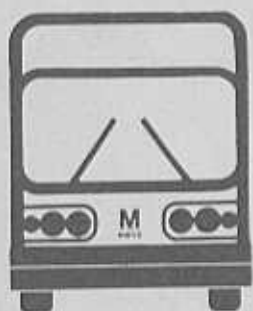


para transit alternatives to off peak bus service



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TAXI PROJECT

CP

REVIEW OF PUBLISHED REPORTS

AUTHOR: NUTC
TITLE: Paratransit Alternatives to Off Park Bus Service
DATE: 1978

DESCRIPTION: Study of Paratransit options, existing services in No. Va., regulatory environment & proposals for instituting new service

COMMENTS: Provides info on taxi industry in N.V., which needs to be updated (p. 35-40).

Description of Alexandria's E+H taxi program indicated (p. 41) discount was given to program for "consistent business"
Appendix III provides analysis of alternative rates.

This report highlights need to clarify what current regulatory environment is. See Sec III + Appendix VI.

DOCUMENT PROVIDES INFORMATION ON:

- Yes Fare & Accounting Procedures out of date
- Yes Productivity Measures, b.t. they are out of date

REVIEW DATE: 8/10/84

PARATRANSIT ALTERNATIVES
TO OFF PEAK
BUS SERVICE

JUNE 1978

NORTHERN VIRGINIA TRANSPORTATION COMMISSION
2009 NORTH 14th STREET
ARLINGTON, VIRGINIA 22201

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EXECUTIVE SUMMARY

INTRODUCTION

This report summarizes the major findings and recommendations of the "Paratransit Alternatives to Off-Peak Bus Service" study for Northern Virginia, conducted by the Northern Virginia Transportation Commission. The study has been reviewed by and received valuable guidance and input from the staffs of the local jurisdictions and private industry.

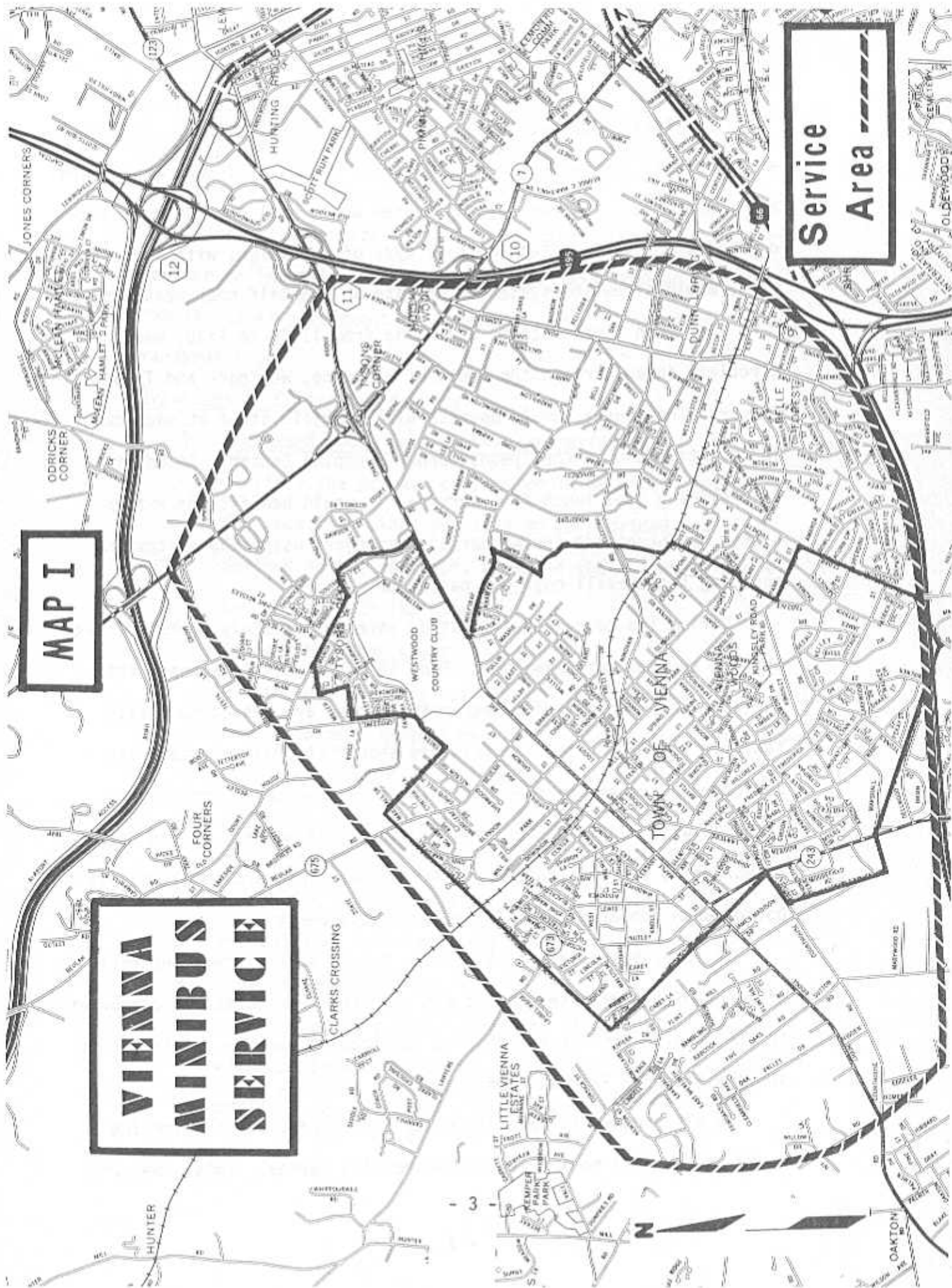
The study provides an overview of the current thinking on paratransit systems, in terms of innovations, legality, and possible areas for its use. This information supplies the base from which new paratransit systems can be developed for various areas in Northern Virginia and establishes the precedent that paratransit systems can be an economical and efficient alternative to the traditional fixed route bus systems.

Several areas in Northern Virginia were looked at for implementation projects. Although the Tysons Corner area was chosen for the first project, two other areas are worthy of note. They are the Springfield area, which is growing at a rapid rate, and Old Town Alexandria where NVTC has recently completed a study. Both areas have large commercial and business areas and sufficient population densities to support some type of increased neighborhood transit service.

MAP I

**VIENNA
MINIBUS
SERVICE**

**Service
Area**



The jitney loops would circulate through the neighborhoods on a fixed route and interface with Metrobus routes at Tysons Corner and along Route 123. Patrons of the system would hail the bus much like one hails a taxicab. Running this type of operation, with two vehicles, would allow the system to operate on one-half hour headways.

The lunch time shuttle, operating from 11:30 to 1:30, would circulate in and around the areas of Westgate, Westpark and Tysons Corner. The shuttle would operate with specific stops at each major installation and at the Tysons Corner Shopping Center. In addition to providing good lunch time service, it would benefit the entire system by increasing the number of passengers using the system and reducing the overall cost per passenger.

During the course of this study several privately operated paratransit systems were examined. From this analysis it appears that large scale unsubsidized paratransit systems are not economically feasible. However, the analysis did show that private enterprise can operate systems more economically than government run systems. Combined with sufficient backing by local governments, in the form of marketing and coordination, private operations are an attractive option when compared to WMATA or local government.

It is proposed here that Fairfax County enter into a contract with one of the privately owned and operated transportation companies in the area to provide the desired paratransit service and that this service be under Fairfax County's direct control.

An alternative to Fairfax County contracting for the service would be for NVTC to act as the contracting agency. This, however,

would only be desirable if an outside source of funds were found to operate paratransit services in Northern Virginia.

There are several ways in which contracting for services can be done. What is important is that the contract must give the private operator an incentive to increase productivity and on the other side give the local government the greatest control in keeping service standards high.

Advantages to Contracted Service

1. Increased Local Control Over Operations

Since the private company would be under contract to the locality, exact services to be provided would be defined in the contract, as would the allowable costs associated with the operation.

2. Established Operations

Hiring an already operating private company would insure that necessary trained management, maintenance, and operating staffs would be available.

3. Increased Transit Accessibility

The neighborhood loops would bring transit closer to the public than today's system. In addition it would make the adjusted line haul service more accessible.

4. Experienced Operators

A number of private operators already have experience with paratransit operations and would have no problem adding a new service to their operation.

5. No Capital Investments Needed

Since the contractor would supply their own vehicles, no public investment in equipment would be necessary to start the service.

6. Termination of Service

With a fixed term to the contract the local government would choose to end the service or change contractor if the service was not operating properly or up to expectations.

Disadvantages in Contracted Service

1. Costs and Profits

A private operator would include in his agreement a profit over the cost of providing the service.

2. Coordination Problems

In all the non-Metro options, the paratransit service would interface with Metrobus and rail services. This will require the coordination of headways and transfer procedures.

3. Fares

If a low fare, such as 25¢, were not adopted a fare structure would have to be developed to make the transfer to and from Metrobus an attractive alternative to the other modes of transportation.

Costs and Revenues

The annual operating subsidy for off-peak Metrobus service in the Vienna-Tysons corridor is estimated to be \$299,000. This consists of

the costs for Routes 3V and 5W. The termination of the 5W route would reduce this amount by approximately \$163,950 per year.

The current ridership level for the 5W, in the Vienna area, is six persons per trip, and 12 for the route overall. This ridership generates \$22,800 a year in revenues, for an operating deficit of \$163,950 per year.

If a two-vehicle jitney loop is substituted for the 5W service in the Vienna area, it can be expected to have an operating cost of \$89,460 per year, with an estimated patronage of ten persons per trip; generating \$17,680 in revenues, at a 25¢ fare level. The resulting operating deficit would be \$71,780 per year. Compared to the current 5W Metrobus service this would be a decrease in subsidy of \$92,170 per year.

Lunch Time Shuttle Service

The shuttle service envisioned here would operate from 11:30 A.M. to 1:30 P.M. Monday through Friday. It would, as a minimum, require one additional vehicle to provide 15-minute headways, eight trips during the service hours.

The additional operating expense would be approximately \$12,000 a year, the exact cost being dependent on whether this service was part of an overall contract with an operator or a separate service. Estimated ridership is 15 persons per trip at a 25¢ fare level. This would result in revenues of \$7,500 per year and an operating deficit of \$4,500.

The combined operating costs and revenues for each of the systems are summarized below in Table A by year and in Table B over a five year period.

TABLE A
OPERATING COSTS, REVENUES AND DEFICITS

	<u>First Year</u>			
	<u>Current Metrobus 5W</u>	<u>Jitney</u>	<u>Lunch Shuttle</u>	<u>Paratransit Total</u>
Operating Costs	\$186,750	\$89,460	\$12,000	\$101,460
Revenues	<u>22,800</u>	<u>17,680</u>	<u>7,500</u>	<u>25,180</u>
Deficits	\$163,950	\$71,780	\$4,500	\$76,280

TABLE B
SUBSIDY LEVELS 5-YEAR PROGRAM*

<u>Metro 5W (40¢ fare)</u>	<u>Jitney (25¢ fare)</u>	<u>Lunch Shuttle (25¢ fare)</u>	<u>Paratransit Total</u>
1 - \$163,950	\$71,780	\$4,500	\$76,280
2 - 175,426	78,804	4,815	81,619
3 - 187,706	82,180	5,152	87,332
4 - 200,845	87,933	5,513	93,446
5 - 214,904	94,087	5,899	99,986

* Increases are based on 7% inflation factor with no fare increase.

It should be noted that the revenues suggested here do not take into account the increased patronage to Metrobus which may occur from transfers from the jitney, and lunch time shuttle service.

Advantages and Disadvantages of 25¢ Fare

Advantages

- 25¢ single coin
- Easy for passengers
- Encourages frequent trips
- Easy to administer
- Encourages short trip
- Establishes good image
- No need for complicated Metrobus transfer mechanism

Disadvantages

- Lower revenues
- May divert patrons from Metrobus
- Added cost for those transferring to Metrobus.

LEGAL OVERVIEW

The State of Virginia regulates paratransit activities through the State Corporation Commission (SCC), which is governed by the Motor Carrier Laws. These laws have evolved over the past 50 years from the Code of Virginia and numerous court cases which have interpreted the laws. These interpretations of the law have made many privately operated paratransit systems illegal. However, if the jitney system is operated only in one city or county, or is operated under contract to a city, county, or NVTC, it would be feasible since it would then be legal under current SCC regulations and NVTC enabling legislation.

TRANSPORTATION BROKER

In Northern Virginia there are a number of existing transit and paratransit systems. One of the problems with these systems is that many are unfamiliar or unknown to the prospective patrons. In addition, many of these systems are not coordinated, which leads to a duplication of effort and a waste of resources. The answer to these needs, as suggested here, is a Transportation Brokerage Service provided by NVTC.

The implementation of the Broker Service would initially involve a reorientation of current staff efforts toward more service directed work. This would include promoting van pooling, investigating areas for new services, putting together and distributing information flyers, lending assistance to groups to improve and establish paratransit services, and generally promoting transit and paratransit.

The following list are items that should be of particular emphasis for the Brokerage Service:

- Generate Increased Usage of Current Systems
 - In areas with little or no transit
 - In areas of low ridership
 - In employment centers
- Promote New Systems

Introduce van pooling and promote the information matching service provided by COG.

- Funding

- Increase awareness of funding mechanisms; promote new legislation that will help rather than hinder coordination of services.
- Make full use of Federal, State and local funds which are already available.

This Broker concept would not involve any additional staff costs, but would probably involve an outlay of some monies for printing of needed materials.

In addition to the Brokerage Service, it is suggested that at some future date a Transportation Information Center be developed. This is not needed today, but as new systems are developed through the Brokerage Service and as Metrorail comes out to the suburbs, a need for such an Information Center oriented to Northern Virginia may develop.

PROGRAM FOR IMPLEMENTATION

The course to follow for implementation of this program involves the following steps:

- First: NVTC should establish a Transportation Brokerage Service using inhouse personnel and summer interns.
- Second: NVTC and the local jurisdiction, Fairfax County, should establish the exact routing for the jitney loop and lunch time shuttle.
- Third: Determine if outside funds are available to fund the jitney loop. If no funds are available Fairfax County will have to determine if they wish to fund the system.
- Fourth: Prepare a bid proposal and solicit bids from the private sector.
- Fifth: Concurrently with #4, advertise the proposed changes in Metrobus service.
- Sixth: Based on staff and public input decide a definite timetable to commence service.

Estimated Costs

Vienna jitney loop	\$71,780
Lunch Time Shuttle	4,500
Transportation Broker	No new costs
Total Operating Subsidy	\$76,280

Proposed Funding

Jitney loop - Fairfax County

Lunch Time Shuttle - Fairfax County

Current Metrobus Service

5W subsidy paid by Fairfax County - \$163,950

Net reduction in subsidy = \$92,170

INTRODUCTION

The current fixed route bus system in Northern Virginia is designed with the intended purpose of providing peak-hour commuter service to and from downtown work sites. Heretofore the improvements made in transit service have for the most part been made in the area of new or expanded radial routes serving the peak hour commuter. This commuter oriented type of transit service leaves "off-peak" service in the position of being a costly, often criticized, system of radial routes, largely ignoring the activity centers of the off-peak hours -- an UMTA official has suggested the following paratransit scenario as an alternative:

In the morning a fleet of vans or minibuses delivers the resident of a low density suburban community to the local commuter rail station or express bus stop. During the day some of the same vehicles provide scheduled service from the community to the regional shopping, medical and other activity centers. Other vehicles provide demand-responsive shared-ride local transit service for children and adults without cars who wish to visit friends, go to the neighborhood swimming pool, the local library or other community centers. In the late afternoon the vehicles meet the commuter trains and buses and bring the returning commuters back to their homes. In the evening and on weekends part of the fleet doubles up as a local taxi system that responds to telephone requests for individual door-to-door transportation service. By adjusting the form of service to the changing temporal demand patterns, the paratransit fleet achieves a high rate of utilization and superior productivity, while providing at the same time a high level of service." ^{1/}

In addition to being a more patron oriented transportation system, paratransit is also being looked at as an alternative to conventional fixed route Metro service because of its cost effectiveness. In the

^{1/} Para-Transit: The Coming of Age of a Transportation Concept, C. Kenneth Orski, Associate Administrator for Policy and Program Development, UMTA, November 9, 1975, Williamsburg, Virginia.

suburbs, where there are low densities and dispersed travel patterns, paratransit systems can be considerably more efficient than fixed route service. The original experiments in paratransit had costs of from \$1 to \$3 per ride, which at the time seemed quite reasonable. However, since that time conventional service costs have risen to the same levels. "For example, a low density suburban Washington bus line showed an average cost of \$2 per ride weekdays and over \$12 per ride on Sundays;"^{1/} the Washington system as a whole has an average cost of \$.78 per ride",^{1/} based on 1975 figures.^{2/}

Paratransit systems on the other hand have begun to reduce their per rider cost. Montgomery County's Ride On service has a deficit of only 46¢, with an overall cost of 71¢ per rider. This system and others are described in Section II, Existing Paratransit Systems in Northern Virginia.

In a response to the need for reducing transit costs and improving transit productivity, this study was designed to evaluate and analyze Metrobus off-peak service in the Virginia suburbs, and consider paratransit alternatives to this service.^{3/} The study was divided into two phases; the first phase was an overview of the current status of existing paratransit systems, legal barriers to extended paratransit service, and a geographical delineation of possible areas for the implementation of paratransit service. The second phase of this study is an indepth analysis of one of the designated areas with defined paratransit options for implementation.

^{1/} Eldon Ziegler "Integration of Transit and Paratransit, 1977", TPB Conference Report.

^{2/} WMATA Non-Standard Bus Study, 1977, p.128.

^{3/} Appendix I

The first section of this study begins with an analysis of the paratransit systems available to Northern Virginia jurisdictions. The services examined include Hail or Phone services, Prearranged Ride Sharing, modified conventional Fixed Route bus service, CARTS (Community Auto Rapid Transit System), and a Transportation Brokerage system.

Section Two summarizes the current uses of paratransit modes in Northern Virginia, including the Reston RIBS, Vienna Jitney, Arlington's Metro Shuttle, and Alexandria's Shared-Ride Taxi.

Section Three is an overview and evaluation of the alternative paratransit modes in the context of what legal and institutional barriers exist, and suggests the means for overcoming these obstacles.

Section Four is an analysis of the various system management options and a discussion of the various funding mechanisms.

Section Five is a look at the ridership projections and system operating and capital costs.

Section Six is the analysis of five possible options for the Tysons Corner area. From these options, Option Three came to the forefront and was chosen as the recommended course of action. In addition, a transportation brokerage system was designed to complement the new paratransit system and to coordinate the existing transportation services in Northern Virginia.