Metrorail, Metrobus and local bus systems. Because peak demands for travel to and from the Museum Extension occur mid-day during the week and on weekends, when existing commuter-oriented public transit systems have excess capacity, every effort should be made to utilize existing services and equipment. Also, because Metrorail is an effective collector of passengers throughout the market area, costly duplicate bus service that parallels Metrorail lines should be avoided.

2) Match transit service with target markets: NVTC believes that most Museum visitors will not split their day between Mall museums and the Museum Extension at Dulles. Consequently, they will be traveling from their homes and hotels throughout the region directly to the Museum

Extension. Tourists may use free hotel shuttles to reach Dulles Airport and then seek a quick and inexpensive connection to the nearby Museum Extension. Transit service that focuses entirely on nonstop bus service from the Mall will not serve this important part of the market.

3) Do Not Overestimate the Potential Transit Market: Because most Museum Extension visitors will travel during off-peak hours, roads will be relatively lightly traveled at those times and the private automobile will be an attractive option. Even $5 parking charges at the Museum Extension will not seem onerous for a family, compared to transit fares of perhaps $3 per person. Consequently, over-optimistic assumptions about transit market shares should not lead to procurement of expensive new buses that might not be fully utilized.

4) Leverage plans for other transit investments: Fairfax County has underway an application for a $72 million Suburban Mobility Grant from the Urban Mass Transportation Administration to implement the County's policy for improved transportation in the Dulles Corridor. The policy calls for construction of new park-and-ride lots (some of which could eventually serve as rail station sites) to be served by express buses. The grant application would fund such lots and perhaps new buses. Also, the Metropolitan Washington Airports Authority provides frequent service to and from Dulles Airport in coaches, vans and minibuses. Metrobus routes also serve areas close to the Museum Extension. NVTC believes every effort should be made to utilize these existing and planned transit services before costly new investments are undertaken to serve the Museum Extension.

5) Financial assistance is needed from the Commonwealth if substantial new investments are to be made: Financial aid from the Commonwealth is essential in building and maintaining an effective public transit network. Local governments in Northern Virginia have identified $10 billion in new transportation investments needed to hold the line on congestion. Only $3 billion is readily identifiable to support these investments. In such a situation, local governments are not able to undertake new financial responsibilities without the help of their State and Federal partners. The Commission has noted favorably Governor Wilder's intention—expressed in a letter to the Smithsonian's Secretary, Robert McAdams—to seek additional funding from the General Assembly to support the Commonwealth's commitment to the Smithsonian.

At this stage in planning for public transit access to the Museum Extension, it appears that several affordable options exist. It should be noted that High Occupancy Vehicles, express buses using timed-transfers, and even future rail service are contemplated in the Dulles Corridor in studies and plans undertaken by local jurisdictions and the Commonwealth. Consequently, the special needs of the Extension and its patrons should be addressed in the content of plans for overall Dulles Corridor transportation improvements.

The final report of the task force in October, 1990, will provide more detailed information and recommendations to allow participating jurisdictions and agencies, the Commonwealth Transportation Board and the Smithsonian Institution to continue to work together for improved public transit service in the Dulles Corridor. Refer to Appendix II below for more details about the agencies involved in the study and the financial options being considered.

Figure 9

SUMMARY OF COMMUTER BUS SERVICES

NAME/ADDRESS	PHONE	SERVICE AREA	VEHICLES	WEEKDAY RIDERSHIP
Aries P.O. Box 192 Fredericksburg, VA 22404	(703) 898-6158	Fredericksburg, Spotsylvania/Stafford TO: Fort Belvoir	2 Buses	70-75
BTS 407 W. 15th St. Front Royal, VA 22630	(703) 635-7644	Front Royal TO: CIA, Pentagon, Crystal City, Navy Annex	1 Bus	25
Groome Transport. 5500 Lewis Rd. Sandstone, VA 23150	(703) 222-7226	Richmond Airport TO: Fredericksburg, National Airport	8 Vans	85
Lee Coaches Route 4, Box 259-S Fredericksburg, VA 22405	(703) 371-6785	Fredericksburg TO: Crystal City, Pentagon, Fort Belvoir	6 Buses	276
National Coach Works 10411 Hall Indus. Dr. Fredericksburg, VA 22401	(703) 898-6959	Fredericksburg TO: Crystal City	Unknown	Not Avail.
O & S Transit 1609 Barnett Drive Front Royal, VA 22630	(703) 636-9723	Front Royal TO: Pentagon Winchester TO: Tysons Corner	1 Bus 1 Mini Bus	26
Prince William CommuteRide ATE Management & Serv. Co. 2540 Horner Rd. Woodbridge, VA 22192	(703) 494-9166	Prince William TO: Vienna Metro, Pentagon, downtown Washington	27 Buses	1725
Quick's Commuter Service 41 RV Parkway Falmouth, VA 22405	(703) 373-6027	Fredericksburg TO: Crystal City, Pentagon	7 Buses	260
Sterling Commuter Bus P.O. Box 452 Sterling, VA 22170	(703) 437-9428 (202) 225-7985	Sterling Park TO: downtown Washington	2 Buses	60
White's Bus Rental 306 Wallace Lane Fredericksburg, VA 22401	(703) 820-8178	Fredericksburg TO: Pentagon, Washington	Unk.	400

Commuter Bus Service

There are a number of commuter bus services available for the regional commuter, ranging from a publicly subsidized operation, to a nonprofit corporation, to profit oriented services. Most rely on HOV facilities to shorten travel times and would benefit from HOV improvements. A brief description of each service is listed below, with a summary provided in Figure 9. The commuter should note that over the course of the year, the level of service may fluctuate and some carriers may even terminate service.

Aries-- This operation, which was started in 1962, provides commuter bus service from the City of Fredericksburg, Spotsylvania and Stafford Counties to Fort Belvoir. There are currently two daily trips leaving at 5:00 and 5:25 A.M., with 3:15 and 4:00 P.M. return trips on weekdays only.

BTS -- This carrier operates one bus from Front Royal to the CIA in Langley, the Pentagon, Crystal City, and the Navy Annex. The bus leaves at 5:05 A.M. and starts the return trip at 3:35 P.M. Service started in 1985, and daily ridership is approximately 25 riders.

Groome Transportation -- A fleet of eight vans provides hourly service between Richmond and National Airport via Fredericksburg, from 6:30 A.M. - 3:30 P.M. Northbound, and 10:30 A.M. - 7:30 P.M. Southbound. There is some weekend service.

Lee Coaches -- This company operates three bus routes from Fredericksburg. Three daily trips leave between 5:07 A.M. and 5:40 A.M. for Crystal City and the Pentagon. One trip departs for Fort Belvoir at 5:05 A.M.

Mantua Commuter Bus -- The Mantua Citizen Association contracts with a private company for two daily trips to the Pentagon/Chrytal City area and downtown Washington D.C.

National Coach Works of Virginia, Inc. -- This firm operates from Fredericksburg to Crystal City and the Pentagon with inbound pickups at six different locations in Spotsylvania and Stafford Counties. Passengers are dropped off at various sites in and around Crystal City and the Pentagon. Morning trips leave between 4:35 and 5:05 A.M. with afternoon return trips between 4:30 and 5:30 P.M.

O & S Transit -- Two separate routes are run by this company; one from Front Royal to Langley(CIA)--Rosslyn--Pentagon--Crystal City. The other operates from Winchester to Tysons Corner.

Prince William CommuterRide -- This is a County-wide, publicly subsidized system that operates 30 different routes, mainly to the Crystal City/Pentagon and the downtown Washington area. The service is managed by the ATE Management and Service Company.

Quick's Commuter Service -- This service provides seven trips from Fredericksburg to the Pentagon, Crystal City, and Rosslyn. Buses are scheduled to arrive at the Pentagon between 6:15 and 7:05 A.M. Afternoon return trips leave the Pentagon between 3:30 and 4:40 P.M.

Sterling Commuter Bus — This is a nonprofit operation that was started in 1974. Officers elected by members of a homeowners association administer the program, and a private charter company provides the actual bus service. Two buses utilize the Dulles Toll Road in serving the Pentagon, Rosslyn, downtown Washington, Capitol Hill and Union Station.

White's Bus Rental -- This is another service that operates from Fredericksburg, Spotsylvania and Stafford Counties to the Pentagon and the District. The five morning trips leave between 5:20 A.M. and 6:45 A.M., with afternoon departures from 4:00 to 5:45 P.M.

NVTC has worked with commuter bus firms to locate mid-day parking, since some buses are operated by drivers who work in Northern Virginia or the District of Columbia during the day. Also, NVTC is working with selected firms to establish cooperative ticketing for Virginia Railway Express passengers who may need to use buses to return home.

The Regional Transit "Connections Project"

The Northern Virginia Transportation Commission was awarded grants by the Urban Mass Transportation Administration and the Virginia Department of Transportation for the establishment of an innovative "Transit Store" and to develop brochures and posters providing information about the interrelationship of the region's many public transit services.

Opened in June, 1989, the Transit Store is the first retail and information outlet in the Commonwealth of Virginia dedicated to the sale of transit fare media (on site and by mail), as well as the dispensing of personalized, computerized transit and ridesharing information. Additionally, it is unique in its offerings of transit information and outreach service to the mobility-impaired population of the region. The Ballston Transit Store began as a one-year demonstration project operated as a public/private venture under the management of NVTC and the Ballston Partnership, a consortium of Ballston area businesses and governments. The project is continuing under funding by Arlington County and the Ballston Partnership with an expanded ridesharing role for the County. A transit store oversight committee establishes operating policy and provides guidance.

Sales and visitor statistics of the Ballston Transit Store confirm its impact on providing a convenient service to meet the needs of commuters. While total sales revenue fluctuated (in part due to the patterns of bi-weekly flash passes), total sales for the first six months of operation equalled $50,651.90, compared to $100,717.54 for the remainder of the grant period (see sales statistics in Figure 10).

In keeping with the "Connections" theme, NVTC--with the support of its graphic arts consultant Peter Muller-Munk Associates--developed and distributed over 15,000 brochures and transit maps. A "connections logo" was designed, providing a unified focal point for all project activities and transit store signage. The brochures were developed to consolidate, under an attractive cover, all transportation services and telephone numbers in the Northern Virginia area. "The Northern Virginia Transportation Guide" is a comprehensive guide to interconnected transportation services, including a user-friendly, color-coded table listing fares, transfer policies, park-and-ride lots, and mobility-impaired information. The "Ballston" and "Old Town Alexandria" Guides provide more area-specific transit information, illustrating locations of specific carrier transfer points and telephone information.

Large, two-sheet poster size maps are displayed in all Northern Virginia Metrorail Stations. These maps were developed by NVTC to provide the transit rider with an up-to-date display and telephone listing of all transit carriers, and to accompany the "Northern Virginia Transportation Guide."

In May, 1990, NVTC sponsored a "Transit Awards Breakfast" at which it honored deserving bus drivers and administrators from regional, local and private transit and paratransit (door-to-door) providers. This event will become an annual tradition to promote public awareness of the diverse transit services available in Northern Virginia and to help instill pride among employees.

Summary of Regional Issues

As is apparent in the preceding description of regional initiatives, finance looms as the most important consideration in improving commuter transportation in Northern Virginia. Regional governments, citizens groups and private business have demonstrated repeatedly their ability to cooperate to overcome difficult jurisdictional issues. Excellent examples of such cooperation include the Virginia Railway Express and the advance planning for the Smithsonian Institution's National Air and Space Museum extension at Dulles Airport.

However, faced with enormous financial needs to upgrade parking, extend HOV lanes, and complete and rehabilitate the Metrorail system, local governments have turned to the Commonwealth and Federal governments for additional financial support. At the same time, the Commonwealth and Federal governments are urging increased local efforts given their own budget crises.

This situation could easily deteriorate into finger-pointing chaos, and constant vigilance and leadership will be required from NVTC and its members to identify innovative funding solutions to pressing investment needs.

SECTION III:

Local Transit Issues and Activities

With this next section the scope moves from broad, regional issues toward transit activities taking place at the local jurisdictional level. Additional details are provided in Appendix V.

The City of Alexandria

Alexandria has a variety of transit services available to commuters. The City has three Metro stations, is served by Metrobus, DASH, the Fairfax Connector and has a number of smaller, specialized services such as DOT, the City's paratransit operation.

DASH

The six-year-old system is comprised of 19 distinctive blue and gold buses that carry more than 5,000 riders a day. There are four routes that serve Old Town, the West End, and points between the Braddock Road and King Street Metro stations and the Pentagon.

Ridership has been on the rise the last two years due primarily to the City's rapid economic growth creating new jobs and riders. Many of the buses are near their 50-passenger capacity (including standees) on some runs. To help ease the crowding, DASH has ordered 9 more buses with a 60-passenger capacity (42 seats and standing room). These new buses, all of which will be lift equipped, will be used to serve the City's fourth Metrorail station--Van Dorn Street--when it opens in April, 1991 as well

as existing routes. An additional five buses will be ordered to expand service along Eisenhower Avenue.

DASH, which is operated by the Alexandria Transit Company, a nonprofit public corporation owned by the City, employs a private management firm to manage the service (ATE Management and Service Co., Inc.). DASH was designed to supplement the regional bus and rail service provided by WMATA. The system was also designed to improve internal circulation within the City, improve access to Metrorail stations and to offer the City greater flexibility to respond to commuter demands. Fares cover about half the system costs, with the City paying the remainder. This is a high revenue to cost ratio compared to other bus systems, and reflects excellent ridership results. The subsidy is projected to be $1,360,000 for Fiscal Year 1991.

Paratransit

The "DOT" service is the City of Alexandria's transit service for the mobility impaired. This program, which was started in 1985, utilizes taxicabs and wheelchair accessible vans to provide fast and convenient transit for its patrons. The DOT program now serves over 800 citizens and averages approximately 1,700 taxi and 700 van trips per month. The number of annual trips has doubled from nearly 10,000 in the program's first full year to over 25,000 trips in FY 1990.

The service is open to any person living in or visiting the City who cannot use the regular transit bus system due to a disability. A physician's statement is required as part of the certification process handled by the Office of Transit Services.

DOT operates door-to-door with a fare of $1.25 per one-way trip. There is no charge for a companion who provides assistance. The hours of operation are the same as the DASH bus service:

Monday - Friday from 6:00 A.M. to 11:30 P.M.
Saturday from 6:30 A.M. to 11:45 P.M.
Sunday from 8:00 A.M. to 9:30 P.M.

While same day service is provided if space is available, trips should be scheduled the day before, if possible. The DOT program is administered by the City's Office of Transit Services (838-3800).

MetroTaxi

In 1987 a new service was instituted to complement late night DASH and Metrobus service from the Braddock Road and King Street Metrorail stations. This program, called MetroTaxi, operates from 8 P.M. to 12:30 A.M. from the aforementioned rail stations to any place within the City limits. The metered fare is discounted by $1 or $2 depending on the length of the trip. The difference between the actual and discounted fare is paid by the City.

Currently there are four cab companies (Alexandria Diamond Cab, Alexandria Yellow Cab, White Top Cab Company, Alexandria National Cab) that participate in this program and between 400 to 500 trips are taken each month.

This successful service started as an experimental program sponsored by the Northern Virginia Transportation Commission.

Arlington County

By virtue of its central geographic location and recognition of the benefits of transit, Arlington County is the host to eleven Metrorail stations that serve as the County's transportation foundation. In addition, the County also pays for Metrobus service, helps fund the Ballston Transit Store, and administers the Arlington Crystal City Trolley and the Subway Shuttle Taxi.

Crystal City Trolley-Replica Buses

The County purchased three new lift-equipped trolley-replica buses in March of 1990 to be used along the Crystal City Trolley's 2.4 mile circular route. The two-bus system, which operates exclusively in Crystal City, has 15 stops including the Crystal City Metrorail Station. Service is provided from 6:30 A.M. to 6:30 P.M. Monday through Friday only. The fare is a nominal 25-cents and the system averages about 650 passengers per day. The Trolley-replica is operated by ATE Management and Services Company, Inc.

SST

The Arlington Subway Shuttle Tax (SST) serves the south-central portion of Metrobus Route 22, operating from the Ballston Metrorail station to the Shirlington area of the County from 9:30 P.M. to 12:30 A.M. Monday through Friday and 7:45 A.M. to midnight on Saturdays. Patrons can use the shuttle, which is operated by the Arlington Yellow Cab Company, Inc., from Ballston to areas along Metrobus Route 22 south of the South

George Mason Drive and Route 50 intersection (the southern portion of the County). To take the SST from the commuter's front door, commuters must call one hour ahead of time and meet the Shuttle at the designated location. The fare is 85-cents (50-cents with a valid Metrorail or Metrobus transfer). This service was initiated by NVTC in cooperation with Arlington County and the Virginia Department of Transportation, and is now funded by Arlington County. The SST averages seven weekday riders.

Other Paratransit

Other Paratransit service in Arlington County is provided by the Farewheels program, along with a number of private organizations. This service is for elderly and disabled individuals who are also eligible for other social service programs. Certified recipients are given $20 worth of transportation coupons every month. Taxis may be used only for medical appointments. Lift-equipped vans are also available. There are approximately 260 residents certified to use Farewheels, with about 70 using it on a regular basis.

The City of Fairfax

In April of 1990, the City's CUE bus system expanded service by adding one new bus to each of the four existing routes. Headways, or the period between bus arrivals, have been reduced to 30 minutes. This allowed the City to eliminate the supplemental Red line rush-hour service.

The expanded service now includes eight buses circulating along four routes that connect with the Vienna Metrorail Station between the hours of 5:30 A.M. and 7:30 P.M. From 7:30 P.M. to 9:00 P.M., there are four buses operating, with two providing service from 9:30 to midnight. On weekends, four buses operate along the Gold and Green lines and transfers are free between these two lines.

Fares are 35-cents, and students with a valid George Mason University identification badge, citizens over the age of 60, and children under 3 years, all ride free of charge.

Paratransit

The City of Fairfax utilizes the Farewheels program to provide transportation for the City's mobility impaired. There is a certification process involved and once enrolled in the program, the user can purchase for $6 a booklet worth up to $24 of coupons that are used to reimburse the taxi companies which participate in the program. Of the 40 or so City residents enrolled in Farewheels, approximately 15 use it on a regular basis.

Fairfax County

Fairfax Connector

The Fairfax Connector bus system is the largest bus service operated by a jurisdiction in Northern Virginia. At its inception in September

1985, the Connector consisted of 33 buses operating along 10 routes. By March of 1988 the system had expanded to 50 buses and 14 routes. The next phase of the fleet's expansion will coincide with the opening of the Van Dorn Metrorail in the Spring of 1991. The fleet will increase from the current level of 55 buses to 72 by the end of Fiscal Year 1991. While the County has elected to purchase the buses, the actual operation is under contract with ATE Management and Service Company, Inc.

At this time the Connector system consists of 14 routes that serve southeastern Fairfax County. Ten routes feed the Huntington Metrorail station, charging patrons a nominal 25-cent fare. The four remaining routes serve the Pentagon Metrorail station and have a fare structure identical to those charged on the Metrobus system. Total ridership for Fiscal Year 1990 was just over 2.3 million with the average weekday ridership at approximately 8,550 patrons.

Tysons Shuttle

The Tysons Shuttle provides weekday service during the morning and evening rush hours. The Shuttle operates between the West Falls Church Metrorail Station, Tysons II, and the various residential and employment centers in the Westpark area of the County. On April 1, 1990, the County officially incorporated the service into its transportation network. (The shuttle, which started as an experimental project, had been administered by NVTC on behalf of the County). The two-bus shuttle is operated by a private contractor (TSMI, Inc.) and carries 200 passengers each weekday.

RIBS

The Reston Internal Bus System (RIBS) serves the Reston Community. Starting with the opening of the Reston Town Center in October of 1990, the three routes will converge on the Timed Transfer Center affording the transit riders easy and convenient access to an express shuttle serving the West Falls Church Metrorail Station. RIBS is rather unique in that it does not employ the use of posted bus stops. Rather, commuters can flag down the bus anywhere along the route. Like the Tysons Shuttle, RIBS is operated by TSMI, Inc.

Paratransit

The County has FASTRAN bus service, which is a centralized paratransit system that provides transportation to the mobility impaired for all of the County's Human Services agencies. Each agency may have particular guidelines, so it is best to call FASTRAN at 339-2021 to discuss the program and the individual's needs. This system is a zone-based operation with free transportation within a zone. Zone crossings result in the commuter paying a $1 surcharge. The system, which averages about 35,000 rides per month, is operated by ATE Management Company, Inc.

The County does have a door-to-door service called Dial-A-Ride. For more information, call 339-1358 between 8 A.M. and Noon.

Lift-equipped service is also available on the Fairfax Connector. Reservations for this service must be made 24 hours in advance.

The Urban Mass Transportation Administration Dulles Corridor Grant Application

This grant application is supported by a KPMG Peat Marwick study which began in 1988 to study transit alternatives in the Dulles Corridor. The report, which was funded by UMTA and Fairfax County, concluded that an express bus system in the corridor would attract almost as many riders as a rail system at less investment cost. Then UMTA Administrator Alfred DelliBovi indicated that his agency was willing to fund up to 50 percent of the needed $72 million to implement this bus system as part of a Transportation Systems Management (TSM) plan for the study area. The Federal funds would come from UMTA's Section 3 Discretionary Funding Program.

On April 7, 1990 the Fairfax County Board of Supervisors endorsed the concept of a TSM approach to solving transit problems in the Dulles Corridor, while preserving the necessary right-of-way for construction of a rail line in the future. On June 4, 1990, the County Board reaffirmed its April 1989 position and directed County staff to formulate a capital grant application for submission to UMTA by December 31, 1990.

County Staff is exploring the possibility of sharing the $36 million local match with the private sector through joint development. This would also help offset the cost of land in the corridor for future rail stations. The process of identifying local sources of funds and the selection of sites for park-and-ride lots are the two most critical decisions the Board must make before the December 31, 1990 application deadline.

In addition to site selection and exploring joint development possibilities, County staff is at work on the other phases of the project. A bus service plan must be developed along with a financial plan. Environmental assessments must also be undertaken. Finally, the application itself must be written.

On August 6, 1990, the Board of Supervisors approved a bond package to be included on the November 1990 ballot. This bond package included $36 million to fund the local match for the Dulles grant.

Reston Transit Center/Timed Transfer Demonstration Project

The Board has adopted a resolution which approves the implementation of this $280,773 demonstration project. This experimental project, which will run from October 15, 1990 through October 12, 1991, calls for the reconfiguration and rescheduling of the Reston Internal Bus System (RIBS) as well as the initiation of a mid-day Reston Express route between the West Falls Church Metrorail Station and the Reston Transit Center, with stops at the Reston Town Center.

The demonstration project will increase the frequency of service on the three proposed RIBS bus loops from 75 to 35 minutes. The new midday express service would operate from 9:30 A.M. to 3:30 P.M., Monday through Friday, and utilize buses from the Tysons Shuttle (which is not in operation during this time).

Funding for this project will come from three sources. The Reston Town Center will provide $50,000 (which is about 50 percent of the cost

for the express shuttle). The Virginia Department of Transportation has agreed to pay $113,620, and $117,153 will come from local funds.

The whole idea of a Timed-Transfer system is to provide centralized and efficient bus service. The three RIBS routes will be coordinated with the Reston Express route to allow easy and convenient transfers and facilitate transit to and from the West Falls Church Metrorail Station. The October 1990 project implementation date was chosen to coincide with the opening of the Reston Town Center.

UMTA Suburban Mobility Grant Application

In the Spring of 1988, UMTA announced the Suburban Mobility Initiative and encouraged localities to submit applications. The County has four major projects that are part of its application. These are: the Franconia-Springfield Transportation Center where WMATA is now serving as grant applicant; two 350 space park-and-ride lots in the Reston area; a 500 space park-and-ride lot in Centreville; and the 300 space expansion of an existing park-and-ride lot on Old Keene Mill Road near Rolling Valley Mall.

The Franconia-Springfield Transportation Center has been strategically located at the future site of the Franconia-Springfield Metrorail Station and the pending Virginia Railway Express Springfield commuter rail station, just off the Shirley Highway (I-395) HOV lanes. The Center will have 1800 parking spaces where commuters can park their cars before boarding Metrobus and Fairfax Connector service to Pentagon and Van Dorn

Metrorail stations, the VRE commuter rail, or forming car/van pools. The objective is to move drivers of single occupant vehicles from the congested I-95/395 corridor into various modes of public transportation.

Due to the existence of wetlands on the project site, WMATA has conducted an Environmental Assessment (EA) for the Franconia-Springfield Transportation Center and the Franconia-Springfield Segment of the Metrorail System. The findings of the EA have necessitated a reconfiguration of the station support facilities including conversion of all surface parking into structured parking. A public hearing for the Transportation Center, the Metrorail station and Environmental Assessment was conducted in September of 1990.

Funding for the $46 million Transportation Center is proposed to come from $15.8 million of UMTA Suburban Mobility Section 3 funds, $5.3 million of previously authorized Fairfax County general obligation bonds for Metrorail related construction and $25 million included in the transportation referendum on the County's November, 1990 ballot. If the Transportation Center is approved after completion of the public hearing and funding becomes available, construction would begin during 1992 with completion scheduled for 1994.

The other Suburban Mobility projects located in Fairfax County are surface park-and-ride facilities that will be linked by bus service to the nearest Metrorail station. The two 350 space Reston facilities are located at Fox Mill Road and Lawyers Road and west of Hunter Mill Road off of Sunset Hills Road. The second facility will be constructed for 350 parking spaces but designed for expansion capability to 850 spaces.

The Centreville Park-and-Ride will be a 450-500 space facility located along Route 29 at Stone Road. Bus service to this facility will link directly with Vienna Metrorail Station.

The other County project included in its grant application is a 300 space expansion of the existing Rolling Valley Park-and-Ride Lot. The expansion will be through an easement with VEPCO, the property owner. Bus service along Old Keene Mill Road will continue to serve this facility and link up with Pentagon Metrorail Station.

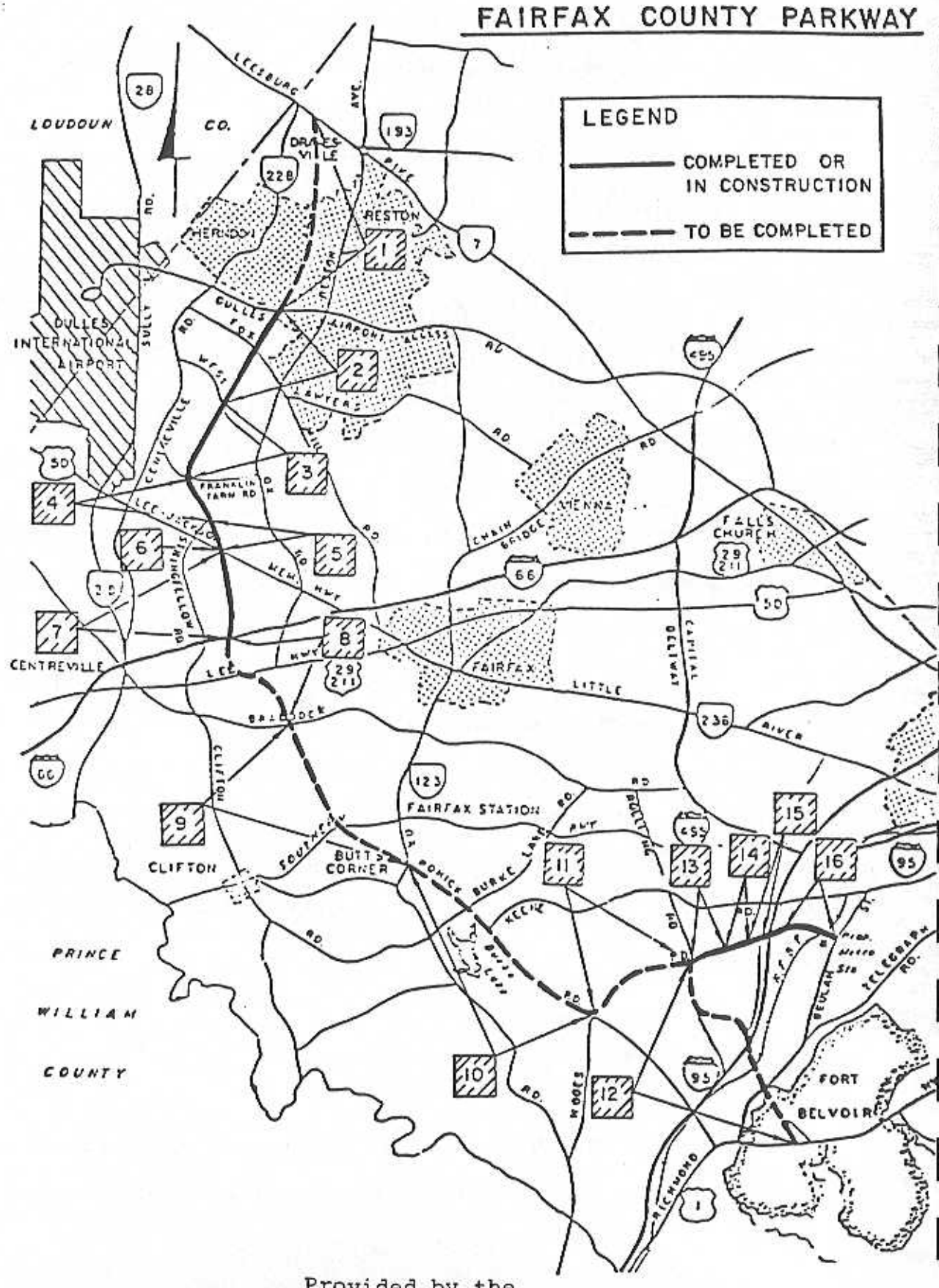
Van Dorn Street Metrorail Station Opening

The Fairfax County Board of Supervisors has approved the expansion of the Connector service to coincide with the opening of the Van Dorn Street Metrorail Station in April of 1991. Three new Connector routes (201, 202, and 203) would be initiated, while routes 108, 109 and 302 would be modified. Connector Route 301 would be terminated. The expansion would utilize 10 additional 35 foot buses and provide access to the station from such major areas as Beulah Street, Franconia Road, Rose Hill, Kingstowne, Manchester Lakes and Hayfield. The new 200 route series would operate from 5:30 A.M. to 9:00 P.M. along with midday and Saturday service to the areas mentioned above.

Fairfax County Parkway

This 35 mile parkway will link Route 1 near Mount Vernon in the south with Route 7 near Herndon in the north. The roadway, which has been

Figure 11



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designated the County's top transportation project by the County Board, will provide a major arterial option for cross county commuters to using the congested Washington Beltway (I-495). (See Figures 11 and 12.)

In an effort to speed the completion of the parkway (22 miles have been on hold pending funding), the County is pursuing issuance of approximately $330 million in contract revenue bonds through NVTC. These bonds, unlike general obligation bonds, do not need to be approved by the voters since they will be repaid from a dedicated source of County tax revenues. The County will retire about $37 million per year for the next 25 years. This debt issue is not expected to affect the Triple A rating enjoyed by the County. The bond issue will proceed when a challenge pending before the Virginia Supreme Court is resolved.

Huntington Metro Station Parking Structure

Construction commenced on August 20, 1990 for a new 1,290 space parking structure along Huntington Avenue. After completion in October, 1991, the facility will increase total station parking to 3,100 spaces.

The new parking structure is funded by Fairfax County Economic Development Authority Parking Revenue Bonds in the amount of $11.2 million. The debt will be serviced by revenues generated by surcharge parking fees charged at Metrorail stations located in Fairfax County as well as the East Falls Church Station. Parking user fees are projected to fund the project fully and will not require Fairfax County contributions from general tax revenues.

Figure 12

FAIRFAX COUNTY PARKWAY

1. Route 7 to Dulles Toll Road
2. Dulles Toll Road to West Ox Road
3. West Ox Road to Franklin Farms Road
4. Franklin Farms Road to Stringfellow Road
5. Stringfellow Road to Route 50
6. Route 50/Fairfax County Parkway Interchange
7. Route 50 to I-66
8. I-66 to Braddock Road
9. Braddock Road to Route 123
10. Route 123 to Hooes Road/Pohick Road
11. Hooes Road/Pohick Road to Rolling Road
12. Rolling Road to Route 1
13. Rolling Road to Lackawanna Drive (Daventry)
14. Lackawanna Drive to Villa Del Rey Lane
15. Villa Del Rey Lane to I-95 HOV
16. East of I-95 HOV to Beulah Street

Provided by the
Office of Transportation

Vienna Metro Station Parking Structure

Fairfax County completed construction in Fall, 1990, of a new 1,874 space parking structure at Vienna Metrorail station. The additional spaces result in total all-day parking of 3,567 spaces at Vienna. The $15.565 million project is also financed with Fairfax County Economic Development Authority Parking Revenue Bonds, backed by the parking surcharge levied at Virginia Metrorail stations.

Loudoun County

NVTC's newest member has an adopted transportation plan setting forth priorities for highway improvements. In addition, the operators of the Sterling Commuter Bus have approached the County Board for financial assistance and the County is evaluating potential park-and-ride lot locations that could be served by new bus service. The County has been an active participant in NVTC's task force preparing recommendations for transit service to the Museum Extension at Dulles Airport.

Falls Church

The City has no local public transit service, but does participate in the Farewheels program. The East and West Falls Church Metrorail stations are located at the City's boundaries and several Metrobus routes travel through the City to reach those stations and other destinations.

Summary of Local Issues

Despite the extensive cooperation on regional issues, local governments must also undertake important public transit initiatives "on their own." NVTC seeks to keep its members well informed about these local initiatives, even when other jurisdictions are not directly involved. Also, even for local initiatives such as the Fairfax County Parkway, other local governments can lend a helping hand, as evidenced by NVTC's proposed involvement in the $330 million contract revenue bond issue needed to finance the Parkway.

NVTC's jurisdictions also cooperated to help fund vital environmental studies that developed the proposed plan to construct the Transportation Center, VRE station, and Metrorail station at Franconia/Springfield.

Despite such evidence of cooperation, more needs to be done to improve connections between local transit systems. The array of transfer restrictions and other requirements facing a patron who wishes to move across the region via more than one local transit system can be daunting. NVTC has endeavored, through its ongoing Connections project, to educate travelers about existing restrictions. Nonetheless, removing the barriers through such mechanisms as joint fares would be a preferable alternative. VRE will attempt to establish such unified fare structures with WMATA and local feeder bus systems prior to operation in October, 1991.

SECTION IV:

Federal Legislation Affecting Public Transportation

There are three Federal legislative measures that will have an enormous impact on the region's transportation network. The Americans with Disabilities Act and the Clean Air Act will affect transit systems throughout the United States. The jurisdictions in the Metro Transit Zone may have to pay a greater proportion for construction of the remainder of the 103-mile Metrorail system than they did for the first 89-miles, as a result of pending Metro-Reauthorization legislation. Below is an overview of each piece of legislation.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) has finally passed both houses of Congress and was signed by President Bush this summer. This legislation requires that all new buses ordered by public transit providers be accessible to the mobility impaired, and that there be complementary paratransit service within 18 months. Key rail stations and trains must also start the process of becoming accessible to persons with disabilities.

The actual cost the ADA will mean to public transit providers will not be known for at least one year. During the next 12 months, the U.S. Department of Transportation (DOT) will be preparing regulations detailing the implementation of part of the Act (only Title II of the ADA deals with transportation; other portions deal with business, employment and communications areas).

What is clear is that all new public transit vehicles that are used on fixed routes must be accessible to the mobility impaired. Solicitations that occur after the first 30 days since the Act was signed must include a means for making the vehicle accessible. Any remanufactured vehicle that has had its useful life extended five or more years and that is purchased or leased by a public entity must also be made accessible to the mobility impaired to the maximum extent feasible. It is up to DOT to define what is meant by "maximum extent feasible" over the next 12 months.

The Act further calls for public entities which operate fixed-route service to provide complementary paratransit which must be comparable to the fixed route service (including fares, hours of operations and service territory) to the extent practicable. The ADA does include the caveat that the public entity would have to introduce or expand the paratransit service only to the point where it imposed an undue financial burden. Again, this threshold level will have to be defined by DOT.

All new rapid and light rail stations must be accessible to patrons using wheelchairs, with three years provided for making key existing stations accessible. Key existing stations may be allowed up to 30 years for the conversions under circumstances to be defined by DOT. However, if such an extension is awarded, two-thirds of the other existing key stations in the system must be accessible after 20 years.

Existing commuter rail trains also have a requirement that one-car per train be accessible. Further, all new commuter cars must be accessible. Key existing commuter stations must be accessible within three years, with extensions of up to 20 years where this requires raising the entire platform or where similar exorbitant structural changes are needed.

This legislation will increase the cost of public transportation to the region. All new buses purchased by the jurisdictions and Metro will be lift-equipped, adding an additional $15,000 to $20,000 per bus, plus maintenance costs ranging from $3,000 to $5,000 per year depending on use, terrain and other considerations. With a fleet of over 2,000 buses in the region, the annual cost could eventually reach $10 million. Transit managers are waiting for clarification by DOT for the complementary paratransit requirements.

Clean Air Act

The Clean Air Act, which is in conference committee, will undoubtedly place additional financial burdens on the region's public transit infrastructure. The Act calls for the phasing in of alternative fueled vehicles in an effort to reduce harmful emissions.

Of the two versions, the House Bill (HR. 3030) would appear to be the more lenient, primarily because it allows the use of "clean diesel" as an acceptable alternative fuel (clean diesel has a low sulfur content). Other fuels that both bills consider include: methanol, ethanol, reformulated gasoline (contains more oxygen and less hydrocarbon), natural gas, liquefied petroleum gas, electricity and other fuels.

Another area of concern to transit operators is the phase-in schedule for alternative fueled buses. Here again the two bills differ with the Senate bill (S. 1630) calling for a faster conversion schedule. For urban areas with more than 1.5 million people:

- S. 1630: 10% in 1991; 25% in 1992; 60% in 1993; and 100% in 1994 and later model years.

- HR. 3030: 25% in 1994; 60% in 1995; and 100% in 1996 and later model years.

The effect of this legislation will extend beyond public transit. Provisions in both the House and Senate bills, for example, provide direction in reducing vehicle miles travelled (VMT) as a means of controlling vehicle emissions in areas that exceed the ozone standards. For example, the Senate version allows governors in nonattainment states the authority to use highway funds for public transit capital programs, busways, employer VMT reduction programs, as well as other measures. Thus, transit patronage and revenue may be increased to offset some of the additional costs imposed on transit systems.

When passed, this act will certainly place additional costs on public transit agencies, the extent of which will not be known until the final version is adopted. If alternative fuels are mandated and clean diesel is not an approved fuel, this will add capital costs (in the form of new facilities and buses), operational and maintenance costs. Even if clean

diesel is acceptable under this legislation, this will require electronic engines, adding about $3,500 per bus. Buses using Compressed Natural Gas would cost $250,000 each (versus $170,000 for current diesel models) as well as requiring several refueling stations at perhaps $2.5 million each.

Funding for Completion of the Metro System

Since 1967, when Congress first funded Metro, the Federal government has shown its commitment to build a rapid rail system by paying up to 80 percent of the construction costs. With congressional funding for completion of the 103-mile Metro system being debated in both chambers of Congress, it appears unlikely that the Federal participation will remain at its maximum levels.

On March 28, 1990, the House approved legislation calling for the Federal government to pay $2.025 billion, or 75 percent of the $2.7 billion needed for the completion of the remaining 13.5 miles of the unfunded Metro system. This five percent decrease in Federal matching share means that the State and local governments will have to pay an extra $135 million in construction costs.

The Senate, which is still debating this funding package, is considering an even larger decrease in Federal aid. Senator John Heinz has presented a proposal that calls for only a two-thirds Federal share. This would require an additional $351 million over the $540 million required from State and local governments if they were required to pay the historic 20 percent of the cost.

SECTION V:

ADVANCED TECHNOLOGY FOR THE REGION

Advanced Technology

The preceding sections have described a number of transit initiatives (and legislation affecting those initiatives). Virtually all involve capital expenditures designed to efficiently move people. Though in the shadows of more conventional solutions, advanced technology may offer innovative approaches to many of the same problems. This section will highlight some of these technologies that may be applicable to this region. Even technologies that improve the efficiency of private automobiles and highways can benefit public transit by reducing congestion and saving dollars that can be spent instead on improved transit.

Smart Highway/Vehicle Technologies

A host of systems is included under this heading, ranging from automobile dashboard-navigation systems to automobile trains that incorporate radar, electronic sensing devices, lasers and even satellites to produce an efficient highway system. One firm has proposed a navigation system--the motorist information system--that could be used in the Northern Virginia Region.

The goal of this navigation system is to supply the driver with real time traffic information that allows the commuter to avoid congested areas and thereby obtain greater utilization of the existing roadway infrastructure. The navigation system consists of a TV monitor placed in the car that displays a map of the area. A continuous stream of

information is beamed from a traffic control center to the car, with congested areas highlighted on the monitor. The key to this system is that it works with constantly updated information and displays the trouble spots on a map. These features allow the driver to confidently plot an alternative route. This method is an alternative to helicopter-based traffic reports that direct the driver, since most commuters are unwilling to follow verbal directions to alternative routes, particularly over unfamiliar terrain.

This system might be useful for one Northern Virginia region in particular: The area would extend from I-66 up through the Dulles Access Road and the Route 7 corridor and down to and including the American Legion Bridge on the Capital Beltway.

Automated Vehicle Identification

Dulles Toll Road commuters will be able to pay their tolls electronically by the middle of 1991. The system consists of an electronic tag, called a transponder, that is attached to the license plate. As the drivers pass a certain point, sensors in either the pavement or on an overhead sign will charge a toll automatically by deducting the total from revenue encoded in the transponder. The commuter will pay a security deposit for the use of the transponder and will have three payment options available. Commuters may be billed through the mail, have the charges appear on their credit card statement, or go to a designated location to add money to their account. This system should decrease lines at toll plazas and be more convenient for commuters since they won't have to slow down or fumble with change.

This automatic vehicle identification system, which is being used in New Orleans and Dallas to automatically pay tolls, could be used in other ways. For example, the transponder can allow two-way communications and be combined with the navigation-type system outlined above. Thus, not only would the toll be paid, but the sensor could transmit information about congested areas that lie ahead and pick up information about traffic flow. This information could be used by the driver to steer away from the congested area and by the traffic control center to relieve pressure in the congested area by changing the traffic signals to slow traffic heading to the choke point.

Though the use of Smart technologies may seem futuristic, the technology to implement these navigational systems exists today. However, as in many other areas, the U.S. lags behind the Japanese and Europeans in this field. Western Europe has pledged $5 billion over the next eight years for research in this type of technology. Two taxi companies in Osaka, Japan have dashboard monitors that display traffic reports, maps and train and airline schedules. In contract, total U.S. investment to date by the government and universities is estimated at $20 million, with only $2.3 million in Federal funds spent this year. The Department of Transportation estimated that Smart cars will help boost the sale of auto electronics from an $8.5 billion market to a $28 billion a year industry by the turn of the century.

Magnetic Levitation

Magnetic levitation involves moving a train suspended by repelling magnetic forces over a guideway at speeds of 300 or more miles per hour.

This technology, called Maglev for short, may be competitive for trips of 100 to 600 miles long. A one-mile test segment has been integrated into the Berlin Subway system. The Federal Railroad Administration has about $6 million available to support Maglev and the Corps of Engineers has another $4 million.

A local group, called MAGTRANS, has been exploring the possibility of including the Commonwealth of Virginia in any regional Maglev system. The group proposes that implementing such a system would help continue the economic growth of the region, provide spill-over technologies that could be used in other industries, and would be an environmentally safe technology that would reduce the use of petroleum and would be virtually noiseless. Connections could be explored between the three airports in the region (Dulles, Baltimore-Washington and National) as well as with local and regional transit systems at such locations as Union Station in the District of Columbia or King Street in Alexandria. With the construction over the next several years of a 14-mile Maglev system connecting Orlando International Airport with Walt Disney World, realistic construction and operational cost data will be available to better evaluate the Maglev against more conventional technology.

SECTION VI:

Conclusion

Northern Virginia's existing public transit systems now provide well over a quarter million trips each weekday. Annual costs to Northern Virginia for operations, construction and capital equipment are about a quarter billion dollars. Over the next two decades, another $10 billion will be needed for basic transit operations, construction and capital, as well as highway construction and HOV improvements.

Commuters are clamoring for an end to deteriorating levels of service, while taxpayers are demanding relief. Federal policymakers look to State and local governments to do more financially, while the Commonwealth has just announced a $1.4 billion budget shortfall.

Compounding these financial issues are commuting patterns that cut across jurisdictional boundaries (roads of jurisdictions close to the urban core are clogged with drivers from outlying jurisdictions, despite enjoying the Nation's greatest average auto occupancy). Further accelerating demands to drive "cross-County" choke roads not designed to accommodate substantial commuter loads. Traditional public transit is not well suited to low density areas with widely dispersed origins and destinations.

Despite this gloomy and apparently deteriorating situation, some rays of light are evident. Jurisdictions are cooperating on important regional initiatives to initiate commuter rail service and to plan transit for new Museum facilities. That can boost the economy of Northern Virginia. New financial instruments are being readied (NVTC/Fairfax County contract revenue bonds, private toll road financing, statewide pledge bonds) to

leverage current taxes. Mechanisms (e.g., the proposed Transportation Coordinating Council) are being adopted to set priorities for apportioning scarce funds to those project with the greatest effectiveness. The region is united in its support of pending Federal legislation that would fund the completion of the 103-mile Metrorail system.

With such pressing problems in finding conventional solutions to today's congestion, opportunities featuring new technologies are in danger of being ignored, unless local and state interests can cooperate with the private sector and the Federal government to study and implement the most promising of these.

NVTC and its member jurisdictions are not able to fund by themselves major new technologies, but may be able to assist in testing various components. One example might be maglev or other rail links between the Northeast Corridor,(which now terminates in the District of Columbia) Richmond, and points south (such as the Tidewater area of Virginia or the Research Triangle area of North Carolina). Another example could be extending new transponder-based toll collection technology to finance bridges or expressways for which no other funding source is apparent.

It is apparent that the relatively narrow focus that led the General Assembly to ask NVTC to undertake a Bus Service Coordination Plan in 1983 is no longer appropriate. In fact, as can be seen from the extensive discussion of highway-related issues in this report, the appropriate range of coordination planning has broadened beyond Transit to include all forms of passenger transportation. With this expanding scope comes an ever-increasing array of jurisdictions, agencies and problems, but also a greater potential to solve the complex problems through cooperation.

APPENDIX I

DIRECTORY OF TRANSIT ORGANIZATIONS IN NORTHERN VIRGINIA

TRANSPORTATION DIRECTORY
FOR NORTHERN VIRGINIA

Regional

(202) 223-6800	Metropolitan Washington Council of Governments
(703) 783-POOL	RIDE FINDERS carpool/vanpool information
(703) 685-8100	Metropolitan Washington Airports Authority
(703) 685-1400	WASHINGTON FLYER ground transportation to Dulles and National Airport
(703) 471-4242	Dulles: airline, airport information
(202) 962-1234	Washington Metropolitan Area Transit Authority (METRO)
(202) 962-1245	Elderly/Disabled assistance, ID cards
(202) 637-7000	METRO bus/rail information
(202) 962-1825	METRO ON-CALL lift-equipped buses
(703) 359-1100/60	Virginia Department of Transportation
(703) 642-0700	Northern Virginia Planning District Commission
(703) 524-3322	Northern Virginia Transportation Commission
(703) 369-6173	Potomac and Rappahannock Transportation District Comm.
(703) 524-3322	Virginia Railway Express

City of Alexandria (All 703 Area Code)

838-3800	Alexandria Transportation Planning Board
838-3800	DOT specialized disabled transportation
838-3800	RIDESHARING carpool/vanpool/transit
370-DASH	DASH bus information

Arlington County (All 703 Area Code)

358-3698	Arlington Transportation Commission
358-4786	Farewheels - subsidized taxi
358-3575	Arlington Trolley
528-3541	Ballston Transit Store

City of Fairfax (All 703 Area Code)

385-7855	Transit Services Information
385-7859	CUE bus information

Fairfax County (All 703 Area Code)

246-1100	Office of Transportation
246-1111	RIDESOURCES carpool, vanpool, transit
246-5242	Human Services Transportation
339-7200	FAIRFAX CONNECTOR bus information
548-4545	Reston RIBS bus information
548-4545	Tysons Shuttle information
359-8400	FASTRAN (over 60) info and referral

City of Falls Church (All 703 Area Code)

241-5040	Planning Department
241-5005	Farewheels - subsidized taxi
359-8400	FASTRAN info and referral

Loudoun County (All 703 Area Code)

777-0246	Department of Planning and Zoning

APPENDIX II

SMITHSONIAN INSTITUTION'S
NATIONAL AIR AND SPACE MUSEUM EXTENSION
TRANSIT SERVICE AND FINANCING PLAN

Improving transportation in the Dulles corridor involves the efforts of the following agencies and jurisdictions. Their special interests in this effort are highlighted. Members of the Multi-Agency Task Force cooperating to produce this report are also listed.

o Arlington County: A participant in Metro service, host for two of Metro's three Virginia bus garages, site of a number of tourist attractions and home of a large element of the tourist industry. Arlington hotels serve a large portion of the Department of Defense [DOD] and DOD contractors travel requirements. As a consequence, there is excess hotel capacity on weekends, some of which is booked by tour groups.

o DATA, The Dulles Area Transportation Association: A transportation management association comprised of landowners and businesses located in the vicinity of Dulles Airport and along the Route 28 corridor. DATA is sponsoring a study of market and transit improvements for employers in the corridor, in cooperation with the Metropolitan Washington Council of Governments. DATA coordinates with Metro on expanding transit service and with local jurisdictions on land use, transit and general transportation planning issues. DATA supports extending rail transit to Dulles.

o Fairfax County: Owner of the Fairfax Connector and contractor for Reston Internal Bus System [RIBS]. The County and Metro are presently examining the expansion of public transportation service in this corridor. Decisions will be influenced by the provisions of the soon to be enacted Americans with Disabilities and Clean Air Acts. The County supplies the operating subsidy for Metro service within its boundaries. Fairfax County hotels in the Dulles and Route 28 corridors also have excess weekend capacity and would benefit from improved public transit access.

o Loudoun County: Recently joined NVTC. Loudoun County's economic development objectives include eventually establishing rail transit in the Dulles corridor. In the meantime, the County is actively exploring new park-and-ride lots.

o Metropolitan Washington Area Transit Authority [Metro]: Owner/operator of the National Capital Region's handicapped accessible fixed route bus service. Metro operates several routes in the Dulles corridor, principally between Reston/Herndon/Dulles locations and the West Falls Church Metrorail station. Metrobus operates service on a three to one ratio of peak period to base and Saturday service. Weekdays, between the hours of 9:00 A.M. and 3:30 P.M., Metrobus potentially would have as many as 100 buses available in off-peak hours, some of which could be used to serve trips to the Extension. Metrorail is especially attractive for the Extension service in that the rail system is often regarded as a tourist attraction in its own right. Marketing the combined Metrorail and bus trip to the Extension will be most effective if built upon successful efforts such as the family/tourist pass and the Wolf Trap service.

o Northern Virginia Transportation Commission [NVTC]: Multi-jurisdictional transit contract and finance agency. NVTC's efforts to establish commuter rail service have created a contract model for the creation and financing of substantial new transit improvements. For example, NVTC issued $80 million of tax-free bonds to pay for commuter rail rolling stock and other expenses. The Commission's membership includes many of the relevant state and local jurisdictions and would provide a forum for operating management decisions.

o Route 28 Tax District: A special tax district, encompassing land in Fairfax and Loudoun Counties, established to finance improvements to Route 28. Tax revenues from property and development within the district are not yet sufficient to pay debt service, but the growth in revenues is exceeding the initial projections. At such time as revenues exceed debt service, the tax district revenues offer a potential source for funding the second phase of construction (10 interchanges and eight-laning Route 28) or other capacity enhancing treatment. The initial bond issue to finance the Route 28 improvements did not require the full authorization. Statutory authority would allow for approximately $20 million in additional bonds to be issued.

o Smithsonian Institution: Owner of the museum sites on the Mall and the National Air and Space Museum Extension proposed for Dulles Airport property at Gate 4. Smithsonian Regents have determined the Dulles location of the Extension on the basis of improved access to the Extension, particularly for the entire Washington, D.C. community. Marketing a metropolitan-based trip to the Extension would require effective cooperation between Metro and the Dulles Corridor service provider. The Smithsonian Regents have adopted a policy favoring rail transit access to the Extension.

o Virginia Department of Transportation [VDOT]: Operator of Routes 28 and 50 and the Dulles Toll Road. Toll road revenues now exceed required debt service and maintenance expenses. Although VDOT has agreed to consider bonding for intersection improvements, excess toll revenues have been used on a pay-as-you-go basis for improvements to the Toll Road. The Commonwealth's Secretary of Transportation has indicated willingness to initially commit 15% of excess revenues to transit in the corridor, and perhaps more in the future. VDOT is also the manager of the Commonwealth's Mass Transit Trust Fund and is likely to be the manager of a FY 1992 construction program funded with Pledge Bond proceeds, if a proposed statewide referendum is passed in November 1990.

o Metropolitan Washington Airports Authority [MWAA]: Lessee and operator of Washington Dulles International Airport, and the Dulles Airport Access Road corridor [including the land under the Toll Road and Route 28, and the median which may be the site of a future rail system]. MWAA also owns and operates the Washington Flyer, a 10-bus system (plus 10 vans and 5 minibuses) to provide express access between Dulles Airport and downtown destinations. The Washington Flyer serves the Dulles Corridor with trips originating both downtown and at the West Falls Church [WFC] Metrorail station, as well as new service from Montgomery County,

Maryland. Current service is not well patronized and is operating at a substantial loss of almost two million dollars annually, although it provides airport access for those who may not have another means of travel. Early estimates suggested that up to ten percent of airport passengers [as well as employees] would use the service. The Washington Flyer is not handicapped accessible, and has relatively high fares, although earlier problems with unreliable service and poorly performing buses have been corrected after MWAA took over operations. An element of this review will consider combining the WFC/Dulles routes and all management of the Washington Flyer service with that proposed to serve the Extension. Such a combination might require additional buses to avoid reducing the frequency of existing airport service while covering the lengthened routes necessary to capture the Extension market. Trips at West Falls Church are made every half hour (15 minutes during peak hours) using vans. The Airports Authority is in favor of eventual rail service in the Dulles Corridor to the Airport.

As mentioned above, several options are available to fund one or more variations of Extension transit service. These include:

o Federal Grants: As an example, Fairfax County is seeking to complete by December 31, 1990 an application for a $72 million Suburban Mobility Grant from the Urban Mass Transportation Administration. The grant is for capital costs associated with improved commuter transit service in the Dulles Corridor (e.g. park-and-ride lots, express buses). The local matching share needed is $36 million, a portion of which may come from developer proffers. Problems with Federal requirements (e.g. labor protection) may make it difficult for Fairfax County to include new buses in the grant, although other potential applicants (e.g. WMATA, NVTC) may be able to meet such requirements. While High Occupancy Vehicle lanes are being built on I-66, the region might seek Federal maintenance of traffic funds that could purchase buses. Federal demonstration funds could also be sought, with no guarantee of success. Operating additional miles of transit service would qualify the region for a greater amount of Section 9 formula assistance from the Urban Mass Transportation Administration, which also could be available to help fund the purchase of new buses (although the increased formula assistance is received with a two-year lag from initiation of new service and its continuation in the face of strong Presidential opposition is in doubt).

o State Grants: Northern Virginia receives all the available state transit operating assistance to which it is entitled under existing state programs. While additional state capital assistance theoretically may be available, in practice heavy statewide needs are steadily forcing the local matching ratio up (the level for FY 1991 is 50 percent). Statewide pledge bonds, if approved in the November, 1990 statewide referendum, provide another potential source for new buses or intersection improvements that would aid access to the Extension. VDOT also has available a modest ($200,000 annually) experimental program from which a one-time grant of $50,000 or $100,000 might be made for a specific, innovative feature of new service to the Extension.

o Tax Assessment Districts: The Route 28 District may generate some excess funds which will be applied to Phase II needs. Also, some bonding authority remains. Conceivably these funds could support intersection improvements at Barnsfield Road. New tax districts in which landowners agree to pay annual assessments to support rail service in the Dulles Corridor or other public transit improvements are possible but perhaps not likely in the current political climate.

o Regional Aid: NVTC negotiated a Master Agreement among several local jurisdictions in which various funding sources were combined to support new commuter rail service. In that case, a new transportation district commission (Potomac and Rappahannock Transportation Commission) was formed to take advantage of a new regional motor fuels tax that is funding the entire local share for commuter rail of the members of the new district. A similar cooperative regional enterprise might be established to fund improved commuter bus service in the Dulles Corridor.

o Private Funding: If improved access is provided to hotels and employees in the Dulles Corridor, some private contributions should be expected, particularly if these firms are able to discontinue vans they otherwise would be operating.

o Excess Dulles Toll Revenues: An agreement being negotiated with MWAA, Fairfax County, and VDOT for ratification by the Commonwealth Transportation Board would specify initially 15 percent of excess toll collections in the Dulles Toll Road (currently about $12 million in total) for rail-related public transit purposes in the Dulles Corridor. It is believed that new bus service to the Extension would qualify for a portion of these funds, and that the broader the service being provided (e.g. commuters plus museum visitors) the more substantial a portion of such aid might be forthcoming.

o Local Subsidies: Local governments already spend substantial amounts for existing transit services, and the region as a whole faces a $7 billion shortfall to complete highway and transit projects needed to hold the line on congestion through the year 2010. Nonetheless, if greater efficiencies in capital, management and operations can be achieved by a coordinated response to commuting and museum access needs in the Dulles Corridor, local governments may see the growth in expected transit subsidies moderate. For example, Fairfax County may expand its Fairfax Connector service in western Fairfax or expand Metrobus service there to serve commuters. If in combination with new bus service to the Extension economies were realized (or access to additional revenue sources achieved), the local funds required for this expansion may be reduced.

o MWAA: The Airports Authority is reported to be spending up to $2 million annually for Washington Flyer service in excess of fare revenues. If combined service serves its constituents effectively and relieves it of all or a portion of this financial burden, the Authority could be asked to contribute a portion of its savings to fund the combined service.

o WMATA: Limited marketing funds and perhaps a one-time grant from the proposed Enterprise Fund might be received if WMATA is selected as the operator.

o Smithsonian: Only limited financial assistance for marketing can realistically be expected. Concessions from restaurants and parking (at up to $5 per car) are budgeted for other purposes.

o Passenger Revenues: A one-way fare of about $3 was assumed. Typically transit fares are inelastic (more revenue is realized by raising fares despite reduced ridership). Since the primary objective here is to provide transit access to the Extension, not to maximize revenues, presumably the fares should be held to the assumed level, with various special promotions and passes offered to lure even more riders.

o Non-Passenger Revenues: If dedicated vehicles are used, advertising revenue is a possibility, although this may conflict with the concept of "theme" buses enhancing the museum experience. Sales of advertising on tickets and passes may also be considered.

Although there is an impressive array of possible revenue sources, the competing demands for financing are great. The greatest opportunity to capture funding will occur if a compelling package can be put together that offers real economies to the region while providing access to the Extension, and perhaps also serves related commuting needs. In that case, revenues from several sources could be combined to fund the entire package, including new service to the Extension.

Whatever package is adopted, the purchase of new buses should be held to a minimum, since ridership levels are uncertain and off-peak capacity exists among several existing public bus operators.

APPENDIX III

TRANSPORTATION MANAGEMENT ASSOCIATIONS

Transportation Management Associations: Coordination Facilitators

Transportation Management Associations (TMA's) form a new institutional mechanism that can be used to coordinate the needs of activity centers with ridesharing and transit services. The Reston Timed Transfer Center is a prime example of how TMA's can work with local governments and regional agencies. Staff from Fairfax County, NVTC and WMATA worked with Reston's TMA (Reston Town Center Joint Committee) to realign bus routes to provide the area with better service (see Jurisdictional section--Fairfax County for more information). In addition, NVTC worked with the TMA for the Ballston area in opening the Ballston Transit store. Office space and other in-kind grants were provided to help make the store a success. Attached is a listing of TMA's.

Transportation Management Associations

Ballston Area Transportation Association
c/o Ballston Partnership
Mr. William Demas
Chairman
4200 N. 9th Street
Arlington, Virginia 22203
(703) 528-3541

Dulles Area Transportation Association
Dr. Sid Steele
Executive Director
Suite 138
13873 Park Center Road
Herndon, Virginia 22071
(703) 689-9598

Reston Town Center Joint Committee
Mr. Karl Ingebritsen
Transportation Manager
Suite 1400
11800 Sunrise Valley Drive
Reston, Virginia 22091
(703) 620-3015

TEMPO
Ms. Cynthia Fondriest
Executive Director
1725 Duke Street
Suite 660
Alexandria, Virginia 22314
(703) 519-8970

TYTRAN
Mr. Pat McEvoy
President
P.O. Box 3264
Tysons Corner, Virginia 22103
(703) 821-3000

APPENDIX IV

REGIONAL RIDESHARING RESOURCES

Regional Ridesharing Resources

The Ride Finders Network has been working since 1974 to match the region's commuters who wish to join car or van pools. This coordinating program, which is operated by the Metropolitan Washington Council of Governments, works by linking the ridesharing programs operated by the City of Alexandria, Arlington County, Fairfax County, Loudoun County and various other entities throughout the greater metropolitan region into one computer network. Of the 9,700 commuters in the system, one third come from the jurisdictions listed above.

REGIONAL RIDESHARING PROGRAMS

Local Government	Ride Finders Network Metropolitan Washington Council of Governments 777 North Capitol Street, Ste. 300 Washington, DC 20002 (202) 962-3333 (business) 783-POOL (rideshare info)
Federal Facility: National Capital Region	Mr. Michael Ziskind Mr. Michael Jones General Services Administration 7th and D Streets, S.W. Room 2048 WpBOC Washington, DC 20407 (202) 472-4492
General Information	Mr. Wayne Berman US Department of Transportation, FHWA Office of Traffic Operations Room 3101, HTO-34 400 7th Street, S.W. Washington, DC 20590 (202) 659-0602

FEDERAL RIDESHARING PROGRAMS

Housing and Urban Development	Ms. Marion Jones Mail & Transportation Specialist Department of Housing & Urban Dev. 451 7th Street, S.W., Room 5176 Washington, DC 20410-3700 (202) 755-5703
Pentagon	Ms. Delilah Young Ridesharing Coordinator P.O. Box 46301 Washington, DC 20050-6301 (202) 697-6251
Nuclear Regulatory Commission	Ms. Renea Bailey Administrative Services Coordinator US Nuclear Regulatory Commission Washington, DC 20555 (301) 492-0251

VIRGINIA RIDESHARING PROGRAMS

Statewide	Ms. Viktoria Fox/Lauren L. Giannotti Virginia Ridesharing Program Rail & Public Transportation Division Virginia Department of Transportation 1221 East Broad Street Richmond, VA 23219 (804) 786-8089
Alexandria	Mr. Stephen R. Hayes Ridesharing Coordinator Alexandria Ridesharing Service Office of Transit Services P.O. Box 178 City Hall Alexandria, VA 22313 (703) 838-3800
Arlington County	Ms. Robin Bard Ridesharing Coordinator Ballston Transit Store 4200 N. 9th Street Arlington, VA 22203 (703) 528-3541
Fairfax County	Ms. Dorothy Cousineau Ridesharing Coordinator Fairfax County RIDESOURCES Office of Transportation 4050 Legato Road Fairfax, VA 22033 (703) 246-1100 (business) (703) 246-1111 (rideshare info)
Lord Fairfax Planning District: Clarke, Frederick, Page, Shenandoah, and Warren Cos.; City of Winchester; and Towns of Luray and Front Royal	Mr. Rob Kinsley Associate Director Planning District Commission 103 East 6th Street Front Royal, VA 22630 (703) 635-4146
Loudoun County	Ms. Lynne Roberts Ridesharing Coordinator Loudoun County 39 Catoctin Circle Leesburg, VA 22075 (703) 478-1850

VIRGINIA RIDESHARING PROGRAMS
(continued)

Prince William County	Ms. Lauretta Ruest Project Director Commuteride Prince William County 1 County Complex Court Prince William, VA 22192 (703) 335-7009 (business) Eve. & Weekends: (703) 369-7665 From Washington: 631-1703 x6846
Rappahannock Area: Caroline, King George, Spotsylvania, and Stafford Counties, and City of Fredericksburg	Ms. Diana Utz Rappahannock Area Development Commission (RADCO) P.O. Box 863 Fredericksburg, VA 22404 (703) 373-2890 (business) (703) 373-7665 (rideshare info)
Rappahannock-Rapidan Planning District: Culpepper, Fauquier, Madison, Orange and Rappahannock Counties; and Towns of Culpepper, Gordonsville, Orange and Warrenton	Ms. Melody Miller/Ms. Tersea Hurlock Ridesharing Coordinator Rappahannock-Rapidan Commuter Services 121 West Locust Street Culpepper, VA 22701 (703) 825-2739

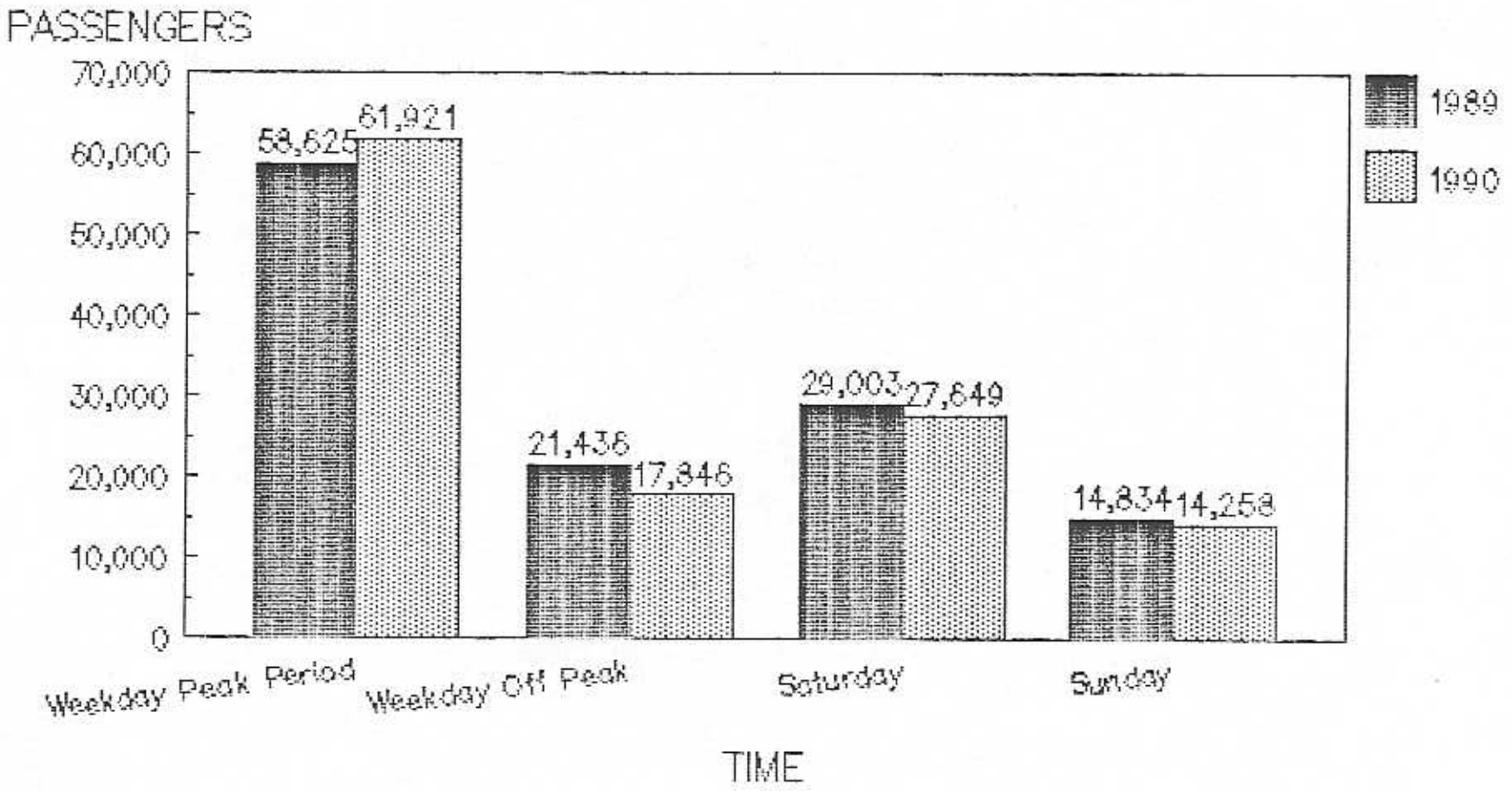
APPENDIX V

PUBLIC TRANSIT DATA

PUBLIC TRANSIT SYSTEMS OPERATING
IN NORTHERN VIRGINIA
-- 1990 --

	# VEHICLES	AVG. DAILY BOARDINGS	FY'91 OPERATING BUDGET
METRO BUS	408	79,767	70,088,378
METRO RAIL	198	123,068	76,106,348
FAIRFAX CONNECTOR	55	8,500	4,125,160
ALEXANDRIA'S DASH	19	4,682	1,769,000
CITY OF FAIRFAX CUE	14	2,780	1,353,790
RESTON RIBS	2	235	253,000
TYSONS SHUTTLE	2	290	83,000
CRYSTAL CITY TROLLEY	3	650	303,425

VIRGINIA METROBUS
COMPARISON OF 1989 & 1990 RIDERSHIP



Source: WMATA, Office of Planning
"Metrobus Service Productivity Report".

Alexandria

1. DASH: 370-DASH

2. DOT: Specialized Transportation for the Disabled 838-3800

3. MetroTaxi:

Diamond Cab	549-6200
Airport/White Top/Silver Cab	683-4004
Columbus Cab	684-7373
National Cab	548-7415
Yellow Cab of Alexandria	549-2500

4. Senior Taxi: 836-4414

5. Transportation Planning: 838-3800

   Transportation Demand Management

   Transportation Management Plans (Ordinance #3024)

   Traffic Modeling

DASH TRANSIT MAP

Route Legend

- A.T. 2 — Midday Extension
- A.T. 5 — Midday Extension
- A.T. 3 — Rush Hour Extension
- Midday Extension
- A.T. 4 — Rush Hour Extension
- Midday Extension
- One Way Travel Only
- Metrorail Stations
- Terminal Point

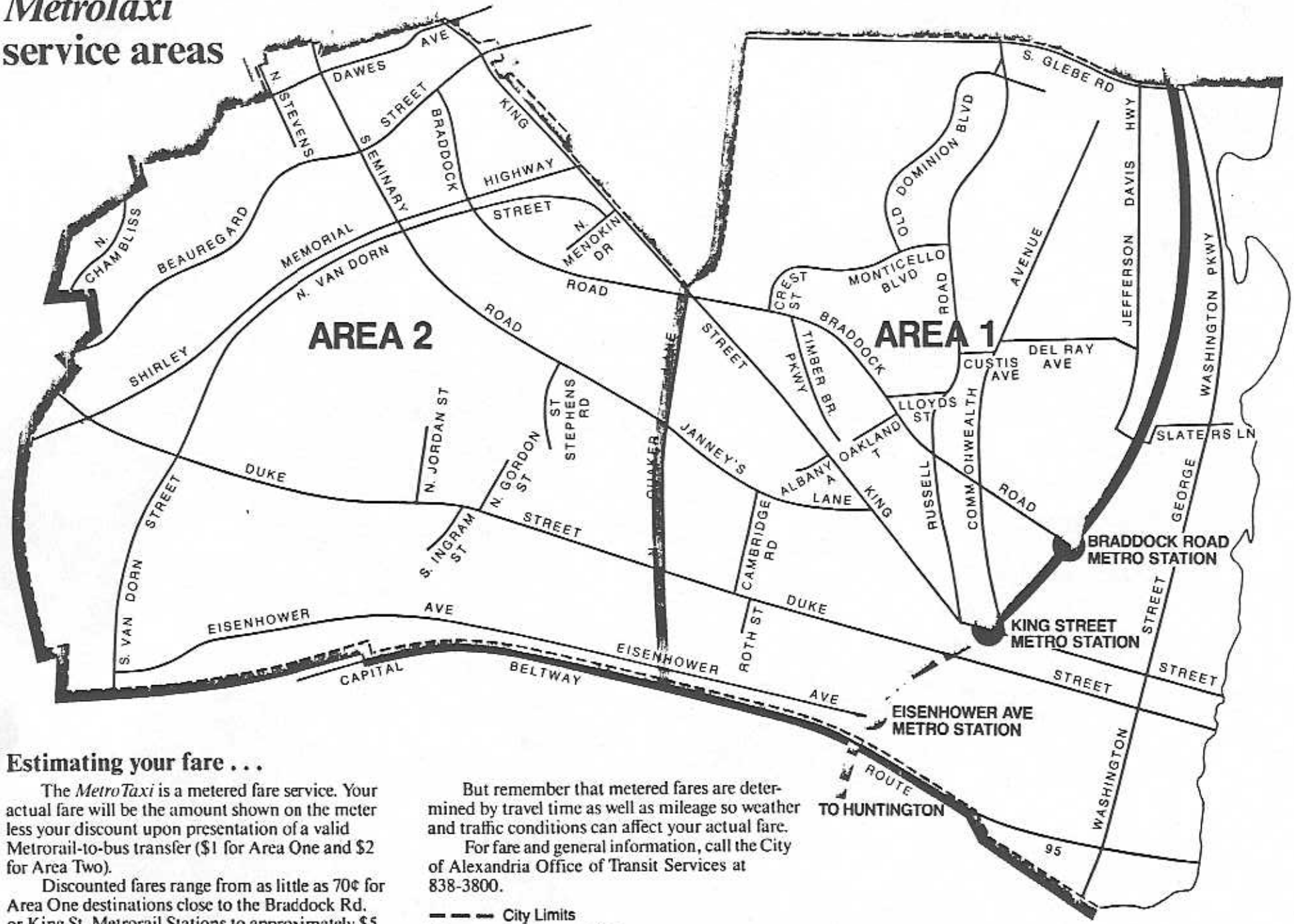
HOLIDAY SCHEDULES

New Year's Day — No Service
Martin L. King, Jr.'s Birthday — Saturday Service
George Washington's Birthday — Saturday Service
Memorial Day — Sunday Service
Independence Day — Sunday Service
Labor Day — Sunday Service
Columbus Day — Saturday Service
Thanksgiving Day — No Service
Christmas Day — No Service

REGULATIONS

DASH passengers are asked to observe rules which prohibit smoking, eating or drinking on the bus. Drivers may refuse service to anyone not observing rules or whose behavior is hazardous to vehicle or passenger safety.

MetroTaxi service areas



Estimating your fare . . .

The *MetroTaxi* is a metered fare service. Your actual fare will be the amount shown on the meter less your discount upon presentation of a valid Metrorail-to-bus transfer ($1 for Area One and $2 for Area Two).

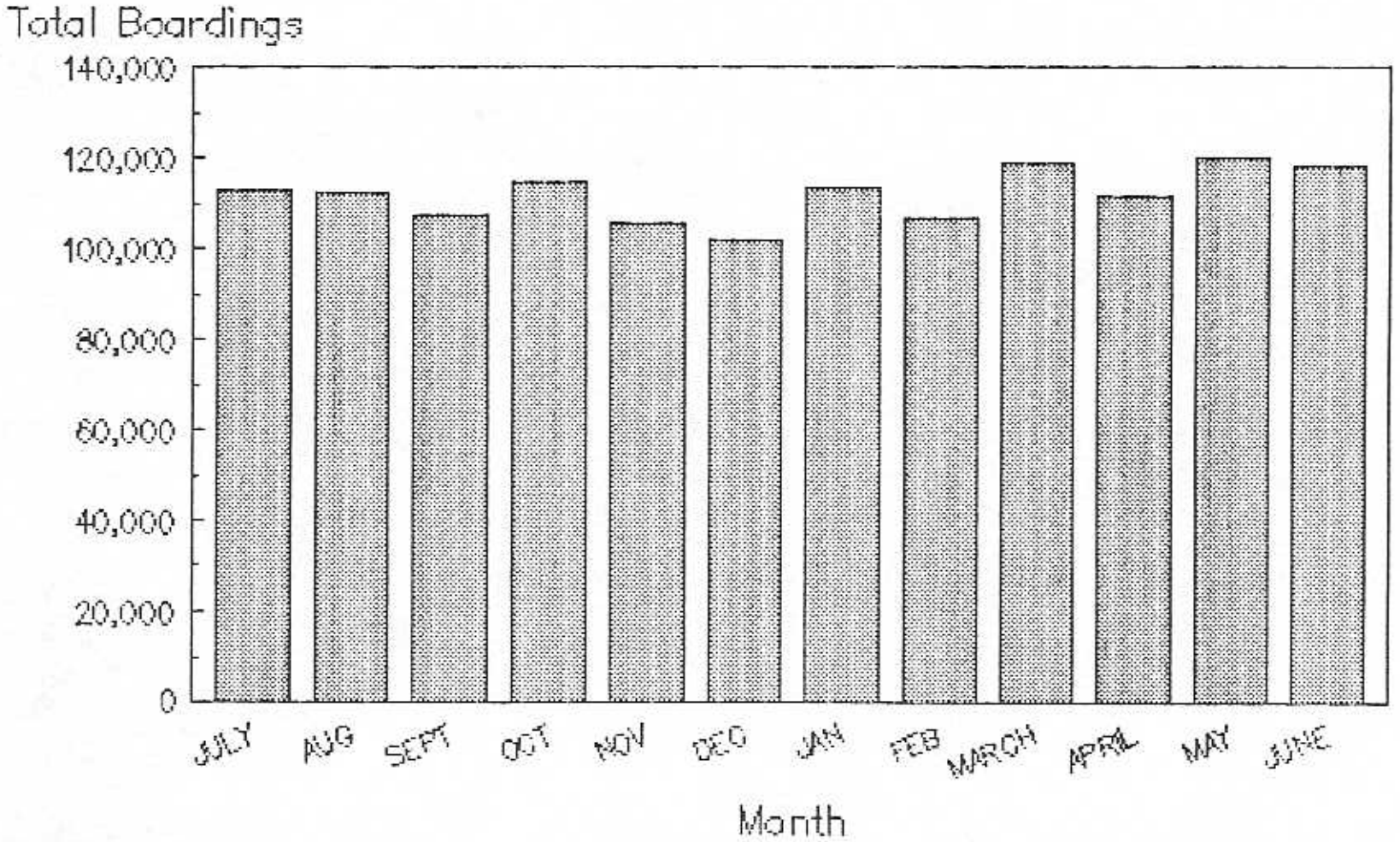
Discounted fares range from as little as 70¢ for Area One destinations close to the Braddock Rd. or King St. Metrorail Stations to approximately $5 or more for more distant destinations in the West End of Area Two.

But remember that metered fares are determined by travel time as well as mileage so weather and traffic conditions can affect your actual fare.

For fare and general information, call the City of Alexandria Office of Transit Services at 838-3800.

— — — City Limits
Area Boundaries
Streets

DASH
Ridership for FY 1990



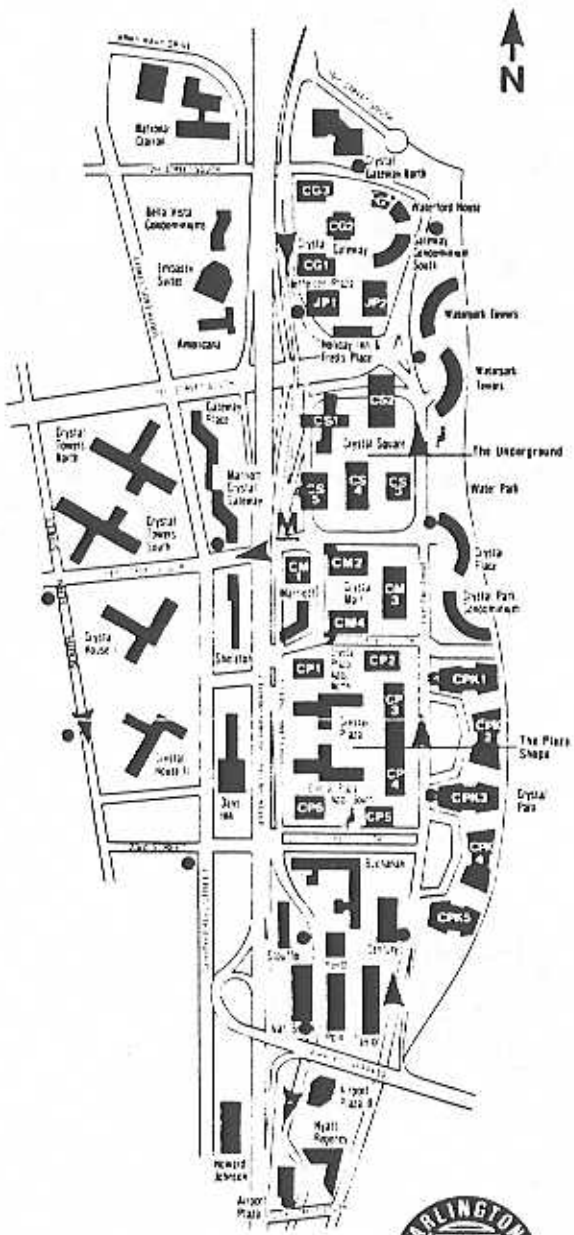
SOURCE: DASH

Arlington

1.	Crystal City Trolley:	358-3575
2.	SST:	524-3322
3.	Farewheels:	358-4786

Crystal City
Arlington, Va.

Arlington County
Department
of
Public Works



ARLINGTON TROLLEY

- Trolley Hours
  6:30 a.m.-6:30 p.m. Monday-Friday
- 25c exact change or token required
- Complete loop takes 15 minutes
- 8-minute intervals

Trolley Route

Handicapped Access to Mall

JUNE 1989 EDITION

Advanced
Technology, Inc.
620-8328

THE
CENTURY
BUILDING
920-7677

DAYS INN
920-8600

Polk & Taylor
Buildings
920-1423

Fred's Place
the place for ribs
at the Holiday Inn
521-1600

Holiday Inn
521-1600

CRYSTAL GATEWAY Marriott
920-3230

CRYSTAL CITY Marriott
521-5500

Jefferson
Plaza
920-5000

THE UNDERGROUND
AT CRYSTAL CITY
Shopping Excitement
Down Under

Chesapeake Grill
at the
HYATT REGENCY CRYSTAL CITY
892-4699

STOUFFER
CONCOURSE HOTEL
979-6800

Heitman
Virginia
Management Inc.
521-1821

SMITH
Charles E. Smith
Companies
920-8500

Airport
Plaza
Associates
785-9191

Sheraton
Crystal City Hotel
The hospitality people of ITT
486-1111

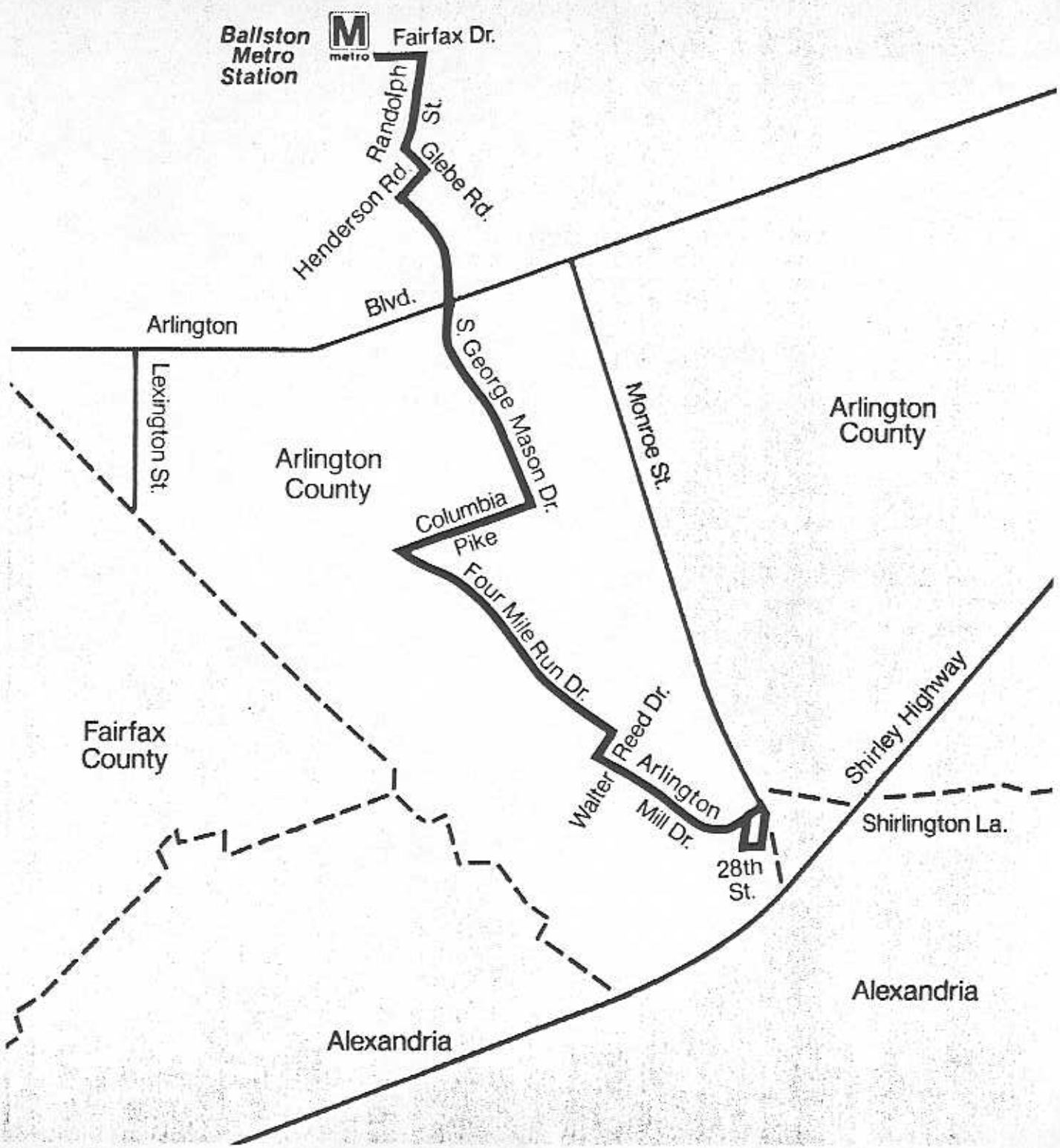
PLAZA SHOPS
CRYSTAL
CITY

The Arlington Subway Shuttle Taxi

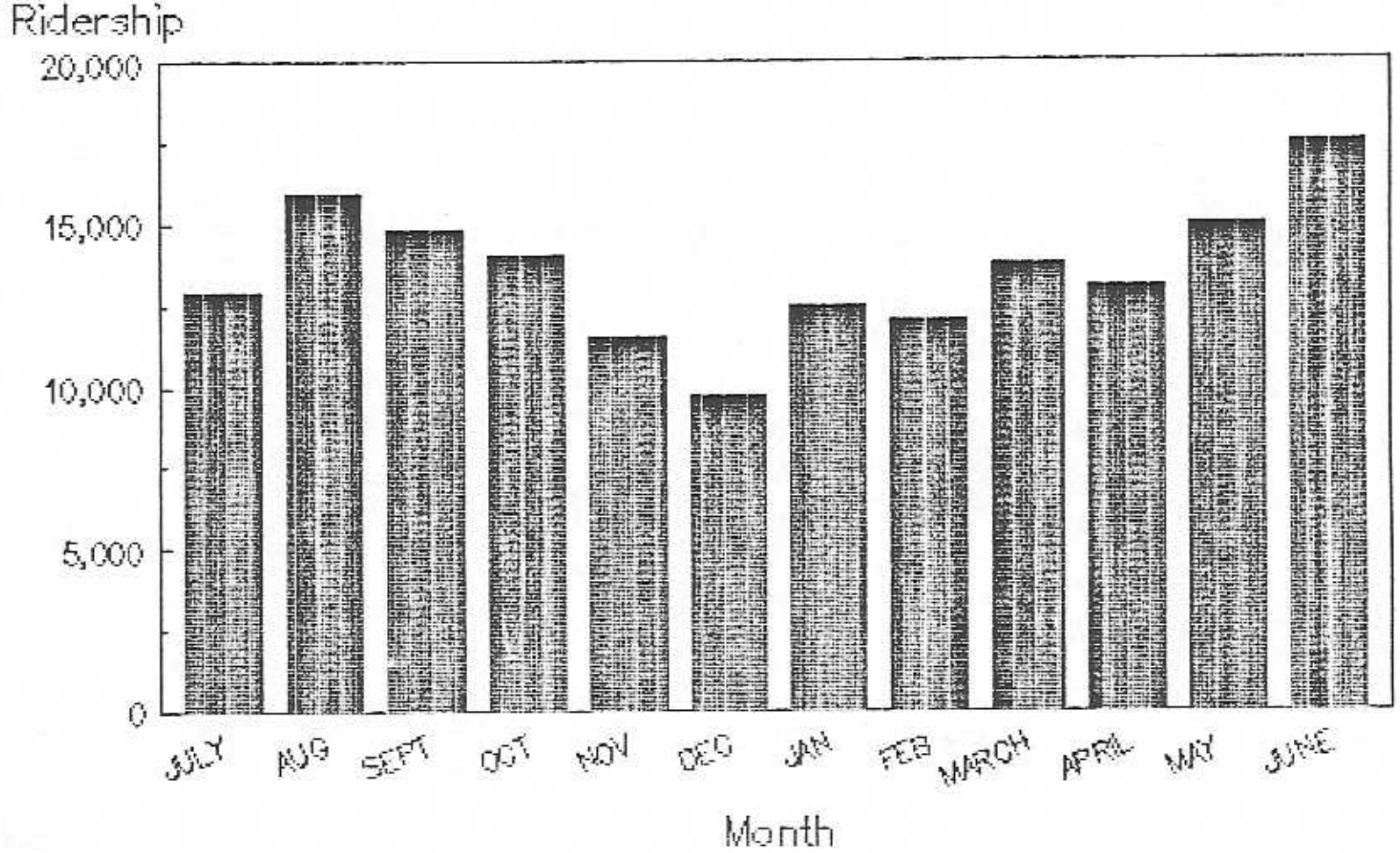
Service Area

The Arlington Subway Shuttle Taxi is designed to provide weeknight afterhours and Saturday to-the-door service for South Arlington residents living within normal walking distance of the Metrobus Route #22. The service area, as shown on the map, includes an area on both sides of Metrobus Route 22.

If you have any problems determining whether your destination or departure point is in the SST service area, call the Arlington Yellow Cab Co. at 527-2222.



CRYSTAL CITY TROLLEY
Ridership for FY 1990

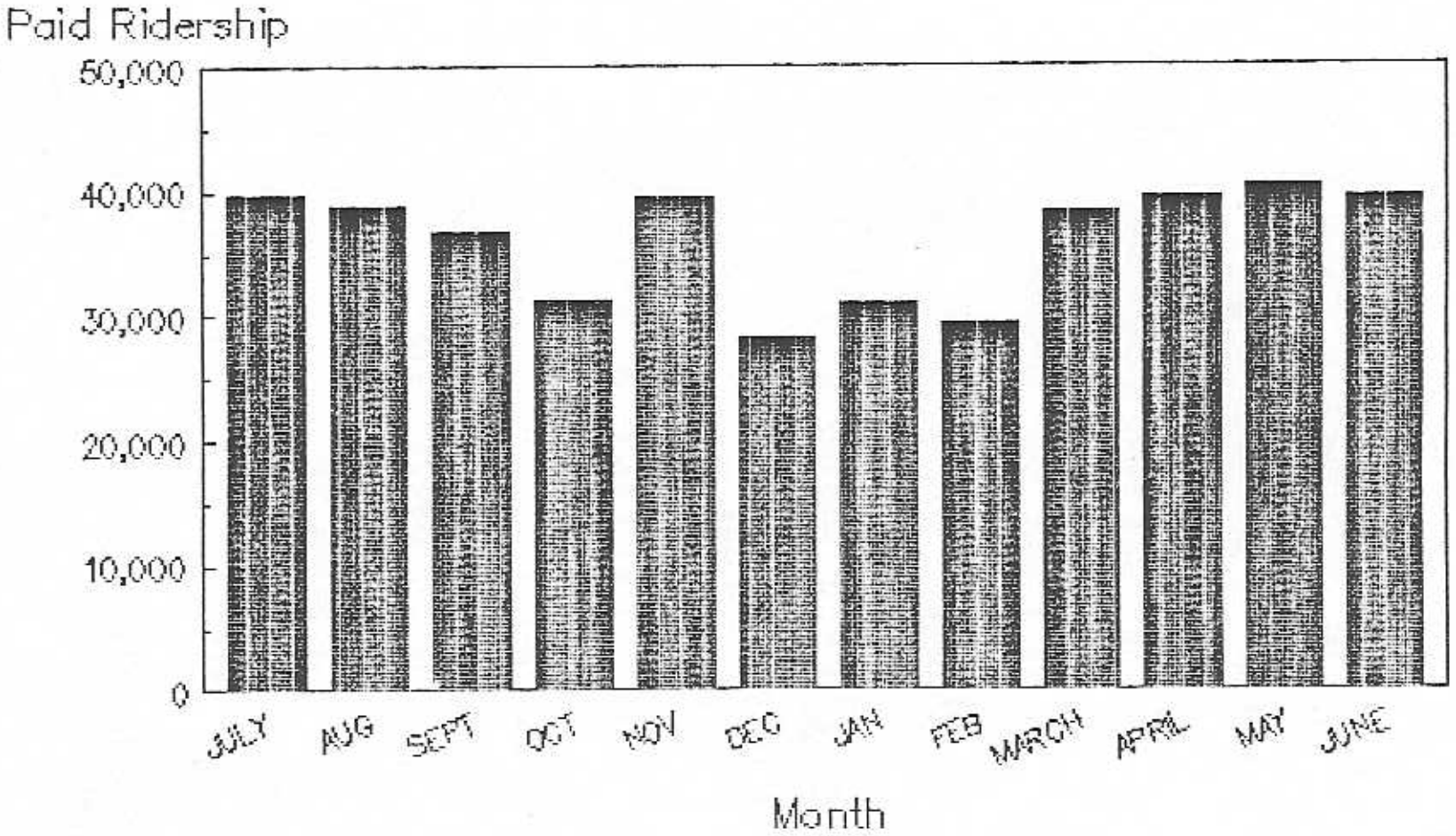


SOURCE: Arlington County, Dept. of Public Works

City of Fairfax

1.	CUE bus:	385-7859
2.	Transit Services Information:	385-7855

CUE BUS SYSTEM
Paid Ridership for FY 1990



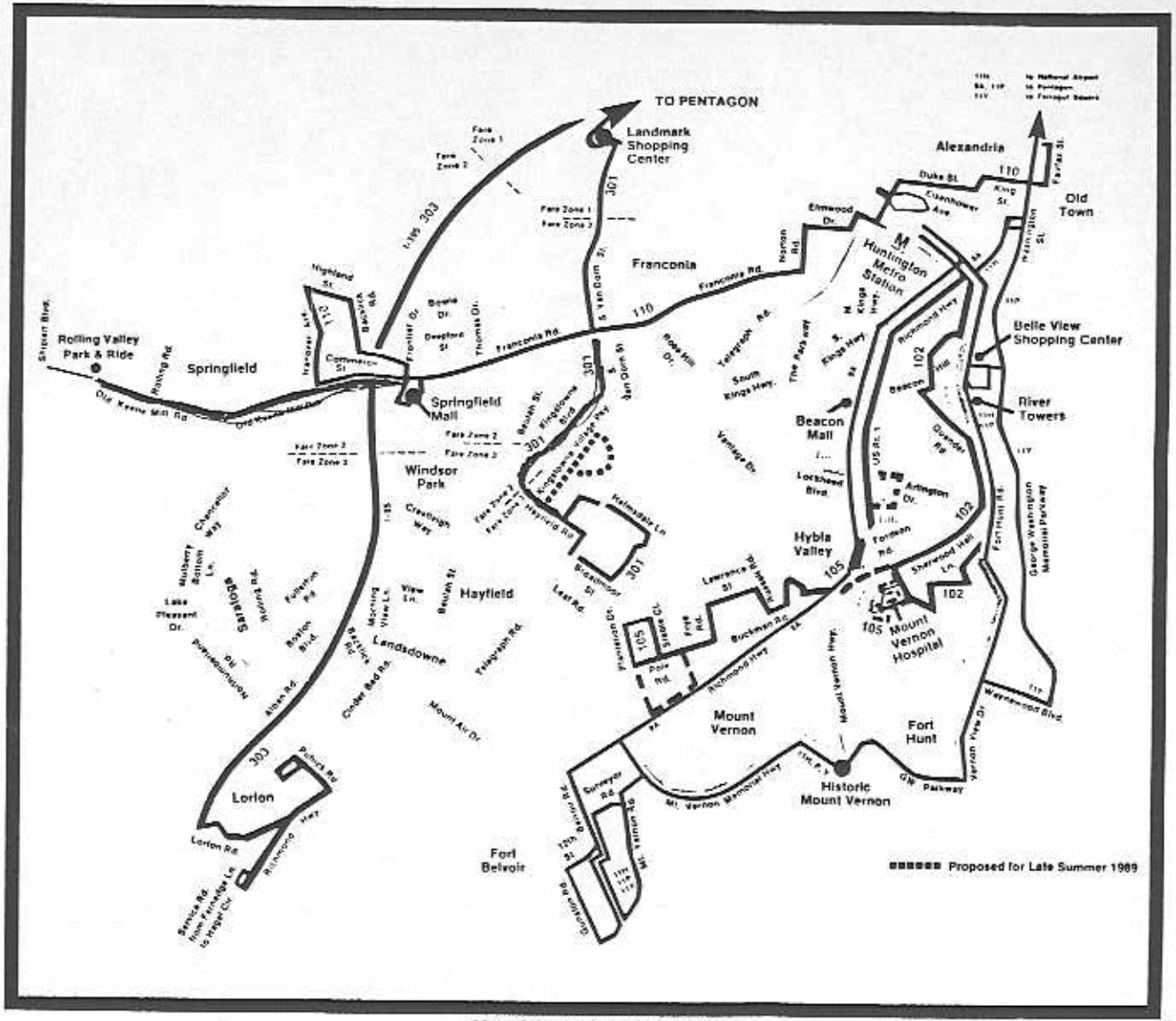
SOURCE: City of Fairfax, Office of Transit & Utilities

Fairfax County

1.	Fairfax Connector:	339-7200
2.	Tysons Shuttle:	548-4545
3.	RIBS:	548-4545

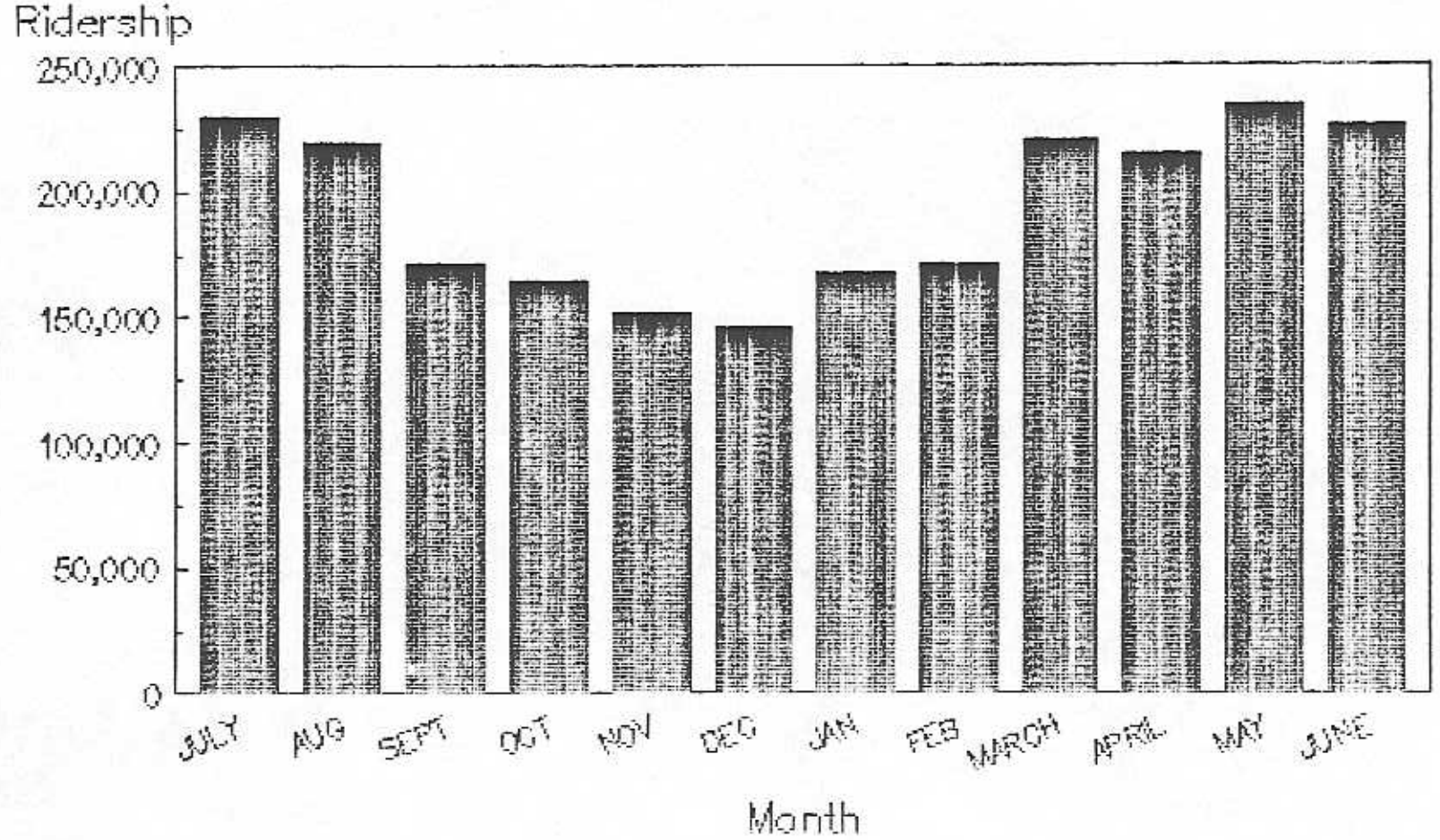
Fairfax Connector SYSTEM MAP

ROUTE NUMBER	AREA OF SERVICE
101	Mt. Vernon to Huntington via Fort Hunt Road
102	Hollin Hall to Huntington via Sherwood Hall Lane and Quander Road
103/ 104	Bucknell Manor to Huntington Loop
105	Woodlawn to Huntington via Richmond Highway
106	Mount Vernon Hospital to Huntington via Mt. Vernon Square and Richmond Highway
107	Mt. Vernon to Huntington via Richmond Highway
108	Hayfield to Huntington via Virginia Hills
109	Springfield Mall to Huntington via Rose Hill Drive
110	Springfield to Alexandria via Huntington and Franconia Road
301	Hayfield to Pentagon via Kingstowne
302	Beulah Street to Pentagon via Franconia Road
303	Lorton to Pentagon
304	Saratoga to Pentagon



Metrobus routes appear in black

FAIRFAX CONNECTOR
Ridership for FY 1990



Source: Fairfax County, Office of Transportation

Tysons Shuttle Holiday Schedule

Labor Day	No Service
Columbus Day	Bus "A" Only
Veterans' Day	Bus "A" Only
Thanksgiving Day	No Service
Christmas Day	No Service
New Year's Day	No Service
Martin Luther King Day	Bus "A" Only
President's Day	Bus "A" Only
Memorial Day	No Service
Independence Day	No Service

Tysons Shuttle Snow Emergency Plan

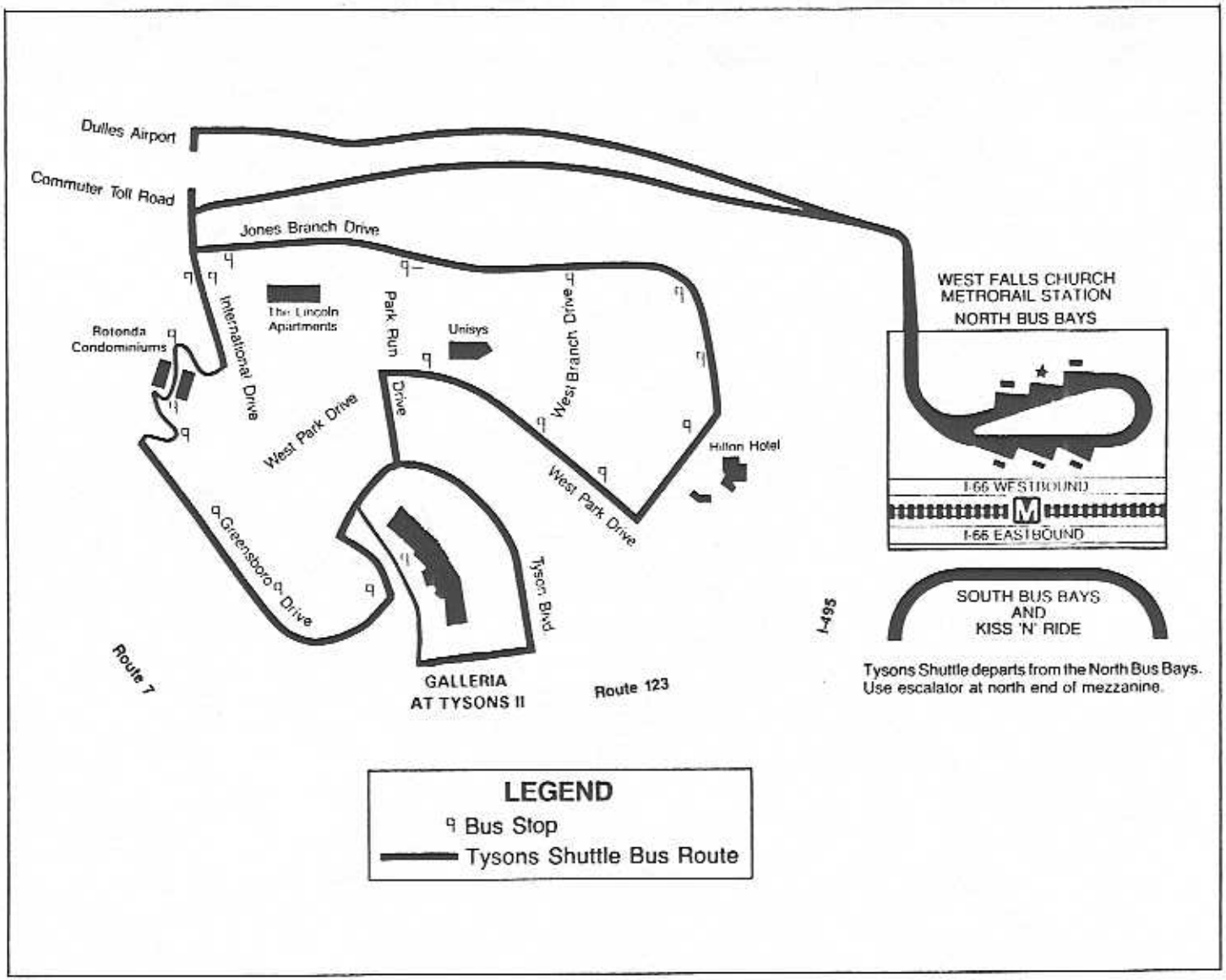
The Tysons Shuttle will conform to the regional snow emergency plan and adjust service during inclement weather, triggered by announcement of the Federal Government, bus service will be established as soon as possible to accommodate early releases and at least one hour prior to delayed openings.

Wheelchair Lift Service

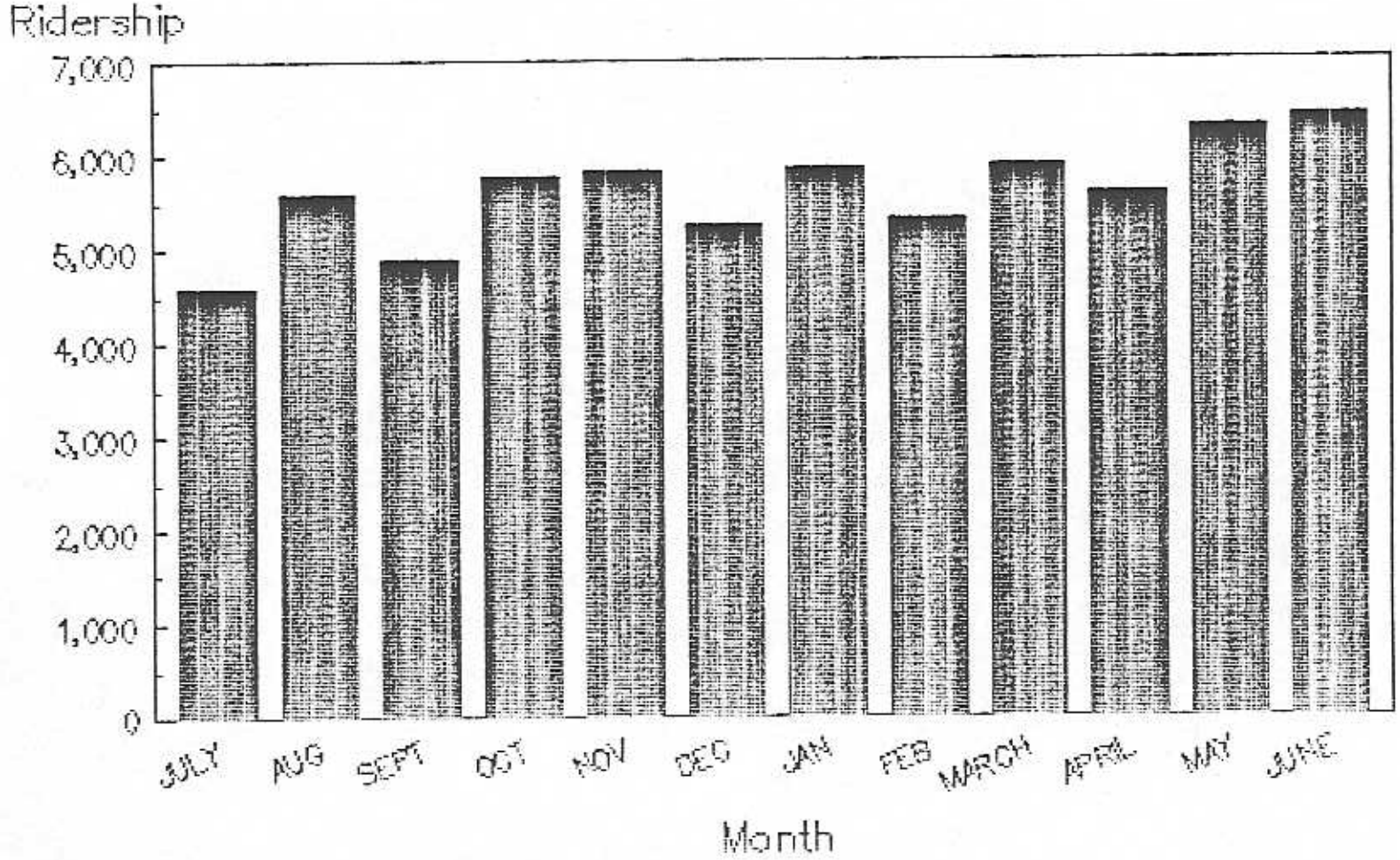
To schedule a wheelchair lift-equipped bus, call 548-4545 24 hours in advance.

Operator

Transportation Management Service, Inc.
901 N. Washington Street, Suite 401
Alexandria, Virginia 22314
Call (703) 548-4545 for customer information.



TYSONS SHUTTLE
Ridership for FY 1990



SOURCE: Fairfax County, Office of Transportation

RIBS

WEEKDAY SCHEDULE

(Subject to change without notice)

(Read Top to Bottom)

MAP KEY	COUNTERCLOCKWISE – BLUE									
1	Lake Anne Center		7:20 AM		11:30 AM	12:45 PM	2:00 PM	3:15 PM	4:30 PM	5:45 PM
2	Cedar Ridge		7:25		11:35	12:50	2:05	3:20	4:35	5:50
3	Fellowship House				11:43	12:58	2:13	3:28	4:43	5:58
4	Hechingers				11:47	1:02	2:17	3:32	4:47	6:02
5	Library				11:57	1:12	2:27	3:42	4:57	6:12
6	Sunrise Valley @ USGS Entrance				12:06 PM	1:21	2:36	3:51	♦5:06	6:21
7	The Greens	6:46 AM		10:56 AM	12:09	1:24	2:39	3:54	5:09	6:24
8	Hunter's Woods Village Center	6:50		11:00	12:15	1:30	2:45	4:00	5:15	6:30
9	Soapstone & Glade	6:53		11:03	12:18	1:33	2:48	4:03	5:18	6:33
11	South Lakes Village Center	7:01		11:11	12:26	1:41	2:56	4:11	5:26	6:41
13	Tall Oaks Village Center	7:11		11:21	12:36	1:51	3:06	4:21	5:36	6:51
14	Lake Anne School	7:16		11:26	12:41	1:56	3:11	4:26	5:41	6:56
15	Fellowship House	7:18		11:28	12:43	1:58	3:13	4:28	5:43	6:58
1	Lake Anne Center	7:20		11:30	12:45	2:00	3:15	4:30	5:45	7:00

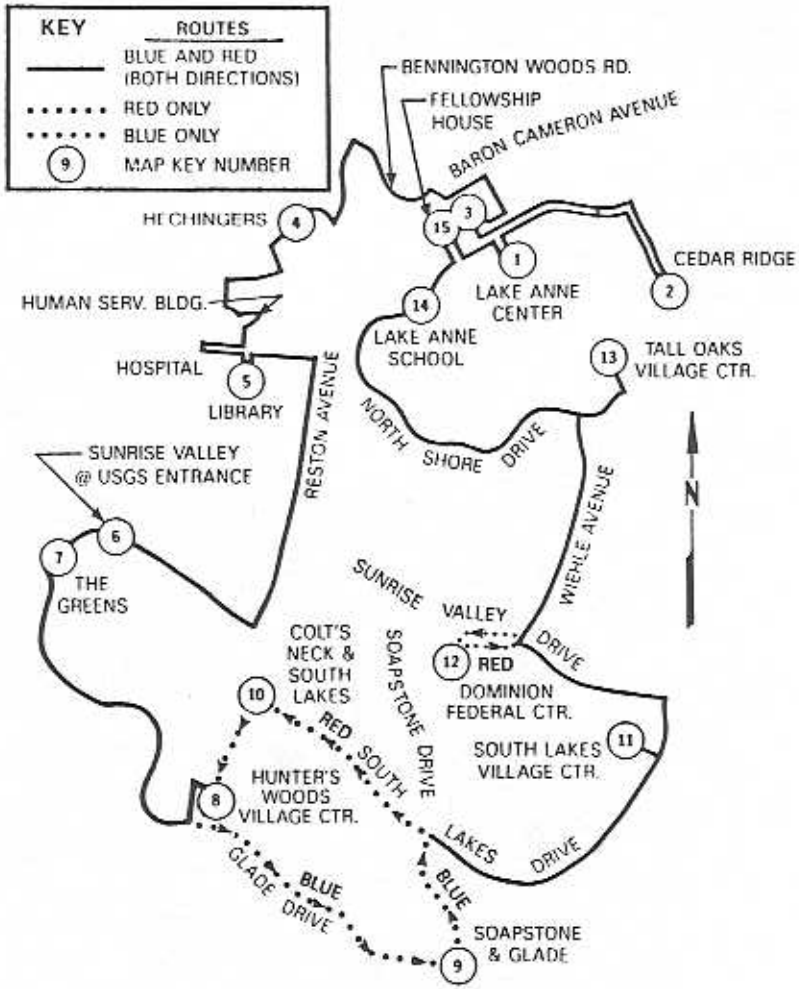
	CLOCKWISE - RED										
1	Lake Anne Center	*7:00 AM	7:30 AM	8:15 AM	9:30 AM	10:45 AM	12:00 PM	1:15 PM	2:30 PM	3:45 PM	5:00 PM
15	Fellowship House	7:02	7:32	8:17	9:32	10:47	12:02	1:17	2:32	3:47	5:02
14	Lake Anne School	7:04	7:34	8:19	9:34	10:49	12:04	1:19	2:34	3:49	5:04
13	Tall Oaks Village Center	7:09	7:39	8:24	9:39	10:54	12:09	1:24	2:39	3:54	5:09
12	Dominion Federal Center	7:14	7:44	8:29	9:44	10:59	12:14	1:29	2:44	3:59	5:14
11	South Lakes Village Center	7:19	7:49	8:34	9:49	11:04	12:19	1:34	2:49	4:04	5:19
10	Colt's Neck & South Lakes	7:27	7:57	8:42	9:57	11:12	12:27	1:42	2:57	4:12	5:27
8	Hunter's Woods Village Center	7:30	8:00	8:45	10:00	11:15	12:30	1:45	3:00	4:15	5:30
7	The Greens	7:36	8:06	8:51	10:06	11:21	12:36	1:51	3:06	4:21	5:36
6	Sunrise Valley @ USGS Entrance	♦7:39	♦8:09	8:54	10:09	11:24	12:39	1:54	3:09	♦4:24	♦5:39
5	Library	7:48	═══	9:03	10:18	11:33	12:48	2:03	3:18	4:33	5:48
4	Hechingers	7:58		9:13	10:28	11:43	12:58	2:13	3:28	4:43	5:58
3	Fellowship House	8:02		9:17	10:32	11:47	1:02	2:17	3:32	4:47	6:02
2	Cedar Ridge	8:10	7:25 AM	9:25	10:40	11:55	1:10	2:25	3:40	4:55	6:10
1	Lake Anne Center	8:15	7:30	9:30	10:45	12:00	1:15	2:30	3:45	5:00	6:15

*Starts at Cedar Ridge at 6:58 AM

♦ INDICATES THAT BUS GOES TO USGS BLDG

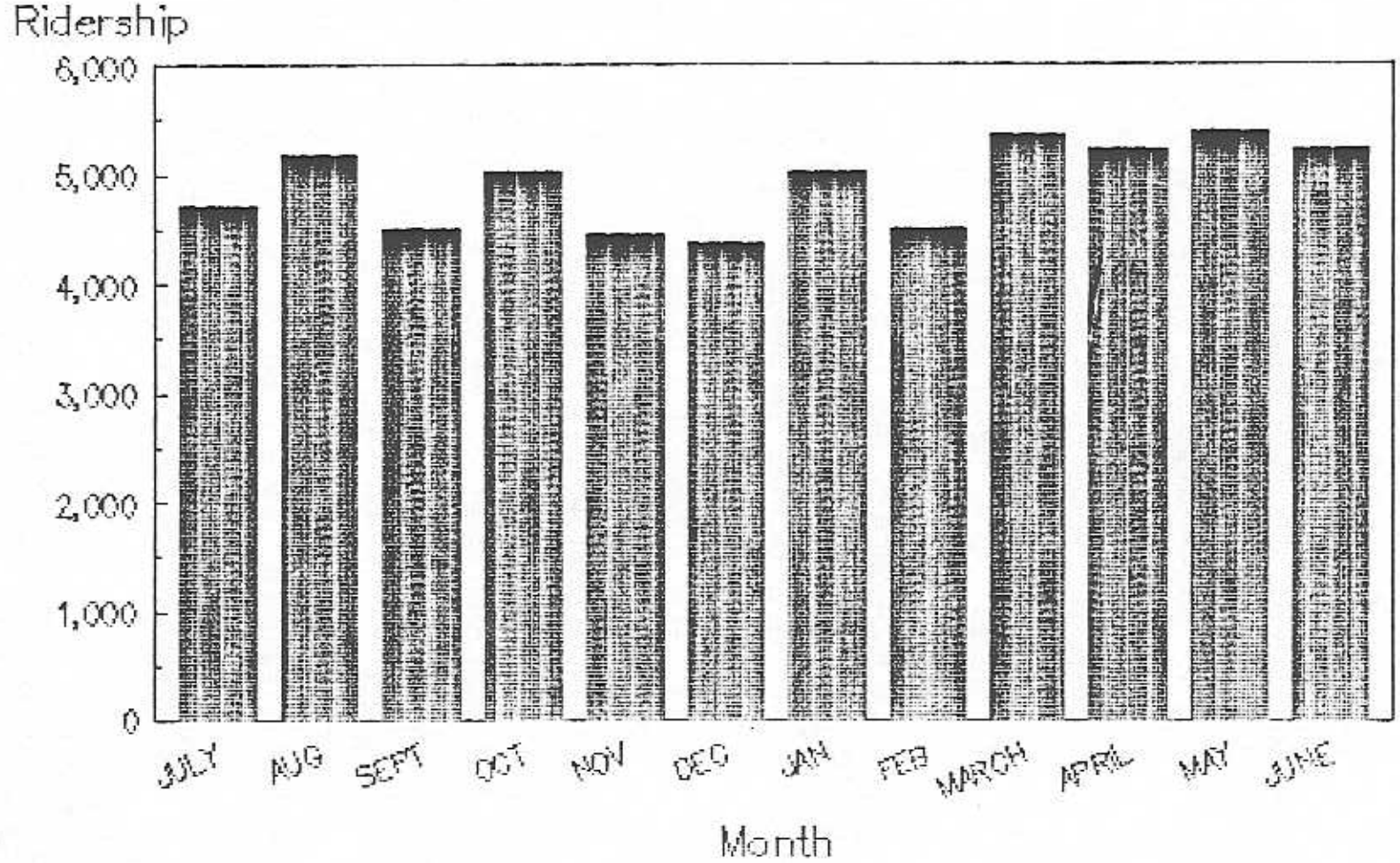
═══ INDICATES END OF RUN; BUS RETURNS TO GARAGE

ROUTE MAP



BUSES OPERATES IN CONTINUOUS LOOP AROUND RESTON IN BOTH DIRECTIONS ON ALL PARTS OF THE ROUTE, EXCEPT AS SHOWN. BUSES OPERATING "COUNTERCLOCKWISE" DISPLAY A BLUE SIGN; "CLOCKWISE" BUSES DISPLAY A RED SIGN.

RIBS
Ridership for FY 1990



SOURCE: Fairfax County, Office of Transportation

APPENDIX VI

PARATRANSIT RESOURCES AND CONTACTS

Sources: Arlington County, Department of Human Services
Northern Virginia Planning District Commission

GEOGRAPHIC AREA SERVED

Washington Metropolitan Area
Aid Van, Inc.
Diamond Transportation Services - Accessible Service
Handi Ryde
Mobile Care, Ltd.
Multiple Sclerosis Society (specific locations)
Muscular Dystrophy Association (specific locations)

Northern Virginia
American Cancer Society
Blue Top Cab

Arlington County
Arlington Chapter - American Red Cross
Arlington Community Action Program
FISH - North and South Arlington

TRIP PURPOSE

General
Aid Van, Inc.
Blue Top Cab
Diamond Transportation Services, Inc. - Accessible Service
Handi Ryde
FISH - North and South Arlington
Mobile Care, Ltd.

Medical Appointments
American Cancer Society
Arlington Chapter - American Red Cross
Arlington Community Action Program
Multiple Sclerosis Society
Muscular Dystrophy Association

Grocery Shopping
Arlington Chapter - American Red Cross (by schedule and zone)

FEES

Fee Charged (See entry for details since some fees are covered by Medicaid, program charges, etc.)

Aid Van, Inc.
Blue Top Cab
Diamond Transportation Services, Inc. - Accessible Service
Handi Ryde
Mobile Care, Ltd.

No Fee Charged (Donations may be mailed to the agency if desired, and will be used to support transportation services.)

American Cancer Society
Arlington Chapter - American Red Cross
Arlington Community Action Program
FISH - North and South Arlington
Multiple Sclerosis Society
Muscular Dystrophy Association

TYPES OF VEHICLES

Vans Accessible to Wheelchairs
Aid Van, Inc.
Arlington Community Action Program
Diamond Transportation Services, Inc. - Accessible Service
Handi Ryde
Mobile Care, Ltd.

Vans
Arlington Chapter - American Red Cross

Automobiles
American Cancer Society
Arlington Chapter - American Red Cross
Blue Top Cab
FISH - North and South Arlington
Multiple Sclerosis Society
Muscular Dystrophy Association

AID VAN, INC.
9304 Richmond Highway
Lorton, Virginia 22079

550-9066

CONTACT PERSON: Dispatcher

METHOD OF REFERRAL: If private pay client, self-referral is accepted. If Medicaid client, must obtain Medicaid preauthorization.

CLIENT POPULATION: People with physical and/or mental disabilities who are not confined to a stretcher.

SERVICES PROVIDED: Non-emergency door to door transportation via lift-equipped van. No restrictions on trip purpose. Travel primarily within the Northern Virginia Metropolitan Area, but travel outside the area can be arranged. Escort service, if necessary, can be provided for an additional fee.

LEAD TIME: Call during office hours as much in advance of need as possible, or at least one day in advance.

DAYS: Monday through Friday. Special arrangements can be made for weekend service.

HOURS: Office hours are 8:00 A.M. to 5:00 P.M. Special arrangements can be made for other times.

FEES: (subject to change)	One Way	Round Trip
1. Basic Zone - Northern Virginia Metropolitan Area	$45	$60
2. Washington, D.C. and Maryland (plus mileage)	$50	$65
3. Charlottesville, VA and Woodrow Wilson Rehabilitation Center (plus waiting time)	$175	$195
Additions to Basic Zone Charges:		
1. Local area outside Basic Zone (rounded to nearest mile)	$1 per loaded mile	
2. If two drivers are required to assist passenger to and from vehicle (passenger can arrange own assistance and not incur this fee)	$10	$15
3. Travel beginning before 7:30 A.M. and/or ending after 5:30 P.M. and on weekends/holidays	+20%	+20%
4. Cancellation upon arrival of vehicle	$30	
5. Driver required to remain with passenger (passenger can arrange to have own attendant and not incur this fee)	$15 per hour	

DRIVER INFORMATION: State certified salaried employees

VEHICLE INFORMATION: 5 State certified lift-equipped vans

AMERICAN CANCER SOCIETY
346 Maple Avenue, East
Vienna, Virginia 22180

938-5550

CONTACT PERSON: Transportation Coordinator

METHOD OF REFERRAL: Self-referral and agency referral accepted.

CLIENT POPULATION: Residents of Northern Virginia diagnosed as having cancer. Person must be ambulatory.

SERVICES PROVIDED: Door to door transportation for cancer related medical and therapy appointments within Northern Virginia.

LEAD TIME: Call during office hours at least two days before appointment.

DAYS: Monday through Friday.

HOURS: Office hours are 8:30 A.M. to 4:30 P.M.

FEES: No fees charged.

DRIVER INFORMATION: Volunteers.

VEHICLE INFORMATION: Volunteers drive own vehicles.

ARLINGTON CHAPTER - AMERICAN RED CROSS
4333 Arlington Boulevard
Arlington, Virginia 22203

527-3010

CONTACT PERSON: Transportation Coordinator

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Arlington County residents who are not restricted to wheelchairs or stretchers and who need transportation within Arlington County for shopping or medical services. Drivers are not able to assist in transferring person to and from vehicle.

SERVICES PROVIDED:

1. Grocery Shopping: Door to door transportation for adults 60 years of age and older to nearest large grocery store. Grocery shopping schedule is set up by zones. Arrangements for shopping assistance can be made.

2. Medical Services: Door to door transportation to medical and therapy appointments within Arlington County as schedule permits.

LEAD TIME: Call at least one week in advance of need, if possible. Arrangements generally cannot be made if notified the same day service is needed.

DAYS: Monday through Friday.

HOURS: Office hours are 8:30 A.M. to 4:30 P.M.

FEES: No fees charged. Contribution to Arlington Chapter may be mailed if desired.

DRIVER INFORMATION: Volunteer drivers supervised by salaried employees.

VEHICLE INFORMATION: 2 eleven passenger vans
2 station wagons
3 four passenger automobiles

ARLINGTON COMMUNITY ACTION PROGRAM, INC.
ACAP
1415 South Queen Street
Arlington, Virginia 22204

979-2400

CONTACT PERSON: Betty Robinson, Coordinator of Community Development and Services

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Income eligible elderly and disabled residents of Arlington County.

SERVICES PROVIDED: Door to door transportation via a lift-equipped bus primarily to medical appointments and dialysis treatment center within Arlington County. ACAP also transports people to the Langston-Brown Senior Center.

LEAD TIME: Call at least one or two days in advance of need.

DAYS: Monday through Friday.

HOURS: Office hours are 9:00 A.M. to 5:00 P.M.

FEES: No fees charged. Contributions may be mailed to ACAP if desired.

DRIVER INFORMATION: Salaried employees.

VEHICLE INFORMATION: Lift-equipped bus (15 passengers, including three spaces for people in wheelchairs)

BLUE TOP CAB
901 North Glebe Road
Arlington, Virginia 22203

243-8294

CONTACT PERSON: Dispatcher

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: General public.

SERVICES PROVIDED: Demand responsive, door to door transportation.

LEAD TIME: Not applicable.

DAYS: Daily.

HOURS: Daily 24 hour service.

FEES: Fees charged on mileage basis. Senior citizens (62 years of age and older) receive 10 percent discount.

DRIVER INFORMATION: Salaried employees.

VEHICLE INFORMATION: 10 automobiles.

DIAMOND TRANSPORTATION SERVICES, INC. - ACCESSIBLE SERVICE
3025 Mount Vernon Avenue
Alexandria, Virginia 22305

548-6500 548-7505

CONTACT PERSON: Robert Wirth or Charles Walker

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Residents of Arlington or Alexandria who have mobility impairments.

SERVICES PROVIDED: Door to door transportation via van; accessible to people who use wheelchairs. No restrictions on trip purpose.

LEAD TIME: Call during office hours as much in advance of need as possible, or at least one day in advance.

DAYS: Transportation services available 24 hours a day, seven days a week.

HOURS: Office hours are 8:00 A.M. to 5:00 P.M. At other times call 549-6200.

FEES: Transportation within the Beltway averages $20.00 for one-way service. Depending on various conditions, rates are arranged on an individual basis.

DRIVER INFORMATION: Salaried employees.

VEHICLE INFORMATION: 3 vans accessible to people who use wheelchairs;
4 accessible taxi-vans

FISH - FOR IMMEDIATE SYMPATHETIC HELP
NORTH ARLINGTON AND SOUTH ARLINGTON

337-8660 (answering service 24 hours)
558-2028 TDD 8 A.M. TO 5 P.M. (weekdays for message relay)

CONTACT PERSON: If North Arlington resident, ask for North Arlington FISH captain. If South Arlington resident, ask for South Arlington FISH captain.

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Arlington residents who are not restricted to wheelchairs or stretchers.

SERVICES PROVIDED: Door to door transportation generally within Arlington County, provided on an emergency, one time basis for those in need. People who use wheelchairs should arrange to have someone accompany them to assist with transferring to and from the vehicle and to move the wheelchair in and out of the vehicle.

LEAD TIME: Call the day transportation is needed or no earlier than 6:00 P.M. of the day before the service is needed.

DAYS: 7 days per week.

HOURS: 24 hours per day.

FEES: No fees charged.

DRIVER INFORMATION: Volunteers.

VEHICLE INFORMATION: Volunteers drive own vehicles.

OTHER: Services dependent on availability of volunteers.

HANDI RYDE
1122 North Utah Street
Arlington, Virginia 22201

525-8639

CONTACT PERSON: James Bouchillon, Manager

METHOD OF REFERRAL: If private pay client, self-referral is accepted. If Medicaid client, must obtain Medicaid preauthorization.

CLIENT POPULATION: People with physical and/or mental disabilities who are not confined to a stretcher.

SERVICES PROVIDED: Non-emergency door to door transportation via lift-equipped van. Will assist person from home to van. No restrictions on trip purpose. Travel primarily within the Northern Virginia Metropolitan Area, but travel outside the area can be arranged. Escort service, if necessary, can be provided for an additional fee. Wheelchair can be provided upon request.

LEAD TIME: Call during office hours as much in advance as possible or at least one day in advance. Messages can be left after office hours.

DAYS: Monday through Friday. Weekends by special appointment.

HOURS: Office hours are 7:00 A.M. to 5:30 P.M.

FEES: (subject to change) Based on five mile increments.	One Way	Round Trip
First five miles	$30	$35
6 - 10 miles	$35	$45
11 - 15 miles	$45	$55
16 - 20 miles	$55	$65
Each additional mile	$ 1.50	
Cancellation upon arrival of vehicle	$15	

DRIVER INFORMATION: State certified salaried employees. Drivers willing to provide special assistance and care.

VEHICLE INFORMATION: 2 State certified lift-equipped vans

MOBILE CARE, LTD.
6201 Riverdale Road
Riverdale, Maryland 20737

779-5115

CONTACT PERSON: Staff.

METHOD OF REFERRAL: If private pay client, self-referral is accepted. If Medicaid client, must obtain Medicaid preauthorization.

CLIENT POPULATION: Disabled and older persons living in the Washington Metropolitan area.

SERVICES PROVIDED: Door to door transportation with no restrictions on trip purpose. Willing to assist persons that require transfer assistance and lifting for an additional fee.

LEAD TIME: Four days notice in advance is appreciated.

DAYS: Monday through Saturday. One week notice for Sunday service.

HOURS: 6:00 A.M. to 6:00 P.M. on Mondays, Wednesdays, Fridays and Saturdays.
8:00 A.M. to 8:00 P.M. on Tuesdays and Thursdays.

FEES: (subject to change)	One Way	Round Trip
First 10 miles	$30	$48
Each additional mile	$ 1	
Attendant service	$ 5	$10

DRIVER INFORMATION: State certified employees.

VEHICLE INFORMATION: 5 lift-equipped or ramped vans.

MULTIPLE SCLEROSIS SOCIETY - NATIONAL CAPITAL CHAPTER
1200 15th Street, N.W.
Washington, D.C. 20005

296-5363

CONTACT PERSON: Transportation Coordinator

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Residents of the Washington Metropolitan Area who are diagnosed as having multiple sclerosis and who are ambulatory or able to transfer from a wheelchair. People who need assistance with transferring must arrange for another person to accompany them.

SERVICES PROVIDED: The Multiple Sclerosis Society gives vouchers for cab fares to medical appointments when other means of transportation are not available.

LEAD TIME: Call office 5 days in advance to make arrangements.

DAYS: Monday through Friday.

HOURS: Office hours are 9:00 A.M. to 5:00 P.M.

FEES: No fees charged.

DRIVER INFORMATION: Employee of cab company.

VEHICLE INFORMATION: Taxicab.

OTHER: Persons must register with the Multiple Sclerosis Society before service can be provided.

MUSCULAR DYSTROPHY ASSOCIATION, INC.
5249 Duke Street, Suite 109
Alexandria, Virginia 22304

823-1115

CONTACT PERSON: Transportation Coordinator

METHOD OF REFERRAL: Self-referral or agency referral accepted.

CLIENT POPULATION: Residents of the Washington Metropolitan Area diagnosed as having muscular dystrophy or one of the 40 other associated neuromuscular diseases.

SERVICES PROVIDED: The Muscular Dystrophy Association pays for transportation to clinics at Georgetown and Children's Hospitals and to clinic sponsored therapy programs.

LEAD TIME: Call one week in advance if possible.

DAYS: Monday through Friday.

HOURS: Office hours are 9:00 A.M. to 5:00 P.M.

FEES: No fees charged.

OTHER: Persons must register and submit a letter of diagnosis from their doctor. They will make appointments for the Georgetown University Hospital Clinic (Mondays).

INFORMATION FOR DISABLED DRIVERS AND PASSENGERS

1. Contact the Division of Motor Vehicles (DMV) at 761-4655 for information about obtaining:

   a. Virginia Handicapped Parking Permit -- issued to people with a permanent physical disability which limits their mobility. It authorizes special parking privileges to physically handicapped persons who are either the drivers of or passengers in a vehicle.

   b. Virginia Temporary Handicap Parking Permit -- issued to people with a temporary physical disability which limits their mobility. It authorizes special parking privileges for up to one year to a person with a temporary physical disability who is either the driver of or passenger in a vehicle.

   c. Disabled Licensed Driver Parking Permit -- issued to licensed drivers who have a permanent or temporary physical disability which limits their mobility. It authorizes special parking privileges to the disabled driver.

   d. Handicapped Person (HP) or Disabled Veteran (DV) License Plates -- issued to persons with a permanent physical disability which limits their mobility. The vehicle must be registered in the name of the disabled person.

   All permits and special license plates are recognized throughout the Washington Metropolitan area. Call DMV and request that an application be sent to you. It must then be completed by a medical doctor and returned to DMV before a permit or plate can be issued.

2. Contact the Arlington County Police Department at 558-2922 for information about obtaining:

   a. Temporary Handicap Parking Permit -- valid for no more than 90 days and issued to persons determined by their physicians to have a temporary physical handicap either (1) of a musculoskeletal nature which prevents such persons from walking without the aid of an assistive device or (2) of a respiratory or cardiovascular nature and diagnosed as requiring a significant limitation of physical activity.

   b. Permit for Visitors -- valid for up to 30 days and issued to nonresidents who have a permanent disability and are visiting in Arlington.

3. Contact the Traffic Engineering Division (358-3575) for information about obtaining a sign designating reserved parking for handicapped persons on a public street.

4. Jurisdictions have established regulations specifying where persons with special license plates and permits may park. The fine in Arlington County for parking is a space restricted to use by disabled people on any County-owned property, any public street, or at any privately owned shopping center or business offices without displaying the specially designated license plates or permits is $100.

5. Some owners and operators of gasoline retail outlets in Virginia are offering assistance at self-service gasoline pumps to disabled persons displaying the specially designated license plates and permits. Participating stations may display a blue decal with the International Symbol of Access and the word "gas".

ARLINGTON COUNTY RESCUE SQUAD/AMBULANCE

FOR EMERGENCY MEDICAL TRANSPORTATION ONLY, CALL THE ARLINGTON COUNTY RESCUE SQUAD/AMBULANCE AT:

911 voice
527-8900 voice
358-4610 TDD

Door to door transportation via medically equipped emergency vehicles is provided for medical emergencies only The passenger will be charged $75 for a one way trip.

WMATA
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
600 5th Street, N.W.
Washington, D.C. 20001

Metrobus and Metrorail provide transportation along fixed, predetermined routes in the Washington Metropolitan area. Elderly and disabled people can ride Metrobus or Metrorail at a reduced fare by presenting a special identification pass. Information about receiving the pass can be obtained by calling the Handicapped Office, Senior Citizens Office, or TDD number, as appropriate.

Metrobus On Call: Buses equipped with wheelchair lifts are available on some routes and can be requested for your route if you make a reservation 24 hours in advance of your trip. The lift-equipped buses can carry two passengers in wheelchairs, and boarding can be made easier for people who have difficulty climbing steps. Call 962-1825 voice or 638-3780 TDD Monday through Friday, 8 A.M. to 4 P.M.

General Transit Information Service: 637-7000 or 638-3780 TDD (6 A.M. to 11:30 P.M. daily)
Metro provides service during the following hours:

Monday to Friday	6 A.M. to 12 midnight
Saturday	8 A.M. to 12 midnight
Sunday	10 A.M. to 12 midnight

Handicapped Office: 962-1245 (8 A.M. to 4:30 P.M. weekdays and second Saturday of each month from 11 A.M. to 1 P.M. by appointment only).
638-3780 TDD
Issues special identification passes for reduced rates.

Senior Citizens Office: 637-7000 (6 A.M. to 11:30 P.M. daily)
Information about special identification passes for reduced rates.

ARLINGTON AGENCY ON AGING
1801 North George Mason Drive
Arlington, Virginia 22207-1999

358-5030 voice
358-4611 TDD (TDD users, only)

The Arlington Agency on Aging serves as a focal point for services to Arlington's elderly residents. The Agency receives federal funds under the Older Americans Act for nutrition and social services programs. The congregate meal program is administered directly by the Agency; all other services are provided by public and private non-profit agencies through contracts with the Agency on Aging. Contractual services include transportation for shopping, medical appointments and congregate meals; homemaker; legal; employment; volunteer; recreation/socialization and delivery of meals to the homebound. A citizen Advisory Council guides the Agency in carrying out its mandates and holds an Annual Public Hearing on the needs of Arlington's elderly residents.

OFFICE FOR PHYSICALLY DISABLED PERSONS
1801 North George Mason Drive
Arlington, Virginia 22207-1999

358-4786 voice
358-4612 TDD (TDD users, only)

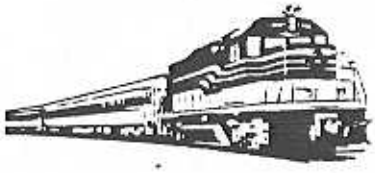
The Office for Physically Disabled Persons provides information and referral services on matters pertaining to disabled people, addresses inquiries from citizens, coordinates Arlington County's compliance with Section 504 of the Rehabilitation Act (Federal legislation), and provides staff support for the County Board appointed Commission on Physically Disabled Persons. Attention is given to assuring that disabled people have access to County programs and services.

APPENDIX VII

VIRGINIA RAILWAY EXPRESS

PROJECT DESCRIPTION

VIRGINIA RAILWAY EXPRESS OPERATIONS BOARD
2009 North 14th Street, Suite 300
Arlington, Virginia 22201
703-524-3322
FAX #(703) 524-1756



PROJECT DESCRIPTION

Northern Virginia
Transportation Commission
2009 North Street, Suite 300
Arlington, Virginia 22201
703-524-3322

A TRANSPORTATION PARTNERSHIP

Potomac and Rappahannock
Transportation Commission
9257 Lee Avenue, Suite 205
Manassas, Virginia 22110
703-369-6173

COMMUTER RAIL STATIONS EXPECTED TO OPEN IN OCTOBER 1991

WESTERN ROUTE (on Norfolk Southern tracks)

10W. Manassas Airport

The exact site is still in doubt, but it probably will be on the east side of the tracks north of Piper Lane. The site could be as far south as Route 619. This will be the train yard and will have 400 to 500 parking spaces.

9W. Manassas

At the existing depot, between West and Battie. The city will build up to four parking lots with up to 281 spaces.

8W. Manassas Park

East of the tracks at Blooms Road. The Signal Hill development company will build this station and a 300-space parking lot. City officials also hope to create a "town center" with small shops in that area.

7W. Burke Center

South of the tracks and east of Roberts Parkway. There is a 400-space commuter parking lot on the site.

6W. Rolling Road

South of the tracks in the triangle formed by Shana Place and Burke Road. A 420-space parking lot has been designed.

5W. Backlick Road

South of the tracks and east of Backlick Road. A 220-space parking lot already has been designed.

4. King Street

In Alexandria's Union Station. Commuter rail officials are going to improve connection to the King Street Metro station, currently a three-minute walk away. There will be no parking.

3. Crystal City

South 15th Street and Crystal Drive. No parking.

2. L'Enfant Plaza

Between Sixth and Seventh streets SW. No parking.

1. Union Station

EASTERN ROUTE (on RF&P railroad tracks)

5E. Lorton/Pohick

The exact site is uncertain, but it will be east of the railroad, between Pohick Road and Lorton Road. Depending on the site, the station probably would have 200 parking spaces.

6E. Woodbridge/Dawson Beach

East of the railroad and north of Dawson Beach Road. Prince William officials anticipate a 600-space parking lot.

7E. Rippon

West of the railroad, and at the southern end of Farm Creek Drive. Access will initially be down Farm Creek Drive, and eventually on Rippon Boulevard extended. A 300-space lot is planned.

8E. Quantico

At the existing rail station on Potomac Avenue. An existing 75-car gravel parking lot will be covered with asphalt.

9E. Leeland Road

South of the rail line and west of Leeland Road. Stafford County is still negotiating to buy the land.

10E. Fredericksburg

At the existing rail station. The city is discussing a 200-car parking lot. The trains will be stored in Spotsylvania at Crossroads Business Park (on Route 17 bypass.) No passengers will be allowed to get on and off there.

POSSIBLE FUTURE STATIONS

WESTERN LINE

Fairfax Station

Between Manassas and Burke. Fairfax County officials are looking at putting a station at Fairfax Station, perhaps near the Fairfax County Parkway.

EASTERN LINE

Franconia/Springfield

Between King Street and Lorton/Pohick. At the planned transportation center southeast of Springfield Mall. A Metro station and a 1,500-car lot are also planned for this site.

Cherry Hill

Between Rippon and Quantico, on the Cherry Hill peninsula.

Widewater/Arkendale

Between Quantico and Leeland. East of the tracks and north of Brent Point Road.

Brooke

A station has been designed on Route 608, but only 1.5 acres are available. Stafford County is looking at other sites

Spotsylvania

If Spotsylvania agrees to participate, a station would be built in the train yard.

THE VIRGINIA RAILWAY EXPRESS PROJECT *

General Description of Project

The Virginia Railway Express will consist of trains providing commuter rail service on two existing railroad lines from the areas of Fredericksburg and Manassas, Virginia, to Union Station in Washington, D.C. Service is anticipated to commence in the fall of 1991. Funds necessary for the various costs associated with the commencement of rail service are expected to be derived from proceeds of the Series 1990 Bonds and equity contributions derived from a variety of sources. See the subsection of this section entitled "Sources of Funding." A portion of the Series 1990 Bond proceeds will be used to purchase approximately 38 new passenger railcars and ten used or new locomotives and to pay the costs of remanufacturing such used locomotives, if necessary. See the subsection of this section "Railcars and Locomotives." The equity contribution (together with a portion of the proceeds of the Series 1990 Bonds in certain cases) will be used to provide the funds necessary for: (1) storage facilities, stations, platforms and parking lots, (2) the Commissions' liability insurance plan ("Insurance Plan"), and (3) certain administrative expenses incurred prior to the start of rail service. See the subsections of this section entitled "Storage Facilities, Stations, Platforms and Parking Lots," "Commuter Rail Operations Liability Insurance Plan," and "Administrative Expenses."

The trains will be operated on existing tracks of the Richmond, Fredericksburg and Potomac Railroad Company ("RF&P"), Southern Railway Company ("Southern") and Consolidated Rail Corporation ("Conrail") (collectively, the "Railroads") pursuant to agreements described in the subsection of this section entitled "Contracts Relating to Use of Existing Railroad Tracks and Bridges." The commuter rail service will be operated by Amtrak pursuant to an agreement described in the subsection of this section entitled "Operating Agreement."

A summary of the Commissions' expected revenues and expenses for operation of the Virginia Railway Express based on their current six year financial plan is described in the subsection of this section entitled "Six-Year Financial Plan." Included in the revenues are certain grants from the Commonwealth of Virginia and appropriations by the Participating Jurisdictions that are respectively described in the subsection of this section entitled "Aid from the Commonwealth of Virginia" and the section entitled "THE MASTER AGREEMENT."

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*Excerpts from the Official Statement of NVTC's $79,350,000 bond issue for the VRE. The complete statement is available on request from NVTC.

Sources of Funding

Bond Proceeds

The proceeds to be received from the sale of the Series 1990 Bonds (excluding any original issue discount) equal to $75,903,913*, together with estimated earnings thereon of $6,514,005[1], will be used as follows:

Railcars and Locomotives	$46,600,000
Stations and Storage Facilities	5,605,135
Contingency	3,729,418
Insurance Premiums	4,827,000
Operating Reserve[2]	2,348,000
Capitalized Interest	9,885,040
Debt Service Reserve Fund	6,913,350
Costs of Issuance[3]	2,509,975
TOTAL	$82,417,918

* Any savings in any category of expenditure may be applied to other costs of the Project.

(1) Investment earnings estimated based on average interest rate of 6.75%.
(2) This amount represents the first 3 months' estimated operating expenses.
(3) Includes bond insurance premium and underwriters' discount.

Equity Contributions

As more fully provided below, it is currently estimated that $31 million will be available from federal, local and Commonwealth of Virginia sources to assist in financing (1) the costs of construction of storage facilities, stations, platforms and parking lots, (2) reserves for the Insurance Plan and (3) the legal, engineering and administrative expenses of establishing the Virginia Railway Express.

Railcars and Locomotives

The rolling stock requirements for the Virginia Railway Express are expected to be met by the Commissions from the proceeds of the Series 1990 Bonds as described below.

The Commissions plan to meet their needs for railcars by awarding a contract to the lowest responsive and responsible bidder to an invitation to bid for the delivery of 38 new passenger rail cars. Three responses to the invitation to bid were received and publicly opened by the Commissions on December 6, 1989 and the Commissions have 90 days from that date to award the contract. Each bidder was required to submit documentation establishing its prior experience and financial resources and a bid guarantee (in the form of a bid bond from a surety company authorized to conduct business in Virginia or a certified or cashier's check) in the amount of 5% of the bid. The two lowest bids were within the Commissions' budget estimate of $36 million and the amount of Series 1990 Bond proceeds allocated to such purposes. The Commissions, assisted by STV/Seelye Stevenson Value & Knecht, Engineers/Planners (the "Mechanical Engineers"), are in the process of evaluating the responsiveness of the bids and the responsibility of the bidders and expect to award the contract to one of the bidders prior to the expiration date of the bids.

The supplier under the awarded contract must provide a performance bond and a labor and material payment bond payable to the Commissions in an amount at least equal to 100% of the accepted bid from

a surety acceptable to the Commissions and the Bond Insurer. In accordance with the invitation to bid, the contract for rail cars will provide for liquidated damages (in lieu of actual damages) to be paid to the Commissions in the event of delay in delivery of rail cars or termination of the contract. However, if the supplier under the awarded contract does not perform on a timely basis, the rail cars will not be available to provide service as planned and the liquidated damages due to the Commissions will not necessarily compensate for all the damages that may result.

The Commissions are exploring the possibility of acquiring used locomotives directly and issuing invitations to bid for the remanufacturing that would be required. Other options involve acquiring a combination of new and used locomotives, subject to the availability of excess funds upon award of the contract for rail cars. According to estimates provided by the Mechanical Engineers, the cost of acquiring remanufactured locomotives or acquiring used locomotives and paying the cost of remanufacturing them will not exceed the budgeted amount of $11.3 million. If the costs exceed the amount budgeted, the Commissions plan to eliminate certain nonessential aspects of the remanufacturing process or contribute additional funds.

In the opinion of NVTC, no additional permits or governmental or regulatory approvals will be necessary in connection with the purchase of the railcars and locomotives or the operation of the Virginia Railway Express.

Storage Facilities, Stations, Platforms and Parking Lots

In addition to the rolling stock requirements described above, three storage facilities and a number of stations, platforms and parking lots are necessary for the operation of the Virginia Railway Express. The location, size and costs of these capital improvements are currently being developed.

These capital improvements are expected to be paid from $3 million of Series 1990 Bond proceeds and a combination of federal, Commonwealth of Virginia and local sources that are currently estimated to total $11 million. A $750,000 grant has been set aside by the United States Urban Mass Transportation Administration ("UMTA") but has not yet been paid over to NVTC. VDOT and NVTC have entered into a contract dated August 4, 1988, as amended, to pay $7,933,000, subject to the availability of mass transit funds for fiscal year ending June 30, 1990. A small portion of this amount has been paid to NVTC. Additional amounts under this contract will be paid to NVTC on a reimbursement basis. NVTC expects that VDOT will extend the contract if all amounts have not been paid by June 30, 1990. The remaining $2.3 million necessary to fund the non-rolling stock capital improvements required of the Project is expected to be paid by the Participating Jurisdictions.

The Master Agreement establishes priorities for the use of available funding to pay all or part of the costs of constructing capital facilities. The Commissions are responsible for completing the construction of certain facilities designated as first and second priorities. The Participating Jurisdictions will be responsible for the remaining costs.

First Priority: Storage facilities are required at Washington, D.C., and at the southern terminus on both the Southern and RF&P lines. Three million dollars in Series 1990 Bond proceeds have been identified to purchase lay-up yard sites and to provide track and signal improvements necessary to allow for the location of Virginia Railway Express facilities at either Manassas airport or Nokesville on the Southern and in Spotsylvania County on the RF&P.

Second Priority: Construction of station facilities is required at Washington, D.C.'s L'Enfant Plaza location, Arlington County's Crystal City location, and Alexandria's Union Station.

Third Priority: Engineering expenses for stations and parking lots will be funded from any amounts remaining from the sources listed above. The remaining amounts will be allocated to each Participating Jurisdiction based on the population/ridership formula in the Master Agreement.

Fourth Priority: The fund balances may be used for construction and/or, if necessary, land acquisition.

The Master Agreement requires that stations and/or platforms be located in the following general areas with the following parties being responsible for capital costs associated with them:

Station	Party Responsible for Paying Capital Costs
RF&P Corridor	
South Stafford	Stafford
Brooke	Stafford
Quantico	Prince William
Woodbridge	Prince William
Pohick/Lorton	Fairfax
Franconia*	Fairfax
Southern Corridor	
Manassas Airport**	Prince William & Manassas
Manassas	Manassas
Manassas Park	Prince William***
Burke Center	Fairfax
Burke/Rolling Road	Fairfax
Backlick Road*	Fairfax

* subject to agreement with METRO.
** subject to agreement between Manassas and Prince William County regarding cost sharing.
*** subject to agreement with Manassas Park.

Because the plans of the Commissions and the Participating Jurisdictions with respect to the storage facilities, stations, platforms and parking lots are in the preliminary planning phase, it is not possible to identify the permits and other governmental and regulatory approvals that will be necessary. In the opinion of the Commissions, the necessary permits and approvals can be obtained or alternate sites can be selected for facilities so that commuter rail service can commence by the fall of 1991.

Once constructed, the Commissions will be responsible for maintaining those improvements to the stations not owned by Amtrak and the Railroads. It is anticipated that the Commissions will contract with VDOT for maintenance of the parking lots.

Commuter Rail Operations Liability Insurance Plan

The Virginia Department of General Services, Division of Risk Management ("Risk Management"), has established the terms and conditions of the Commissions' Commuter Rail Operations Liability Insurance Plan (the "Insurance Plan"). The Insurance Plan consists of a combination of self-insurance reserves for retained risks and purchased insurance which are required to be actuarially sound to meet the indemnification requirements of the Operating Access Agreements and the Operating Agreement. Risk Management and the Commissions have entered into an Agreement dated January 1, 1990 (the "Management Agreement"), relating to the management of the Insurance Plan for the Project.

In accordance with the Insurance Plan, the Commissions have established certain insurance reserves (the "Insurance Fund") pursuant to an Insurance Fund Agreement dated as of January 1, 1990, between the

Commissions and Risk Management. The Commissions initially will deposit in the Insurance Trust Fund with Risk Management $5,000,000 appropriated by the Commonwealth of Virginia from the Oil Overcharge Rebate Fund. The Commissions also have agreed to make two equal deposits in the Insurance Fund of $6,211,000 each on July 1, 1990, and July 1, 1991. The premiums for purchased insurance for fiscal years ending June 30, 1992, and 1993 will be paid out of proceeds of the Series 1990 Bonds. Subsequent premiums for purchased insurance will be paid out of the Insurance Fund. The Commissions have agreed to provide to Risk Management within 30 days of receiving written notice additional funds to insure the financial stability of the Insurance Plan, as determined by Risk Management. Payments under the Master Agreement will be used to meet the Commission's obligations under the Insurance Plan.

The Management Agreement requires the Commissions to have an actuarial study to determine the adequacy of the Insurance Fund for the risk retained by the Commission performed at least annually. Risk Management may retain a second actuary to review the work of the Commission's actuary.

Administrative Expenses

Administrative expenses prior to the start of commuter rail service, estimated at $1,460,000, are expected to be paid equally by the Participating Jurisdictions under the Master Agreement and the Commonwealth of Virginia. VDOT has entered into a contract with the Commissions to pay NVTC $730,000 on a reimbursement basis.

Contracts Relating to Use of Existing Railroad Tracks and Bridges

The Commissions have entered into separate Operating Access Agreements dated December 1, 1989 (the "Operating Access Agreements"), with RF&P, Southern and Conrail providing for the right to use tracks owned by such Railroads for the operation of the Commissions' trains in the provision of commuter rail passenger service. RF&P owns the tracks from Fredericksburg to the Potomac River. Southern owns the tracks from Manassas to a point west of the Alexandria station. Conrail owns the bridge across the Potomac River from Virginia to Washington, D.C. and the tracks in Washington, D.C. (other than those owned by Amtrak). The Operating Access Agreements contemplate that the Commissions will enter into additional agreements with the Railroads for use of certain anciliary facilities, including the stations at Fredericksburg, Quantico and Alexandria that are owned by RF&P and the station at Manassas that is owned by Southern.

As a condition to the Commissions' right to use Conrail's tracks for passenger service, the Operating Access Agreement with Conrail requires that federal legislation be effective that limits Conrail's liability to the liability insurance provided by the Commissions, which in no event may be less than $200,000,000.* A provision that satisfies this condition is included in essentially the same form in HR 2364, passed by the House of Representatives on September 25, 1989 and in S 462, passed by the Senate on November 22, 1989. There are differences in certain provisions of HR 2364 and S 462 which relate to matters other than the Conrail indemnity provision for the Virginia Railway Express. These differences must be resolved by conference committee. Congress will not return from recess until January 23, 1990. The Commissions expect that the Conrail indemnity provision will be passed during the next legislative session and is proceeding with plans for service through to Washington. D.C. If the legislation does not become effective prior to the commencement of service, the Operating Access Agreement will be limited to non-revenue service involving primarily the use of Conrail's tracks to move rolling stock without passengers into Washington, D.C. for maintenance. Unless a revenue service agreement is reached with Conrail without the legislation, the Commissions will implement the contingency plan. See the subsection in this section entitled "Contingency Plan."

The Operating Access Agreements require the Commissions to pay the Railroads for any added costs incurred as a result of providing commuter rail service. In the case of RF&P, the Operating Access Agreement includes a return on assets used in providing the service. Each railroad will be paid a monthly base payment as described below and will be reimbursed for additional expenses incurred including without

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* President Bush signed the required legislation in July, 1990.

limitation any costs of changes to the tracks attributable to the service provided. The base payments are subject to adjustment on each July 1 for a number of factors designed to meet the no-cost standard stated above.

The initial base payment under the Operating Access Agreement with RF&P is $46,000 payable monthly beginning with the initiation of service. The initial base payment under the Operating Access Agreement with Conrail is $15 per scheduled train movement during such month estimated at $5,000 per month. The initial base payment under the Operating Access Agreement with Southern is $14,330 payable monthly in advance beginning with the initiation of service. The Commissions have projected that the adjustments to the payments to the Railroads will result in an escalation of the amount by 3% per year.

The Commissions are required to indemnify the Railroads in an annual aggregate amount up to $200,000,000 for any claims for injury, damage, or death to persons or property caused by the provision of the contract services by or for the Commissions. See the subsection in this section entitled "Commuter Rail Operations Liability Insurance Plan."

Each Operating Access Agreement automatically terminates on the earlier of (1) five years from the date of execution of the agreement or (2) three years following actual initiation of regular commuter rail service. While the Commissions expect that they will be able to negotiate new operating access agreements upon their termination, there is no assurance that this will be possible. The possibility exists that the Railroads either collectively or individually will not permit use of their tracks for the Virginia Railway Express which would result in all or part of the service being discontinued.

Operating Agreement

The Commissions have entered into a Purchase of Services Agreement dated October 27, 1989 (the "Operating Agreement"), with Amtrak. The Operating Agreement provides that Amtrak will manage, operate, maintain and staff the Virginia Railway Express, and permits the Commissions to use the terminal, station and equipment maintenance facilities of Amtrak's wholly-owned subsidiary at Union Station in Washington, D.C.

Amtrak will submit a budget for contract services (which includes Amtrak's operating expenses, management fee and performance payments) to the Commissions before January 1 of each fiscal year to be finalized during the Commissions' budget process. This budget is a ceiling on the total amount which the Commissions must pay to Amtrak. The Commissions will make weekly payments to Amtrak for contract services subject to adjustment for actual costs. If during any fiscal year Amtrak believes that the amount of funds budgeted is less than the cost of services to be provided, the parties will agree to reduce or revise the level of service for the remainder of the fiscal year so that the cost of service is within the authorized budget ceiling. As an alternative, the Commissions could amend the budget for the Virginia Railway Express as provided in the Master Agreement. Amtrak will receive additional payments for monthly on-time performance and will be penalized for performance which is not on time. Disputes under the Operating Agreement are to be resolved through arbitration, but Amtrak has the right to terminate its services if payments have reached the budgeted amount in any fiscal year or the Commissions have failed to make weekly payments. The Commissions have agreed to indemnify Amtrak with respect to labor protection costs it incurs as a result of reduction in or termination of contract services by the Commissions.

Amtrak and the Commissions will be excused from performance of any of their obligations (other than for the payment of money) under the Operating Agreement, where the non-performance is occasioned by any event beyond its control which includes without limitation, any order, rule or regulation of any Federal, state or local governing body, agent or instrumentality, work stoppage, accident, natural disaster, or civil disorder, provided that the party so excused will use all reasonable efforts to minimize its non-performance and to overcome, remedy or remove such event in the shortest practical time.

The Commissions are required to indemnify Amtrak in an amount up to $200,000,000 for any claims for injury, damage or death to persons or property caused by the operation of the contract services by or for the Commission. See the subsection in this section entitled "Commuter Rail Operations Liability Insurance Plan."

The Operating Agreement took effect on October 27, 1989, and will remain in effect at least three years from the date of commencement of service. For Amtrak to continue to operate the Virginia Railway Express, either the Operating Agreement will have to be extended or a new Operating Agreement will have to be negotiated upon such termination. The Commissions expect that a new agreement with Amtrak will be negotiated upon such termination.

Amtrak was created by an Act of Congress and incorporated under the laws of the District of Columbia in 1970 to provide intercity rail passenger service on a national route system. Today, it operates more than 200 trains a day over a 24,000 mile system to more than 500 destinations in 44 states. In addition to intercity trains, Amtrak operates commuter service under contract to local agencies in Massachusetts and Maryland.

Six-Year Financial Plan

The Commissions and the Participating Jurisdictions have approved a six-year financial plan to be revised annually as part of the Commissions' budgeting procedure. The six-year financial plan for the Virginia Railway Express covers the sources and uses of funds for both capital and operation. Sources and uses of funds for capital are described in other subsections of this section. The summary of projected revenues and expenses is determined by a model based on a number of assumptions and projections described below (including the assumption that service will be provided to Washington, D.C.). Under the plan of financing provided for in the Master Agreement, to the extent that revenues from sources other than the Participating Jurisdictions are less than expected, the Participating Jurisdictions' share of the cost of commuter rail will increase. The summary of projected revenues and expenses is set forth on the following page:

SUMMARY OF PROJECTED REVENUES AND EXPENSES
($ thousands, fiscal years ending June 30)

	1990	1991	1992	1993	1994	1995	1996
REVENUES							
Ridership Revenues	0	0	3,514	5,550	5,965	6,144	6,329
Payments by Participating and Contributing Jurisdictions	2,043	3,108	5,172	5,108	5,485	5,665	5,800
Commonwealth of Virginia Capital Grants	0	3,336	3,336	3,159	3,500	3,494	3,489
Commonwealth of Virginia Operating Grants	0	0	2,083	2,575	2,652	2,732	2,814
Interest Earnings/ Capitalized Interest	3,623	6,211	6,211	1,876	1,239	1,251	1,261
Total Revenues	5,666	12,655	20,317	18,267	18,842	19,286	19,692
EXPENSES							
Operating Expenses	0	0	7,825	9,672	9,962	10,261	10,569
Debt Service Payments [1]	3,623	6,211	6,211	7,756	7,755	7,755	7,756
Transfers to the Insurance Fund	0	6,211	6,211	767	1,050	1,193	1,288
Working Capital Requirements	0	0	71	73	75	77	79
Costs Associated with Storage Facilities	2,043	233	0	0	0	0	0
Total Expenses	5,666	12,655	20,317	18,267	18,842	19,286	19,692

[1] Actual debt service is less than these amounts. See the section entitled "DESCRIPTION OF THE SERIES 1990 BONDS – Debt Service Requirements."

The major economic assumptions for operations are reviewed below.

Operating Revenues. The operating revenues are based on the ridership projections in the Demand Study. An executive summary of the study including a description of the update performed by NVTC is attached hereto as APPENDIX A. Assumptions upon which the study is based are set forth in APPENDIX A and should be carefully evaluated to understand their implications. Ridership Revenues for fiscal year 1994 are based on the 7,200 riders forecast in the Demand Study assuming an average blended one-way fare of approximately $3.30 for the 250 days per year that service will be provided. The anticipated fare structure includes: multiple-ride, round-trip and single, one-way trips. The revenue estimate is based upon the discounted revenues of the multiple-ride pass. The Commissions will consider the possible introduction of a monthly pass, and multiple-ride fares which will be honored on other local transit systems. Given partial year operation and gradual growth to the base level of ridership, passenger revenues for the first fiscal year are projected to be about $3.5 million. Thereafter assumed fares are escalated at 3% per annum in line with assumed escalation of costs.

The Ridership Revenues presented here are based on service to Washington, D.C. If the contingency plan is adopted the projected revenues will decrease. The nature of the obligations of the Participating Jurisdictions under the Master Agreement will not change if the contingency plan is implemented. Because the level of ridership may vary based on a number of factors, bondholders should not rely on Ridership Revenues being generated at the levels set forth above, but should consider the annual appropriations by the Participating Jurisdictions the primary security for the Series 1990 Bonds.

Operating Expenses. Operating expenses for commuter rail service are expected to total $7.8 million for fiscal year 1992 (the first year in which service is provided) and $9.7 million for fiscal year 1993 (the first full year of service) and are escalated by a factor of 3% per year thereafter. The cost of operations are developed in Operating Agreements with Amtrak and the Railroads.

- Amtrak will provide all train and engine crews, maintenance of equipment and transportation supervision. The estimated cost of these services is $8.1 million in 1993 and is escalated by a factor of 3% per annum, thereafter.

- RF&P, Southern, and Conrail will be paid for trackage rights and will be expected to provide maintenance of way sufficient to allow 70 m.p.h. operation of passenger trains. The estimated cost of these services is $1 million in 1993 and is escalated by a factor of 3% per annum, thereafter.

- Marketing and Administration are expected to cost $500,000 in 1993. These expenses, also escalated at 3% per annum, thereafter, cover the cost of the Rail Manager and the marketing program designed to attract the forecasted daily riders.

- Initial funding for the Insurance Fund is described in the subsection of this section entitled "Commuter Rail Operations Liability Insurance Plan." Transfers to the Insurance Fund after the start of commuter rail service will be based on current actuarial studies.

Aid from the Commonwealth of Virginia

In Chapters 11, 12, 13 and 15 of the Acts of Assembly, 1986 Special Session (the "1986 Acts") the General Assembly established the Commonwealth of Virginia Transportation Trust Fund. The Transportation Trust Fund is funded primarily from additional revenues generated by increases in the retail sales tax and motor vehicle related taxes and fees effected by the 1986 Acts. The 1986 Acts allocated 8.4% of these additional revenues for public transportation purposes ("Mass Transit Funds"). Under the 1986 Acts, the Commonwealth Transportation Board is directed to allocate the Mass Transit Funds as follows:

% of Total Mass Transit Funds	Purpose
73.5%	Grants for eligible operating costs
25.0%	Grants for eligible capital costs (including debt service attributable to capital costs)
1.5%	Grants for Special Projects

There is no assurance that any of these taxes or fees will remain in effect or that they will continue at current levels. Even if the taxes or fees continue at current levels, the General Assembly is under no obligation to continue to allocate the Mass Transit Funds to mass transit or to appropriate the funds for such purposes.

The Commonwealth Transportation Board adopted a resolution on May 21, 1987 affirming its intention to provide continued financial assistance for the Virginia Railway Express.

NVTC currently has a contract with VDOT for the fiscal year ending June 30, 1990. This agreement provides for Commonwealth of Virginia aid on a reimbursement basis in the amount of (1) $730,043 for administrative expenses and (2) $7,933,405 for capital costs related to the platforms, storage facilities and parking lots. If the Commissions are not eligible for reimbursement of these amounts prior to the June 30, 1990 contract termination, it is expected that the Commonwealth of Virginia will extend the contract.

The Commissions expect to receive Commonwealth of Virginia aid on an ongoing basis for approximately 25% of the operating costs and approximately 50% of the capital costs of the Virginia Railway Express. The Commissions base this expectation on discussions with representatives from VDOT but are of the opinion that this is an upper limit on the amount of funding that can be expected from the Commonwealth of Virginia.