

SURVEY AND ANALYSIS OF SPECIAL TRANSPORTATION
FOR THE ELDERLY AND HANDICAPPED IN
VIRGINIA'S URBANIZED AREAS

by

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(The opinions, findings, and conclusions expressed in this
report are those of the author and not necessarily those of
the sponsoring agencies.)

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ABSTRACT

This report is a summary and analysis, where applicable, of those activities in Virginia's urbanized areas which have been undertaken through the planning process to address the transportation needs of elderly and handicapped persons. For each urbanized area the special efforts planning and any resulting special efforts projects are described, with available operating data for the projects being presented. The report provides planners and other responsible officials with information that will allow them to compare the special efforts in their own areas with those in other parts of the state or to initiate services for the elderly and the handicapped.

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INTRODUCTION

In recent years increased emphasis at all levels of government has been placed on addressing the problems of the elderly and handicapped, and the lack of adequate transportation frequently has been identified as one of the most critical problems facing these people. Transportation, or mobility, is a vital part of life in our society, and for the most part it is based on use of the private automobile, a mode of transportation that the elderly and handicapped cannot avail themselves of because of their physical or mental impairment and the often associated economic problems. Thus it is not surprising that transportation is a major problem for them, especially when such basic needs as employment, medical care, and shopping are dependent on transportation.

Public transportation is often considered a viable alternative to the automobile for the elderly and handicapped, particularly in urban areas. Until recently public transportation systems typically were not designed or developed to accommodate their special needs. For example, non-ambulatory persons could not patronize a regular transit bus not having specially designed equipment, e.g., a lift or ramp, and an elderly person had problems negotiating the steps at the door. In September 1975, however, the Urban Mass Transportation Administration (UMTA) and Federal Highway Administration (FHWA) issued joint planning regulations for urban areas having a population of 50,000 or more which required, in part, that each Metropolitan Planning Organization (MPO) include in its planning process "special efforts to plan public mass transportation facilities and services that can effectively be utilized by elderly and handicapped persons" (Federal Register, September 17, 1975). This requirement was a result of Section 16(a) of the Urban Mass Transportation Act of 1964, as amended, which declares the national policy that elderly and handicapped persons have the same right as other persons to utilize mass transportation facilities and services. A similar provision is found in Section 165(b) of the Federal-Aid Highway Act of 1973, as amended.

In April 1976, a joint UMTA and FHWA issuance provided supplementary advisory information on the "special efforts" requirement (Federal Register, April 30, 1976). The same issuance established the following additional criteria which must be satisfied prior to approval of any project by the UMTA.

1. The planning process must exhibit satisfactory special efforts in planning public mass transportation facilities and services that can be used by elderly and handicapped persons.
2. The annual element of the transportation improvement program (TIP) submitted after September 30, 1976, must contain projects designed to benefit elderly and handicapped persons, especially individuals who are semiambulatory or who use wheelchairs.
3. After September 30, 1977, reasonable progress must be demonstrated in implementing previously programmed projects.

As a result of the regulations, the formal planning processes of MPO's in Virginia began to reflect an emphasis on planning for and implementing the special efforts for the elderly and handicapped. Recognizing the variance in local area needs and the importance of local development, neither the UMTA nor the FHWA specified a program design to meet the special efforts requirement. Accordingly, the special efforts differ among the urbanized areas in the Commonwealth and result in various degrees of success in aiding the elderly and handicapped.

PURPOSE AND SCOPE

The overall purpose of the study reported here was to survey and analyze the various special efforts which have been undertaken in Virginia's urbanized areas to address the special transportation needs of elderly and handicapped persons. The presentation of the findings in this single document fulfills several specific objectives of the study. It provides planners in the urbanized areas information with which to compare their special efforts with those of their counterparts and possibly to discover new ideas and ways to improve their planning activities and special services. In smaller urban areas and even rural areas where officials may wish to initiate or improve services, the information provided can be used for general guidance and the establishment of contacts. At the state level, the report complements previous and ongoing planning efforts by the Office of the Secretary of Transportation and the Virginia Department of Highways and Transportation (the Department) concerning

the transportationally disadvantaged in small urban and rural areas of the state. Finally, the information is of benefit to the planning staff of the Department in fulfilling its role in the urbanized areas' transportation planning process.

The survey aspect of the study included an investigation of key elements in the special efforts planning and of pertinent issues arising where special projects had been implemented. An analysis of the operational characteristics of the implemented special projects was conducted where data were sufficient.

As indicated previously, the special efforts are required in those urban areas having a population of 50,000 or more. Accordingly, the following urbanized areas were included in the study.

1. Lynchburg urbanized area;
2. Roanoke urbanized area;
3. Tri-Cities urbanized area—includes Petersburg, Hopewell, and Colonial Heights;
4. Peninsula urbanized area—includes Newport News and Hampton;
5. Richmond urbanized area;
6. Southeastern urbanized area—includes Norfolk, Portsmouth, Virginia Beach; Chesapeake, and Suffolk;
7. Washington, D. C., urbanized area—includes Northern Virginia counties of Arlington, Fairfax, Loudoun, and Prince William, and all cities and towns within their boundaries; and
8. Kingsport, Tennessee, urbanized area—includes Gate City, Weber City, and vicinity.

METHODOLOGY

The procedure followed in developing the report consisted of five basic steps, with the initial step being the development of a set of 19 questions concerning the special efforts. These questions (see Appendix A) were the uniform base for which information and data were collected in each urbanized area. As a second step, the appropriate transportation planning personnel in the Department were contacted to obtain copies of each area's unified transportation work programs and transportation improvement programs for the fiscal years 1976 through 1979 and copies of

completed planning documents concerning transportation for the elderly and handicapped. The third step consisted of answering the aforementioned questions based on the information collected. Since this information was frequently outdated and incomplete, the fourth step was an interview with the transportation planner for each metropolitan planning organization to finalize answers to the questions. As deemed appropriate by the transportation planner, other participants in the special efforts program were also invited to the interview. The final step was a compilation of the collected information and an analysis of the data where feasible.

FINDINGS

The information collected concerning the special efforts undertaken in each urbanized area to address the transportation needs of the elderly and handicapped is summarized in this part of the report. More detailed information can be obtained from the MPO's transportation planner, whose name, address, and telephone number are listed in Appendix B. The findings are presented in three basic subject areas—background information, planning information, and project information. The initial planning effort in each area has been completed; however, the planning information presented should be of value in the urbanized areas in the continuing phases of the planning process and to other smaller areas initiating planning activities for the elderly and handicapped. A final section summarizes findings regarding several issues that are frequently of interest in special efforts planning and projects.

Lynchburg Urbanized Area

The Lynchburg area, which is geographically defined by the transportation planning study area boundary, consists of Lynchburg and portions of the counties of Amherst, Bedford, and Campbell, and has a population of approximately 106,800 (1976 Department estimate). The Central Virginia Transportation Planning Council, which serves as the policy committee for the formal continuing, comprehensive, and cooperative (3-C) transportation planning process, is the designated MPO for the area. The Central Virginia Planning District Commission's (CVPDC) staff serve as staff to the MPO. Transit service is provided by the Greater Lynchburg Transit Company (GLTC), a public, nonprofit corporation owned and locally subsidized by the city and operated by a private management firm. Service is provided throughout the city of Lynchburg with one route extending into the Madison Heights area of Amherst County.

Special Efforts Planning Information

Based on a request by the social service agencies in the area, the CVPDC programmed a social services transportation study for fiscal year 1975. The scope of the study was expanded to include the special efforts planning requirements, and the Special Services Transportation Study (SSTS) was initiated in March 1975, under the supervision of the transportation planner for the CVPDC. The Special Services Transportation Study Task Force, which consisted of 25 representatives from various private, public, local, and state agencies concerned with transportation services for the target population, was established to provide overall guidance, review, and approval of the study effort. The study was completed and adopted by the MPO in October 1978. Planning activities in the fiscal year 1979 planning work program include further analysis of the study's recommendations and a survey by the GLTC of the elderly and handicapped. Following is a discussion of several of the key elements of the planning study.

Identification of the Elderly and Handicapped

Based on a Department procedure using the 1970 census data and national incidence rates, the total number of transportationally handicapped individuals residing in the Central Virginia Planning District (CVPD) in 1976 was estimated. An initial attempt at developing the estimate based on social service agencies' records and the census was not successful due to poor record keeping and double counting. This total transportationally handicapped population was further stratified by jurisdiction and by non-handicapped individuals who were above the poverty level and 60 years of age or over; non-handicapped individuals, regardless of age, who were under the poverty level; semi-ambulatory individuals, regardless of age and income level, who can use transit only with difficulty; and non-ambulatory individuals, regardless of age or income level, who cannot use conventional modes of transit.

Transportation Needs of the Elderly and Handicapped

After the inventory of existing resources was made, a travel needs survey was conducted primarily to determine the trip-making characteristics, perceived travel demand, and interest in transportation services of elderly, handicapped, and low income persons. Approximately 7,300 copies of the questionnaire were distributed to clients of social service agencies throughout the area, with approximately 1,000 being completed and returned. This method of distribution was selected because it was less costly than the

more refined sampling techniques. General information concerning transportation needs was obtained; however, utilization of the results was limited because of the survey technique. For example, only 37 handicapped persons completed the questionnaire and the responses were not evenly distributed throughout the area.

The aforementioned Department procedure for estimating the number of transportationally disadvantaged also employed data from a study in Maine to derive an estimate of potential ridership from each category of the target population in each jurisdiction. Trip rates developed from the above travel needs survey were applied to the potential ridership to estimate total monthly trips by jurisdiction and category.

Alternatives, Evaluation, and Recommendations

The four alternatives listed below were considered for the provision of transportation services to the elderly and handicapped.

1. Continue present policies or maintain status quo.
2. Coordinate existing transportation services through cooperative agreements between agencies.
3. Delegate the authority and responsibility for providing elderly and handicapped transportation services to an existing agency and for providing social service agency transportation services to another existing agency.
4. Establish a new agency to supply all elderly, handicapped, and social service agency transportation services within the CVPD.

The discussion and final evaluation of the four alternatives by the SSTS Task Force was based on the study's adopted goal and objectives and six additional factors. The Task Force developed a total of 19 recommendations, 4 concerning the provision of general service and 15 concerning the specific alternatives under investigation. With regard to the alternatives, it was recommended that alternative 4, the concept of a new agency to supply through coordination of resources all special transportation, be implemented.

Special Efforts Project Information

In order to meet the requirement concerning special efforts projects, the annual element of Lynchburg's current transportation

improvement program contains two projects with associated costs totalling more than 5% of the UMTA's Section 5 allocation to the GLTC. The programmed projects include the retrofitting of 2 GLTC buses with wheelchair lifts and operation of the Central Virginia Commission on Aging's Dial-a-Ride Program, which is coordinated with the Information and Referral Service of Central Virginia.

As a result of the special efforts planning activities and subsequent recommendations of the SSTS Task Force, the Central Virginia Special Transportation Company, known as SPECTRAN, was established in October 1978. It was incorporated as a private, nonprofit corporation with the general purpose of supplying nonemergency, special-service transportation on a contract basis to social service agencies that require transportation in their programs. The objectives of the Company are to improve the quality and quantity of transportation to the transportationally disadvantaged and to relieve the social service agencies of the responsibility for providing transportation for their programs. These objectives will be met through pooling resources and coordinating services.

The initial three stockholders, each purchasing 1 share of stock at \$1.00 per share, are the GLTC, the Central Virginia Commission on Aging, and the Central Virginia Mental Health Services. With these three agencies as the nucleus, SPECTRAN is currently in Phase I of a 4-phase program of implementation which will eventually result in demand responsive, reservation, and fixed route and schedule special transportation services for the planning district. In Phase I the Company is developing its operating, financial, and personnel policies and practices along with plans for offering the service to other agencies. Phase II will be to duplicate the services now being provided by the Commission on Aging and the Mental Health Services in order to test the operational details, with Phase III testing the means of expanding services to the two agencies. Phase IV will be directed toward expanding the service to other agencies through the sale of shares and execution of contracts. Private-for-profit transportation providers cannot become stockholders; however, it is envisioned that they will contract with SPECTRAN to provide services.

The Company is managed by a six member Board of Directors, two members from each of the three aforementioned initial agencies. Each new stockholder will be allowed to appoint two directors to the Board. The drivers and other operating personnel will be employees of SPECTRAN, with management personnel being provided by the GLTC. Operating headquarters will be in the offices of the GLTC.

The primary advantage of the SPECTRAN system is that it allows for the maximum utilization of existing resources by coordinating and consolidating existing equipment and services, along with the potential for supplying additional services. Thus, it should entail better service to the transportationally disadvantaged in the area at a lower unit cost to the community than was heretofore available. Finally, the Company should be able to provide services without being beset by the labor problems typically found in the public transit companies. Although problems have arisen in collecting information in the pre-operational phase, serious disadvantages, if any, to this method of providing special services will likely not appear until operations are initiated. Problems to date have resulted primarily from the poor transportation records typically maintained by agencies not in the transportation business.

Roanoke Urbanized Area

As defined by the transportation planning study area boundary, the Roanoke area consists of Roanoke, Salem, Vinton, and a portion of Roanoke County, and has a population of approximately 187,700 (1976 Department estimate). The policy group for the 3-C transportation planning process, the Roanoke Area Transportation Policy Board, is the designated MPO and receives staff support from the Fifth Planning District's staff. The major portion of transit service is provided exclusively in the city of Roanoke by the Greater Roanoke Transit Company (GRTC), which is a public, non-profit company owned by the city of Roanoke and operated by a private management company.

Special Efforts Planning Information

The MPO responded to the federal requirements by initiating a study entitled Transportation Needs of the Elderly and Handicapped in the Roanoke Metropolitan Area in September 1975. The study, which was performed by the staff of the Fifth Planning District Commission (5th PDC), was completed in late 1976. A special Citizens Advisory Committee served in a review and comment capacity. Current programmed activities include continued monitoring and/or updating of the initial study. Following is a discussion of several of the key elements of the planning study.

Identification of the Elderly and Handicapped

Based on the 1970 Census data for persons 62 years of age and older, the total number of elderly in Roanoke, Salem, Vinton, and Roanoke County in 1970 was estimated.

Extensive efforts were made to identify the handicapped by canvassing social service agencies, churches, and other interested organizations and by employing self-identification solicitation through the news media. Minimal success was achieved, and national incidence rates were ultimately utilized to identify the number of transportationally handicapped persons for each of the aforementioned four jurisdictions. This total was stratified by jurisdiction and by persons who cannot use transit, persons who use transit with difficulty, persons with acute conditions, and persons who are institutionalized. The number identified by the initial efforts amounted to slightly over 10% of this estimate.

Transportation Needs of the Elderly and Handicapped

An inventory of existing resources was conducted as an initial step. Then, in order to derive specific transportation needs of the elderly and handicapped in the Roanoke area, a questionnaire was mailed to known persons in the target group. Out of approximately 1,000 questionnaires distributed, 193 were returned in usable form, including 55 from handicapped individuals. Although general application of the survey results was questionable due to the small sample, the survey did provide insight into transportation needs of the elderly and handicapped. Transportation needs were also determined from a series of meetings at retirement centers and in interviews with handicapped individuals.

Alternatives, Evaluation, and Recommendations

The seven alternatives for providing transportation to the elderly and handicapped which were evaluated by the 5th PDC staff and the Citizens Advisory Committee are described in the following.

1. Maintain the status quo.
2. Equip or reequip the present bus fleet with wheelchair lifts, and make the system generally more accessible.
3. Establish a transportation district to coordinate and/or provide the service.
4. Provide special transportation services through the GRTC.
5. Provide special transportation services through an independent agency under direct contract with the GRTC.

6. Contract with private transit and ambulance companies to provide services.
7. Utilize a combination of public, private, and private-nonprofit organizations operating under an umbrella agency to provide services.

The 5th PDC staff recommended that alternative 7 be developed to address the needs of the elderly and handicapped citizens in the Roanoke area. It was recommended that an existing private, nonprofit organization, Unified Human Services Transportation System, Inc. (UHSTS), expand its operation to cover the planning area and serve as the umbrella coordinating agency. In this role, the operating program of the UHSTS, Inc., Roanoke Area Dial-a-Ride (RADAR), would coordinate all special services for the elderly and handicapped to avoid duplication, establish a system of transportation for the non- and semi-ambulatory population, and establish a centralized transportation service by providing service or arranging for service through any of the existing providers, including taxis.

Special Efforts Project Information

In order to meet the special efforts project requirements, the MPO has included three projects in the annual element that have an associated cost totalling 5% of the UMTA's Section 5 allocation to the GRTC. These projects include the purchase of 2 mini-buses with lifts, Roanoke and Roanoke County's subsidy to RADAR, and the GRTC's maintenance assistance to RADAR.

The UHSTS, or RADAR, was established in a joint effort of 23 local agencies as a demonstration project under State Senate Bill 517, which encouraged social service agencies to reevaluate their programs and to maximize coordination in order to avoid duplication of services. The stated purpose of the project was to establish a uniform transportation system for the clients of participating organizations. RADAR began operation in October 1975.

RADAR has contracted with six local agencies to provide transportation for their programs. Two of the agencies have turned over their vehicles to RADAR, with the balance of the fleet of approximately 20 vehicles being leased from other organizations, including 2 under lease/purchase agreements with private leasing companies. The fleet consists of vans, several sizes of school buses, a station wagon, and 2 mini-buses with wheelchair lifts. The majority of the smaller sized equipment is 3 to 4 years old

while the larger equipment is generally over 8 years old. RADAR also leases a base station and 10 mobile radio units. Service is provided from 6 a.m. to 11 p.m. on weekdays with some special services being provided on the weekends.

Requests for service must be channeled through one of the six agencies under contract. That is, if RADAR receives a call for service, the caller is matched with a service program under the auspices of one of the contracted agencies and is advised to call that agency to arrange transportation. Referral services to the taxi company and an ambulance company is offered if none of the six agencies can handle the service request. Trip records are maintained and the agencies are billed for the service provided. Ultimately RADAR hopes to operate as described in the aforementioned study recommendations.

RADAR operates out of an office provided rent-free by Roanoke and with an executive director, bookkeeper, secretary, transportation coordinator, and 16 full-time drivers.

Tri-Cities Urbanized Area

The Tri-Cities area, as defined by the 3-C study area boundary, consists of the cities of Petersburg, Hopewell, and Colonial Heights and portions of the counties of Dinwiddie, Prince George, and Chesterfield. The area has a population of approximately 134,000 (1976 Department estimate). Policy for the planning process is established by the Tri-Cities Area Transportation Policy Committee, which is the designated MPO. Staff support is provided by the Crater Planning District Commission's (CPDC) staff. The Petersburg Area Transit (PAT) began operations on July 1, 1977, when the city of Petersburg purchased certain assets of the local private transit company. The majority of the service provided is within Petersburg; however, two routes extend into Colonial Heights and Chesterfield County. Colonial Heights subsidizes the service within its boundaries, while Petersburg subsidizes the remainder of the transit services.

Special Efforts Planning Information

In order to determine the transportation needs of elderly and handicapped persons in the Crater Planning District, the CPDC initiated the Transportation Study for the Elderly and Handicapped during fiscal year 1977. This initial study was completed in

February 1978, with a supplement being published in June 1978. The study was essentially conducted by the transportation planning staff of the CPDC, although some input was obtained in a review and comment capacity from the CPDC's Committee on the Handicapped and the Crater District Area Agency on Aging (CDAAA). Planning activities programmed for the current fiscal year include the continued coordination and evaluation of the transportation plans and programs for the elderly and handicapped. Following is a discussion of several of the key elements of the planning study.

Identification of the Elderly and Handicapped

Data concerning the number of elderly in the area were obtained from the 1970 census. By manipulating these basic data, the number of persons age 62 or older was calculated for each traffic zone in Petersburg, Hopewell, and Colonial Heights in 1975. The 1970 population of persons 62 years of age and over for each of the other six jurisdictions in the District was obtained directly from the census. Statistics from the Virginia Department of Intergovernment Affairs were presented which estimated the percentage of the 1976 population in 5-year categories ranging from ages 60-64 to 85+ by jurisdiction.

The data from the 1970 census were also used to estimate the number of handicapped individuals in the planning district. Based on the percentage of Virginia's population in 1970 that were 16 to 64 years of age and had a work disability of 6 months or more, the estimated number of disabled by jurisdiction in 1975 was calculated. Information from the Social Security offices was sought; however, nothing of benefit could be obtained because of confidentiality. There is currently under way a formal self-identification program for the handicapped.

In order to circumvent the problems of confidentiality generally encountered in this type of effort, the questionnaire requests authorization for releasing the information to certain groups. It is intended that the questionnaire be distributed to handicapped individuals where possible and to the various agencies serving the handicapped for ultimate distribution to their clients. The program is being administered by the Virginia Department of Rehabilitative Services.

Transportation Needs of the Elderly and Handicapped

The initial inventory of existing resources was followed by general and qualitative analyses of the extent to which existing resources are meeting the demand and the level of potential demand. The CPDC also conducted a questionnaire survey of approximately 400 riders on the Gillfield-Crater Nutrition Project's vans. This resulted in 178 responses which provided insight into transportation needs; however, the survey is of limited value due to its scope and obvious biases.

Alternatives, Evaluation, and Recommendations

Essentially three alternatives, as described below, were considered for the provision of transportation to the elderly and handicapped.

1. Maintain the status quo or existing organizational framework.
2. Consolidate services under the authority of one existing social service organization, e.g., the Gillfield-Crater Nutrition Project.
3. Establish an independent agency to furnish the services. (This included consideration of establishing a corporation, cooperative, transportation district, or brokerage system).

Based on consideration of the area's goal and objectives for elderly and handicapped transportation and on comments from local interested groups as described previously, the CPDC staff recommended that alternative 1 be followed. Although the existing organizational framework would be maintained, it was recognized that better coordination was necessary to better utilize existing resources and improve service to the elderly and handicapped. Other recommendations concerning various aspects of coordination and details of operation were also described. Specifically, it was recommended that the UMTA's Section 16(b)(2) program of capital grants for private, nonprofit corporations be the focal point of the transportation program for the elderly and handicapped.

Special Efforts Project Information

In order to meet the requirements concerning actual projects in the transportation improvement program, the city of Petersburg has just agreed (as of February 20, 1979) to program 5% of the UMTA's Section 5 allocation to support special efforts transportation. This money will provide subsidy to the Gillfield Crater

Nutrition Project (GCNP) for the operation of 2 vans equipped with wheelchair lifts recently received under the UMTA's Section 16(b)(2) program. Although the contract and other details are being developed at the time of this writing, several characteristics of the proposed service have been established. Demand-responsive service will be provided to semi- and non-ambulatory persons within the city of Petersburg and within the PAT's service area outside the city limits. Hours of operation will likely be from 9:00 a.m. to 5:00 p.m., Monday through Friday. A fare of 20¢ will be charged, and the city will be responsible for marketing the service.

This proposed service under the GCNP, which can be considered an operating component of the CDAAA, represents a positive step in implementing the previously described plan. The CDAAA, which is primarily concerned with the elderly, has been authorized by the Executive Committee of the CPDC to be the prime sponsor for the planning and development of a coordinated, district-wide transportation network for the elderly and the handicapped. In this role the CDAAA does not assume the authority or responsibilities of the other agencies; rather its function is to ensure that needs are met and to facilitate the process of initiating new service programs. The CDAAA currently accepts calls for transportation from the general elderly and handicapped population and arranges for or provides service to the maximum extent possible.

Currently, five agencies are participating in this coordination effort, the largest service program being the GCNP. The GCNP is the primary subcontractor of the CDAAA and operates 8 vans to service the nutrition program for the elderly. It also provides personal business transportation to its clients to the extent possible. The GCNP has submitted two applications for UMTA's Section 16(b)(2) funds, with the first being approved for 5 vans equipped with wheelchair lifts.

It is the intent of the MPO that ultimately the majority of the service to the elderly and handicapped will be coordinated by the CDAAA operating through the GCNP and with equipment purchased with the UMTA's Section 16(b)(2) funds. This appears 1) to offer the maximum utilization of existing resources, 2) to provide for improvement of services through coordination, and 3) most importantly, to be acceptable to the area.

Peninsula Urbanized Area

Included within the boundaries of the transportation planning study for the Peninsula area are the cities of Newport News, Hampton, Poquoson, and Williamsburg and the counties of York and

James City. The population is approximately 356,700 (1976 Department estimate). The policy group for the 3-C planning process, and the designated MPO, is the Peninsula Area Transportation Policy Committee, which receives staff support from the Peninsula Planning District Commission (PPDC). The Peninsula Transportation District Commission (PTDC), which consists of Hampton and Newport News, owns and financially supports Pentran, the major public transportation carrier in the area. Pentran is operated by a private management company and provides service within Hampton and Newport News. James City County has received a Rural Highway Public Transportation Demonstration Grant under the provisions of Section 147 of the Federal Aid Highway Act of 1973 and provides general public transportation services throughout the county.

Special Efforts Planning Information

The special efforts planning effort for the Peninsula area was initiated by the staff of the PPDC during fiscal year 1976, being culminated with the approval of the final document in October 1977. A Citizens Advisory Committee on Transportation of the Elderly and Handicapped provided input to the study. The planning document was published as Appendix C: Transportation of the Elderly and Handicapped, of the 1977-1978 Transportation Systems Management Element for the Peninsula area. Current planning activities are intended to monitor and refine the program initiated by the aforementioned study. Specific objectives include an updated data inventory of the target population and their transportation requirements, an updated data inventory of available resources and determination of needs not being fulfilled, a refinement of program objectives and service strategies to reflect the above, a continuing involvement of elderly and handicapped citizens in the process, a program for the utilization of 2 wheelchair-equipped vehicles, and an assessment of previously implemented projects. Several key elements of the initial planning process are discussed in the following.

Identification of the Elderly and Handicapped

The 1970 census was used to derive the number of persons residing in the Peninsula in that year who were 60 years of age or older. The density of this elderly population was depicted on a map by census tract.

Regarding handicapped individuals in the Peninsula, a satisfactory control total for the target population was not developed. Self-identification efforts did not yield satisfactory results and incidence rates from other studies were not

considered acceptable. The only estimates were obtained from the local offices of the Social Security Administration, which reported the number of persons under the age of 64 who were receiving benefits because they were disabled enough to be out of work for 12 months and persons who were receiving Supplemental Security Income as a result of some handicap. These persons were stratified by jurisdiction.

Transportation Needs of the Elderly and Handicapped

An identification and evaluation of existing resources was undertaken as the initial step in identifying the needs of the target population. The survey questionnaire was mailed to 43 agencies which deal with elderly and handicapped clientele in order to assess both the services being provided and some specific characteristics of their clientele. Additional, more detailed information was obtained from Pentran, the James City County Transit, and the Peninsula Agency on Aging. Particular attention was given to Pentran's existing routes as related to known concentrations of the elderly and the location of the 43 agencies surveyed. In order to collect data on the needs of the handicapped, a questionnaire was distributed through the Department of Rehabilitative Services, the City Departments of Social Services and Recreation, and a mailing list developed by a local private, nonprofit organization focusing on the handicapped. Finally, Division of Motor Vehicle records were examined to obtain the number of elderly having a driver's license. This number was subtracted from the elderly population to derive an estimate of the elderly not having a driver's license.

Alternatives, Evaluation, and Recommendations

The following three basic alternatives for the provision of increased mass transportation services to elderly and handicapped residents of the Peninsula were considered, with the third being vetoed immediately because of the tremendous costs involved.

1. Initiation of some form of paratransit to fill the void between the service provided by Pentran and that by the automobile.
2. Expansion of limited Pentran service, especially into the rural areas of the Peninsula.
3. Expansion of the existing Pentran fixed route system to all jurisdictions within the Peninsula.

Recognizing that the data on the travel needs of the target population were limited, especially those for the handicapped, the PPDC staff did not recommend a specific program of implementation based on any one of the aforementioned alternatives. Rather, the staff listed a series of 10 recommendations which highlighted the positive aspects of both alternatives, with the underlying objective of starting on a small scale and expanding as required to meet the actual needs. Included in these recommendations were the extension of an existing Pentran route to provide coverage to a specific agency for the handicapped, establishment of a "specialized transit" section within Pentran to coordinate its activities plus transportation services being provided by other agencies, and establishment of Pentran as the focal point for transportation of the elderly and handicapped.

Special Efforts Project Information

In order to comply with the UMTA's specific requirement for projects in the annual element of the transportation improvement program, Pentran has budgeted 5% of the fiscal year 1979 Section 5 allocation to provide special transportation services to semi- and non-ambulatory persons. This money will be used almost exclusively to subsidize a special service involving taxis, which is described in the following.

In June 1978, the PTDC initiated the Handi-Ride Demonstration Program to provide service for the physically and mentally handicapped persons who are unable, without special facilities, to utilize conventional transit. Handi-Ride provides door-to-door service within Pentran's service area of Newport News and Hampton by utilizing taxicabs under contract to the PTDC. The cab company is subsidized by the PTDC for each ride given a qualified participant, dependent on adherence to certain accounting and monitoring practices. The demonstration is scheduled to terminate on June 30, 1979.

Handi-Ride provides two general types of service— subscription and reservation. Subscription service is provided for trips, such as routine work, medical, and educational trips, occurring at least 3 times per week, and is prescheduled when a user joins the program. Reservation service, which must be requested 24 hours in advance, is provided for the nonrecurring trips such as for shopping, social, recreational, and medical purposes. Service is provided from 6:00 a.m. to 6:00 p.m. on weekdays and Saturdays, with no service available on Sundays or major holidays. Reservations can be made between the hours of 8 and 5 on the days service is being provided.

The taxi company prioritizes and schedules requests received for the Handi-Ride service. The order of priority is work trips; educational trips; medical and rehabilitation trips; and social, recreational, and shopping trips. Attempts are made to pool trips as much as possible to effect an economic savings.

The cost of the service to a qualified rider is \$1.00 per trip, provided he has a valid Handi-Ride Identification Card and Handi-Ride ticket. The I.D. card is issued by the PTDC and is based on an application filled out and signed by a physician or designated social service agent. The tickets are purchased at local social service agencies, hospitals, and the offices of the PTDC. Allowance is made also for accompanying attendants who must obtain a valid escort I.D. card and the \$1.00 tickets. When pooling occurs, each rider is still responsible for the \$1.00 charge. At the end of each trip the driver records the cost on the Handi-Ride ticket, has the rider and/or attendant sign the ticket, and then submits the ticket to the main office at the end of the day. One-way charges over \$12.00 are not allowed. After recording information from the ticket and the driver's manifest, the taxi company bills the PTDC on a monthly basis.

Organizationally, the Handi-Ride Demonstration Program is under the Special Services Section of the Easyride Program, which was established by the PTDC separately from Pentran to administer an UMTA Section 6 demonstration grant involving ride-sharing activities in the Peninsula. One of the objectives of the Section 6 project is to determine the feasibility of utilizing paratransit for providing transportation to the transportationally disadvantaged. The Special Services Section, which is staffed with a full-time professional, 2 senior citizens, and a secretary, also has the goal of coordinating all transportation for the elderly and handicapped in the Peninsula.

Richmond Urbanized Area

The Richmond area's transportation planning study boundary encompasses the city of Richmond and portions of the counties of Henrico, Chesterfield, Hanover, and Goochland, and has a population of approximately 535,200 (1976 Department estimate). The designated MPO for the area, the Richmond Area Metropolitan Transportation Planning Organization, is a group formed by merging the policy and technical committees typically found in other urban areas in Virginia. The MPO operates under a joint agreement with the Department, the Greater Richmond Transit Company (GRTC), and the Richmond Regional Planning District Commission (RRPDC), and under a set of bylaws. Staff support is provided through a contract with a private transportation consulting firm. The primary transit service is provided by the GRTC.

within the city of Richmond and along the urban fringe in Henrico County. The GRTC is a public, nonprofit corporation owned and financed by the city of Richmond and operated by a private management company. Henrico County purchases the services provided within its boundaries. Several small private transit companies also provide minimal service in the area.

Special Effort Planning Information

In order to comply with the special efforts planning requirements, the RRPDC initiated the study entitled Elderly and Handicapped Transportation Study during fiscal year 1976. The final report on the study, which was completed in fiscal year 1978, was the product of the RRPDC staff and an advisory group consisting of elderly and handicapped persons and representatives from state and local, private and public agencies or transportation providers concerned with the target population. Planning efforts in the fiscal year 1979 work program include the continued refinement of the aforementioned plan through the development of an operations and management plan. One of the primary objectives is to improve coordination and consolidation of existing specialized transportation resources in the Richmond area. Several key elements of the initial planning effort are discussed in the following.

Identification of the Elderly and Handicapped

The number of elderly persons age 65 and over was obtained from the 1970 census, with the elderly population in 1995 being estimated. The data for the handicapped population were obtained from a study conducted in 1976 by the Virginia Department of Vocational Rehabilitation. The number of disabled persons in each jurisdiction in the planning district was estimated. By combining the above data with data received from several RRPDC surveys, the number of persons 65 and older who are handicapped and nonhandicapped and persons under 65 who are handicapped were estimated in 1977 for the study area by jurisdiction.

Transportation Needs of the Elderly and Handicapped

Two surveys, one of social service agencies and one of taxi companies, were conducted to inventory the existing resources, service characteristics, and utilization. Owner responses representing 73% of the active fleet were received from the taxi survey, while 29 responses from 47 surveyed agencies were received. In a survey of trip-making characteristics and transportation needs, responses were received from 190 elderly

persons and 50 handicapped persons. Based on responses concerning the number of trips necessary to satisfy their needs, demand trip rates in round trips per month were derived for the elderly (65+), the handicapped, the handicapped elderly, the elderly and handicapped, the non-elderly handicapped, and the nonhandicapped elderly by jurisdiction. Actual trip rates for each category were derived from a prior GRTC marketing survey. The difference between the demand rate and the actual rate for each category represented an unmet need or latent demand trip rate. By applying the latent demand trip rates to the population in each category, and converting the statistics to a daily basis, the number of daily unmet trips for the target population was estimated. Information concerning the target population's views on conventional transit was also obtained from the surveys mentioned.

Alternatives, Evaluation, and Recommendations

In order to provide transportation services to the elderly and handicapped, the 5 alternatives listed below were considered by the RRPDC staff and the advisory group.

1. Convert the GRTC fleet to 50% accessibility by either purchasing buses with lifts (10-year program) or retrofitting buses with lifts (5-year program).
2. Implement a Reserve-a-Ride program consisting essentially of enlarging the services of an existing specialized transportation provider.
3. Implement a user-side subsidy program.
4. Coordinate existing specialized services of the area's transportation providers.
5. Consolidate existing specialized services of the area's transportation providers.

Based on a comparison of the alternatives with regard to cost, the level of service, dependability, physical usability, monitoring capability, and psychological acceptability, a 3-phase program for the transportation of the elderly and handicapped was recommended. These phases included implementation of a subsidy program, the coordination of existing public and private transportation services, and the integration of totally accessible vehicles in the GRTC fleet. An additional 12 recommendations concerning transportation service for the target population were developed.

Special Efforts Project Information

The special efforts project requirement is being met in the Richmond urbanized area by programming 5% of the UMTA's Section 5 allocation to subsidize an existing special transportation service which operates under the name of SPECTRAN (specialized transportation). In this program, which was initiated on March 1, 1978, the GRTC pays SPECTRAN \$5.00 per passenger trip for providing service to persons 65 and over and handicapped persons living in Richmond and Henrico County. Prior to this very recent change to \$5.00, the GRTC paid the average cost incurred by all of SPECTRAN's operations, not just the specific cost of the GRTC service. The subsidy program represents the implementation of the Phase I recommendation of the previously described planning effort.

SPECTRAN began operation in late 1976 under the Cordet Rehabilitation Center with 4 vans purchased through UMTA's Section 16(b)(2) program. The program quickly developed serious financial problems due to the lack of a subsidy to support it. Accordingly, the service was reorganized in July 1977, as a nonprofit, community service corporation and incorporated as the Capital Area Specialized Transportation for the Elderly and Handicapped. As expressed in the articles of incorporation, the purposes of SPECTRAN are to provide and promote transportation services for elderly and handicapped individuals in Planning District 15 and to solicit, accept, and expend funds for such services.

Basically, two forms of service are being provided— a contract service and an advanced reservation service. The contract service is with the Capital Area Agency on Aging (CAAA), with SPECTRAN providing transportation services for the nutrition programs at a charge of \$3.00 per passenger-trip. Until the recent change, this charge had been \$8.00 per vehicle per hour. The advance reservation service, or "Tomorrow Bus" service, is available for a minimum 24-hour advance request, with telephones being manned between 9:00 a.m. and 5:00 p.m., Monday through Friday. The service is available 7 days a week and in the evenings as requested. In Richmond and Henrico County the cost per 1-way trip is 2 GRTC Senior - 10 or Disability - 10 tickets, which are equivalent to 40¢. These tickets are purchased from the GRTC and, in effect, reduce the cost of the \$5.00 trip. To be eligible for these discount tickets, individuals must obtain elderly (65 or over) or handicapped cards from the GRTC. Individuals between the ages of 60 and 64, inclusive, in Henrico County and Richmond, as well as the elderly (60 or over) and the handicapped in the counties of Chesterfield and Hanover are charged \$3.50 per 1-way

trip. Attendants may ride with nonambulatory persons without charge. For both types of services described, driver's logs are preset by the dispatcher based on the service requests.

SPECTRAN's fleet consists of 15 vans, all 1977 or 1978 models, and 6 of which are equipped with a wheelchair lift. Passenger capacity is 143, which includes 129 regular seats and 14 accommodations for wheelchairs. Vans were acquired through the UMTA's Section 16(b)(2) and Section 3 (through GRTC) programs and Title VII of the Older Americans' Act, and are either owned by SPECTRAN or leased for a nominal amount from the GRTC. SPECTRAN is responsible for maintaining, insuring, and all activities related to operating the fleet. At present SPECTRAN has no 2-way radios; however, it does have 5 telephone beepers for contact with the drivers. The only facility is an office provided rent-free by the RRPDC, which was created by partitioning an area in an existing room. Vans are parked near the office at meters or in loading zones during the day and taken home by the drivers each night.

SPECTRAN, which is governed by a Board of Directors, currently employs an executive director, an operations manager, a secretary, and 17 drivers, with the various responsibilities shown in Figure 1.

Due to the lack of a cash reserve, the GRTC advances money to SPECTRAN periodically to cover necessary advance expenditures such as insurance premiums. SPECTRAN bills the GRTC monthly for the number of trips provided, which are supported by the aforementioned discount tickets, less credit for any previous cash advances.

Southeastern Urbanized Area

The Southeastern area, as defined by the 3-C study area boundary, consists of the cities of Norfolk and Portsmouth and portions of the cities of Virginia Beach, Suffolk, and Chesapeake, and has a population of approximately 750,700 (1976 Department estimate). The Continuing Transportation Study Policy Committee establishes policy for the planning effort and is the designated MPO for the area. The Southeastern Virginia Planning District Commission (SVPDC) provides staff support to the MPO. The Tidewater Transportation District Commission (TTDC), which is composed of the aforementioned jurisdictions, owns and financially supports the Tidewater Regional Transit (TRT), the major public transportation carrier in the area. The TRT is operated by a private management company and provides service throughout the area.

	<u>Operations</u>	<u>Finance</u>	<u>Planning</u>	<u>Marketing</u>	<u>Personnel</u>	<u>Management Information System</u>
SPECTRAN Board	Set policy, review Executive Director's reports.	Set policy, establish approved budget.	Review proposals, set policy.	Establish marketing objectives, review effectiveness.	Set personnel policy, hire Executive Director	Review and approve format and content.
Executive Director	Implement Board's policy	Recommend proposed budgets.	Major responsibility.	Major responsibility.	Hire and review all other employees.	Prepare for Board's review
Operations Manager	Manage daily operations (dispatching, equipment and personnel review)	Prepare limited inputs, manager maintenance and other expenses.	Minor inputs only.	Provide major marketing interface with existing users.	Manage drivers on a daily basis.	Provide major input through record keeping.

Figure 1. Responsibilities of SPECTRAN Personnel

Source: Reference 3.

Special Efforts Planning Information

The special efforts planning study was initiated in the middle of fiscal year 1977, with the final document entitled Elderly and Handicapped Transportation Needs Study being approved by the MPO in July 1977. The MPO contracted with the Health, Welfare, Recreation Planning Council (now The Planning Council), a private, nonprofit social services planning organization and planning arm of the United Communities Fund, to perform the study. The Planning Council (TPC) staff was assisted in the study by the Elderly and Handicapped Transportation Needs Study Technical Committee, whose membership well represented the various interest groups in the area. Continuing efforts include planning for and assisting agencies' participation in a program of coordinated special services; development of maintenance, leasing, purchasing, and other service arrangements; coordination of requests for special transportation services; planning and development of special transportation services; and investigation of the use of special vehicles. In particular, TPC has just completed a 6-month evaluation of the special transportation services. Several key elements of the initial planning process are discussed in the following.

Identification of the Elderly and Handicapped

The primary source of data for identifying and locating the elderly and handicapped was the 1970 census. The number of elderly 60 years of age and older were identified by the census with estimates made for 1980. The number of handicapped between the ages 16 and 64 who responded in the affirmative to the question regarding a health or physical condition which limits the amount or kind of work that can be done was compiled. Finally, based on 1970 base data and an estimating procedure using regionally adjusted incidence rates, the numbers of mobility-limited persons by age group and by jurisdiction were derived. These numbers were further stratified by mobility limitations into persons who currently are able to use the existing transit system, persons who might use the transit system if minor modifications are made, and persons who would require major modifications to the existing transit system in order to use it.

Since the data from the 1970 census were several years old, more recent data compiled locally were collected. SEVAMP, the local agency on aging, provided its number of "clients" and "non-clients" located by zip code. The school systems identified the number of children by handicap for each jurisdiction. The

Virginia Department of Rehabilitative Services (DRS) provided statistics by jurisdiction concerning its case loads. Finally, a self-ID program through DRS is anticipated in the near future when service can be provided.

Transportation Needs of the Elderly and the Handicapped

As an initial step in assessing the needs of the elderly and the handicapped, a very comprehensive inventory of existing services was undertaken. This was accomplished primarily through the use of a vehicle inventory questionnaire sent to 102 local transportation providers, a questionnaire concerning informal transportation services sent to 67 local agencies, and a special questionnaire sent to taxi companies. Previous data from a SEVAMP needs/assessment survey and an on-board bus survey of the elderly were reviewed. Finally, statistics from the 1970 census concerning the poverty and employment status of the elderly and handicapped were compiled.

Alternatives, Evaluation, and Recommendations

In order to meet the goals and objectives for transportation of elderly and handicapped persons which were developed by the Study Technical Committee, a series of five alternative strategies were evaluated. Additionally, four alternative agents were evaluated as to which would be the most appropriate agent for assuming responsibility for planning, coordinating, and implementing the strategy selected. The following five strategies and four agents were evaluated.

Alternative Service Strategies:

1. Continue current operating practices, i.e., maintain status quo.
2. Let the TTDC provide general purpose transportation to the target group and let client-specific programs operate as they do now.
3. Develop appropriate cooperative agreements such that existing resources are used to their maximum.
4. Contract all special transportation to private industry under a central coordinating agency.
5. Let the TTDC operate all special transportation services.

Alternative Agents:

1. TTDC.
2. One of several existing social agencies which provide transportation.
3. A new single-purpose transportation agency.
4. One or a consortium of existing taxi companies.

Each service strategy and agent was evaluated by the Study Technical Committee and The Planning Council's staff in view of five specific factors. The evaluation was quantified by having individuals assign numbers ranging from +2 to -2 to each strategy and agent depending on how well the strategy or agent satisfied each of the five factors. Individual scores for each strategy or agent were summed to obtain a numerical ranking which showed how well, on a relative basis, each strategy or agent satisfied each factor.

Based on the study effort and concluding evaluation, a series of 33 specific recommendations concerning services to the elderly and handicapped, taxis, public mass transit, and involvement of target population consumers were developed. It was recommended that SEVAMP should immediately implement an interim coordinated transportation service system as Phase I, which would basically consist of a pooling of vehicles and services among participating agencies. Additional recommendations were made concerning the proposed structure of the coordinated service system. It was recommended that ultimately centralized provision of services under one agency would be implemented as Phase II, with that agency being selected after further evaluation.

Special Efforts Project Information

In order to meet the UMTA's special efforts requirements for specific projects, the TTDC has programmed 5% of its Section 5 allocation to support transportation services to the handicapped. This money has been designated for the purchase of 10 vans with wheelchair lifts, and for partial operational support of local service for semi- and non-ambulatory persons.

As previously mentioned, the plan called for an interim coordinated service to be implemented immediately under the auspices of SEVAMP, Inc. Unfortunately, SEVAMP was unable to come up with non-federal matching money for its own system and

was, therefore, not in a position to assume the lead role for the interim coordinated system. The TTDC recognized the need for transportation services to the elderly and the handicapped and voted to assume this lead role on July 1, 1978, through its Special Transportation Service (STS) Division, which was organizationally established directly under the TTDC and separate from the conventional transit system. Under the initial system, the TTDC developed two basic lease arrangements in order to be as flexible as possible in meeting the needs of the coordinating agencies. The two basic contracts—a Vehicle Lease Agreement and an Independent Contractor Agreement—included one or a combination of the alternatives of contracting with the TTDC for maintenance, gasoline, tires, and oil; leasing vehicles from the TTDC; or turning titles of agency vehicles over to the TTDC and then leasing vehicles back from the TTDC. In all cases the agencies were responsible for contributing 55% of the cost of the service to the TTDC from non-federal sources, hiring and controlling drivers, and providing insurance up to \$1,000,000 for liability. The balance of the cost of the service was borne by the TTDC from UMTA's Section 5 allocation.

Although this interim system proved successful in improving services, several problems were encountered in attempts to better utilize the vehicles by sharing trips with several agencies. These attempts were hindered by organizational problems in the participating agencies, insurance problems, and the lack of information concerning transportation needs of the handicapped. Further, this system was limited to specific agency requests for client transportation to their programs, and this did not satisfy UMTA's requirement for general purpose transportation specifically to the semi- and non-ambulatory. Finally, several small agencies expressed the need for purchasing service from the TTDC. Accordingly, on February 1, the TTDC expanded its STS operation to employ existing drivers of vans for those agencies willing to purchase services and transfer vehicle ownership to the TTDC. Also, the TTDC would purchase special wheelchair-lift-equipped vans in order to provide general purpose services to wheelchair-bound individuals. In essence, the ultimate phase II program had been implemented with the TTDC being the centralized provider of special transportation services and offering a variety of flexible programs for subsidizing 45% of the elderly and the handicapped transportation program costs.

The TTDC has contractual agreements providing for the leasing of vehicles, provision of services, and purchase of services with 11 agencies (through March 1979), and has made initial contacts with approximately 20 other agencies. The contracting agency provides 55% of the cost of the services in non-federal

funds and is responsible for determining the eligibility of riders and priority of trips.

The STS fleet consists of 58 vehicles (as of March 1979). The majority of the fleet consists of 12-to 15-passenger vans, some equipped with lifts; however, several mini-buses and larger buses are also operated. Approximately 57% of the vehicles are 1975 models or newer, and most are equipped with 2-way radios. The STS Division is located at the TTDC's Portsmouth facility, from which no regular transit service is operated. The personnel include an assistant superintendent for STS, a dispatcher, an accounts clerk, a maintenance foreman and assistant foreman, 3 first class mechanics, 2 paratransit servicemen, and 30 drivers.

The subsidized contract services are provided anywhere within the boundaries of the five jurisdictions encompassing the District and to eligible recipients as indicated in the contract. The STS vehicles operate between 8 a.m. and 5 p.m., Monday through Friday. Operation is generally defined as a semi-fixed route system with a morning trip to and an afternoon trip from a social service center. The STS Scheduling and Information System is depicted in Figure 2. Limited general purpose services at a \$1.00 fare to the "unaffiliated" elderly and handicapped have been implemented, and eventually the clearinghouse depicted in Figure 2 will receive the request for service and refer the caller to an agency or directly to the TTDC.

Northern Virginia Urbanized Area

The Northern Virginia area is defined as that portion of Virginia that is located within the transportation planning study area boundaries of the Washington, D. C., metropolitan area. It consists of the cities of Alexandria, Falls Church, Fairfax, Manassas, and Manassas Park, and the counties of Arlington, Fairfax, Loudoun, and Prince William. According to statistics developed by the Tayloe-Murphy Institute, University of Virginia, the population of the area in 1976 was 1,021,900. The designated MPO for the Washington area is the Metropolitan Washington Council of Governments (MWCOC), which has its own staff resources. Transit service, both fixed rail and bus, is provided throughout the Northern Virginia area by the Washington Metropolitan Area Transit Authority, which is supported by all jurisdictions receiving services.

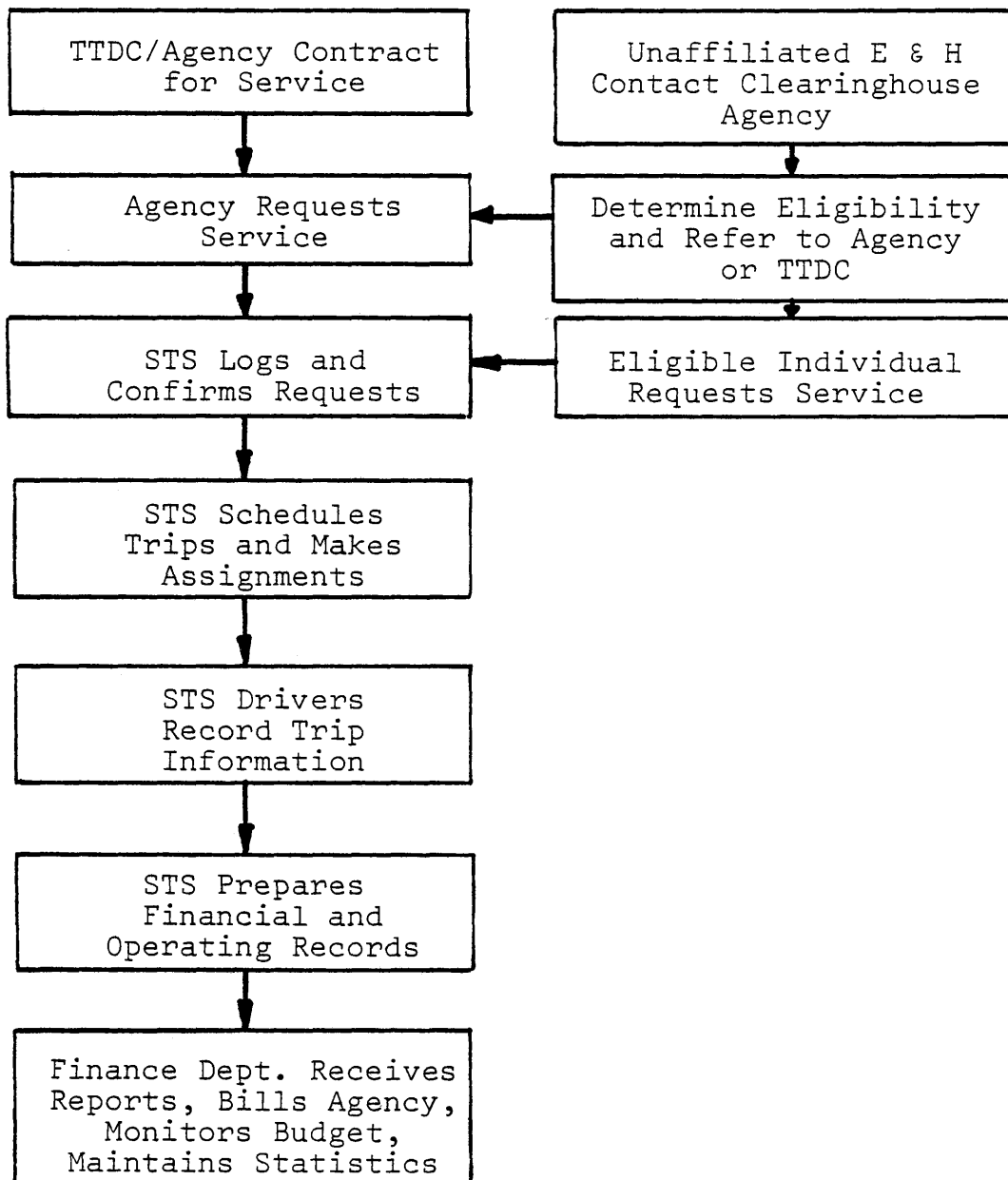


Figure 2. STS Scheduling and Information System

Source: Tidewater Transportation District Commission

Special Efforts Planning Information

In order to develop a program to address the transportation needs of the elderly and handicapped, the MWCOG initiated a planning effort in fiscal year 1975 which resulted in the document entitled Transportation for Elderly and Handicapped Persons in the Washington Metropolitan Area being published in October 1978. The study was performed under contract by a transportation consulting firm with assistance and guidance being provided by a project advisory committee consisting of elderly and handicapped persons and representatives from public and private, state and local agencies, and transportation providers having an interest in the target population. Current continuing planning activities include monitoring of specialized transportation services existing in the region, planning for deployment of newly acquired wheelchair-lift-equipped buses, and assessing the relative effectiveness of Metrorail on improving the mobility of the elderly and the handicapped.

Identification and Transportation Needs of the Elderly and the Handicapped

Contrary to the procedures in the other urbanized areas, a comprehensive survey of the target population was undertaken not only to determine travel patterns, travel attitudes, disabilities causing transportation problems, and other characteristics, but also to determine the size of the elderly and the handicapped population. Based on statistical sampling techniques, the total number of elderly handicapped, elderly nonhandicapped, and handicapped non-elderly persons in the Washington SMSA was estimated. Of the 6,701 persons screened to develop these estimates, 468 were classified in the target population. Secondary data sources provided estimates of the elderly and handicapped non-elderly persons who were institutionalized. It should be noted that statistically the bounds of error at a 95% confidence level for the estimates derived from the survey ranged from +11% to +23% of the estimated number in each population category.

When enough respondents had been obtained to develop the population estimates, i.e., 468, the screening process focused on those subgroups of the target population for which respondents were lacking. An additional 284 respondents were obtained in this effort.

Latent demand estimates were made utilizing a gap analysis technique. The premise is that, given the same socioeconomic, physical, and psychological characteristics, there is reason to assume that those lacking transportation services would exhibit

the same trip-making characteristics as those having services available. Latent demand is then measured simply by the difference in trip-making between those elderly and handicapped that have transportation services and those that do not. Although data were available in considerably more detail, sample sizes allowed latent demand in nonwork vehicle trips per person per day to be determined only for the following categories: total elderly and handicapped who are non-ambulatory, total elderly and handicapped who are ambulatory, elderly handicapped who are semi-ambulatory, elderly nonhandicapped who are semi-ambulatory, and handicapped who are semi-ambulatory. These trip rates per person were applied to the total population in each category to derive the total daily unmet trips in the area.

Alternatives, Evaluation, and Recommendations

The following service alternatives which could potentially meet the latent demand needs of the target population were developed.

1. Special feeder services to Metrorail.
2. Taxi system with variations, including minor modifications to the vehicle, use of trained voluntary aides, and a payment discount system.
3. Alterations to existing bus service, including special off-peak scheduling, equipment modifications, and possible route deviations.
4. Advance reservation dial-a-ride service, which is primarily a program of expanding existing services.
5. Advance reservation subscription service, which is similar to number 4 except that it would encourage group use and repetitive operations.
6. Special services for the non-ambulatory.
7. Jitney service or shared taxi, which would connect target population oriented activity centers to residential areas.
8. Fully demand-responsive dial-a-bus service.
9. Expansion of existing van pool/car pool programs to specifically include the elderly and handicapped worker.

These 9 candidate alternatives were evaluated on the percentage of the target population that they could serve, the quality of the service that they would provide, the probable costs, and the problems for the suppliers of the service, and then reduced to the following recommended implementable programs.

1. Central information and referral program.
2. Advance reservation and subscription service.
3. Modification of existing metrobuses.
4. Special systems for non-ambulatory.
5. Car pool/van pool.
6. Purchase of new buses with lifts and ramps.

Special Efforts Project Information

In order to meet the requirement for specific project implementation, the MPO has programmed several projects in the annual element whose costs will satisfy the criterion of 5% of the UMTA Section 5 allocation. The major expenditure is for wheelchair lift equipment for 150 new buses.

Based in part on the previously described planning study, the MPO has recently adopted "A Plan for the Provision of Transportation Service to the Elderly and Handicapped in the Washington Metropolitan Area". This plan, elements of which are described in the following, provides the regional framework for transportation for the elderly and the handicapped, and, as such, provides the general guidelines for Maryland, Virginia, and the District to follow in future activities regarding the elderly and the handicapped.

1. Reconstitute and expand the aforementioned project advisory committee as a continuing regional forum for elderly and handicapped activities.
2. Establish a central information and referral service either at the regional or subregional level.
3. Develop an advance reservation or subscription service, including purchases of equipment, and integrate it with the information and referral service.

4. Continue to develop the WMATA program, which includes testing wheelchair lifts on buses, consistent with current policy and legal requirements.
5. Improve linkages between accessible bus equipment and rail elevator stations, paratransit fleet, and information and referral services.
6. Maintain inventory of available equipment and services for the elderly and the handicapped.
7. Monitor trends and developments concerning changes in elderly and handicapped locations and needs, new equipment, and new legislative requirements.

In other words, the special efforts project requirement is being met essentially by programming new bus purchases to be equipped with wheelchair lifts. The plan just described lists regional activities, many of which will lead to specific programming items as they move toward implementation. Finally, local projects for the elderly and handicapped which are consistent with the goals and objectives of the regional activities are and will be programmed.

Kingsport, Tennessee, Urbanized Area

The Kingsport area has just recently been designated as a major urban area and, therefore, has no specific planning study of elderly and handicapped transportation needs. Rather, special efforts planning was incorporated in the public transportation study conducted by a private consulting firm and completed in September 1978. Further, as indicated previously, only a small portion of the study area is located in Virginia; specifically Gate City, Weber City, and vicinity. Finally, no special projects have been implemented to date. For these three reasons, only a brief description of those parts of the public transportation study concerned with the elderly and the handicapped is presented in this report.

The Kingsport area does not have a conventional fixed-route, public transportation system, and it was concluded from the study findings that the characteristics of the area do not support such a system. Therefore, minority groups such as the elderly and the handicapped experience significant problems because of inadequate transportation, and immediate attention should be given to requirements for their transportation, especially those of the non-ambulatory.

In view of these and other conclusions, a 5-year program of development which included the following components was recommended.

1. Coordinate special transportation programs and services.
2. Improve existing taxi service.
3. Implement discounted taxi fare program.
4. Implement commuter ride-sharing program.
5. Market and promote existing and new transportation services.
6. Increase planning and evaluation.

Although all 6 components will benefit the elderly and the handicapped to some extent, the discounted taxi fare program was aimed specifically at improving transportation for such persons. The basic concept is to sell tickets, tokens, coupons, or other scrip to the transportationally disadvantaged for less than face value. These would be accepted by participating taxi companies, and the administering agency would reimburse them for all or a portion of the face value. The coordination of existing special transportation services was also considered to be highly beneficial to the elderly and handicapped. Finally, under the increased planning and evaluation component, an in-depth evaluation and development of plans for the special transportation needs of the elderly and handicapped, especially those of the non-ambulatory, was recommended. The MPO is moving toward implementation of these recommendations.

Summary of Other Key Issues in Special Efforts Planning and Projects

To this point the findings have concerned subjects which are common to all the urbanized areas' special efforts. There are other issues which frequently cause problems or are otherwise of particular interest in special efforts planning and projects, and several of these are discussed below as they have occurred in Virginia's urbanized areas.

Use of School Buses

The 1975 session of the General Assembly of Virginia enacted Senate Bill 888 amending the Code of Virginia to allow the use of school buses by certain public service agencies. The idea was that the underutilized capacity of the existing school bus fleets provided the potential for special services to the transportationally disadvantaged. In planning for the transportation of elderly

and handicapped persons, the question arises as to whether school buses were considered.

All the MPO's affected by the school bill amendment did consider to some extent the use of school buses; however, their use was initially ruled out in every area. The general consensus was that school bus design features are not acceptable to the elderly and handicapped. In particular, the steps are steep and high, the seats are narrow and uncomfortable, and the ride characteristics are poor. Another problem is that the times when the buses are needed by the schools and by the elderly and handicapped are frequently the same. Finally, in some instances the requirements imposed by the school systems negate the economic feasibility of school bus use, e.g., using agencies have to pay any additional insurance premium on school buses used for the elderly and handicapped. The only potential in the use of school buses is with the school system's equipment designed for handicapped students. At least one urbanized area is investigating this possibility.

Involvement of Taxi Companies

The utilization of existing private taxi companies is frequently cited as a potential viable alternative for the provision of specialized service to the elderly and the handicapped. The taxi companies were involved in the special efforts planning to some degree in every area. Formal advisory groups or groups used in a review and comment capacity generally included a spokesman for the taxi industry. Several of the planning studies involved a survey of the taxi industry and ridership. Alternatives and evaluation criteria in several of the planning studies were concerned with taxis, with the final recommendations in several instances involving the utilization of taxis. Taxi representatives are participating in or are the subject of continuing planning activities in several areas.

As for actual projects, the most visible utilization of taxis is the Handi-Ride program in the Peninsula area. In the Southeastern urbanized area the STS and two taxi companies have executed a "Taxicab Company Agreement for Special Transportation Services" that provides for the purchase of taxi service by the STS. There is a \$1.00 fare and the TTDC is charged 95% of the meter cost. It is felt that this special contract arrangement, especially regarding the fare structure, overcomes several restrictions in the local jurisdictional taxi ordinances and allows for flexible service. The policy of the STS is that the transport of 5 or fewer persons will be by taxi, if the taxi vehicle is suitable. Local taxi company owners are members of both the RADAR and

SPECTRAN (Richmond) Board of Directors, which provides the taxi interests direct input to the policies of the special services. RADAR provides referral service to the taxi companies, if the caller does not qualify for RADAR service.

Although an in-depth study of the taxi situation was not undertaken, which omission could lead to a biased opinion, it appears that the taxi companies have been given the opportunity to participate in the special efforts planning and projects. The level of participation appears to be based on systematic planning efforts and to the extent the taxi companies wish to be involved. Much of the disagreement associated with the UMTA's 16(b)(2) program seems to have been resolved, and the MPO's and taxi companies seem to be working together to their mutual benefit. Obviously there is and will always be specific examples of disagreement; however, the above discussion is generally accurate.

Marketing Activities

In recent years the marketing of transportation services has become recognized as crucial to the success of the services. Much of the marketing of the special service transportation is done through the individual social service agencies when clients are advised of the service. General service area marketing has been undertaken in several of the areas. SPECTRAN has developed a pamphlet, a copy of which is provided in Appendix C, has published an annual report, and has utilized radio and television advertisements. The Handi-Ride program has been advertised in the newspapers, by a local organization for the handicapped, and in the local hospitals. A copy of the written material included in a recently developed Handi-Ride brochure is also provided in Appendix C. Since RADAR provides only contract service at this point, the only marketing activity is to encourage other agencies to join the system. The STS service in the Southeastern area is relatively new and is holding off on a massive marketing campaign until it is confident that all requests for service can be handled. Several of the programs will expand marketing activities, especially in conjunction with anticipated handicapped self-identification programs.

Monitoring and Evaluation Practices

In order to maintain effectiveness and improve service, a procedure for monitoring and evaluating the services being operated is essential. SPECTRAN has an extensive monitoring and evaluation system, and copies of the more important forms are provided in

Appendix D. The MPO staff has just recently completed an evaluation study of SPECTRAN which assessed its operation and management. The Handi-Ride program is monitored through records maintained by the taxi company. From the special ticket required of the riders, the company records the name of the person using the ticket, the date the service was provided, and the cost of the ride. The company also records from the driver's manifest such information as the name of the driver, the number of passengers, the origin, the destination, the pick-up time, and the drop-off time. Operating statistics are then calculated from the data. For the STS operation in the Southeastern area, various statistics are maintained according to the provisions of the individual contracts. The Planning Council has also just completed a 6-month evaluation report. RADAR also maintains operating statistics in accordance with the provisions in its service contracts; however, copies of the forms were unavailable.

Maintenance of Equipment

The maintenance and durability of the equipment are two important aspects of a successful system. RADAR has a maintenance shop at which vehicle maintenance, including preventative maintenance, is performed. The GRTC also provides minor maintenance service at its facilities to RADAR. The STS program's vehicles are maintained by the TTDC's maintenance department at its Portsmouth facility. SPECTRAN has no maintenance function and utilizes local dealerships and service stations for major, minor, and preventative maintenance.

It is generally agreed that vans and mini-buses are not as durable as regular transit equipment; therefore, an in-depth study of the performance characteristics was not conducted. Comments received in the interviews supported this claim. As is typical, difficulties have been encountered with the wheelchair lifts.

Insurance Coverage for Equipment

Due to the lack of accident histories, insurance coverage for vehicles engaged in the general transportation of elderly and handicapped persons is frequently difficult to obtain and typically quite expensive. A case in point is SPECTRAN, which pays around \$1,200 annually per vehicle for liability coverage of \$100,000 bodily injury per person, \$500,000 bodily injury per occurrence, and \$50,000 property damage per occurrence. SPECTRAN also has several policies amounting to \$1,000,000 single-limit

coverage on its fleet, which cost around \$700 a year. Although no details are available, RADAR apparently has obtained a fleet policy at a very reasonable rate for the minimum coverage required by the state. The insurance company no longer provides this policy and maintains RADAR's only because of its good accident record. The Handi-Ride program requires the taxi operator to have liability coverage of \$50,000 bodily injury per person, \$100,000 bodily injury per occurrence, and \$10,000 property damage per occurrence. The STS project provides insurance coverage on all vehicles operated by its drivers. Liability coverage in excess of \$500,000 per incident is provided through a rider to the transit company's fleet policy. (It is against policy to publicize the specific limits of liability). Both the coverage and the rate, 7.7¢ per vehicle mile, are identical to the public transit company's coverage. At a reported average annual mileage per vehicle of 20,000 to 25,000 miles, the cost of insurance is approximately \$1,600 to \$1,900. Since SPECTRAN reports the same average annual mileage, the cost of the insurance for the two programs appears to be approximately the same. There may be some advantages in having a per mile rate rather than a fixed annual rate.

Driver Training

Of the four operating projects, SPECTRAN has the most extensive driver training program. Its drivers must complete courses in defensive driving, first-aid, cardiopulmonary resuscitation (CPR), and passenger assistance techniques. In addition to defensive driving and CPR training, RADAR drivers receive instruction in preventative maintenance. RADAR has also implemented a 1-to 2-hour monthly refresher training session which includes elderly and handicapped sensitivity training. Drivers for the relatively new STS program are required to take a defensive driving course plus receive a minimal amount of sensitivity training. Finally, the taxi drivers in the Handi-Ride program are versed in sensitivity needs of the handicapped; however, no formal training is given.

Public Transit Labor Unions

With the exception of the Petersburg Area Transit Company, whose drivers are employees of the city, all major public transit companies in the urbanized areas are unionized. If the existing transit company provides the elderly and the handicapped transportation services, union wages and benefits would be paid. The MPO's have proposed or implemented special efforts projects which have avoided the union rates. Most of the special efforts programs

have also been successful in obtaining the labor union's required approval under Section 13(c) for the UMTA's financial assistance. Following is a discussion of the labor aspects of the special efforts projects.

The salary for RADAR drivers is \$2.90 to \$3.80 per hour. Neither the city of Roanoke nor the union at the GRTC would allow the pass-through of federal money to RADAR; however, the city does provide financial assistance and the GRTC does provide some maintenance service. SPECTRAN's drivers earn an average of \$3.20 per hour, and the executive director reports a 100% turnover of drivers since the beginning of operation. The pass-through of the UMTA's Section 5 money has been approved by the GRTC's union; however, this approval is understood to be on a temporary basis. STS drivers earn from the minimum wage to \$3.25 per hour, and are hired directly by the TTDC, which is a public agency, and not by TRT. Collective bargaining and participation in unions are prohibited for employees of public agencies in Virginia. The unionized operators of the transit company have approved the use of Section 5 money to support the operation of the STS. On the Peninsula the Handi-Ride program is organizationally separate from the transit company. The union is allowing Section 5 funds to be used; however, the taxi company can neither increase its fleet nor transport any current users of the transit system.

ANALYSIS OF THE OPERATIONAL CHARACTERISTICS OF THE SPECIAL EFFORTS PROJECTS

As described in the preceding parts of the report, the only areas having special projects in operational stages are Roanoke (RADAR), Richmond (SPECTRAN), Southeastern (STS), and Peninsula (Handi-Ride). These projects are in various phases of implementation and thus have varying amounts and kinds of operating data available. Accordingly, the available operational types of data, including financial information, are presented for each of the four projects. Where possible, typical measures of effectiveness, and, hence, measures of comparison, are provided.

SPECTRAN

Detailed operating statistics are available since SPECTRAN began operation with vehicles obtained under the UMTA's 16(b)(2) program. Table 1 lists the number of monthly trips since SPECTRAN began operation. The number of trips represents actual passenger

trips plus the trips to deliver the food to the nutrition sites, which were approximately 6% of the trips. Since the initiation of service, SPECTRAN has provided approximately 67,000 trips, or approximately 3,500 trips per month. The importance of the GRTC subsidy is obvious from Table 1, which shows a 74% increase in average monthly trips since the 40¢ fare began.

Table 2, which lists characteristics of the passengers, begins a series of tables which provide detailed statistics for the 4-month period of October 1978 through January 1979. An average of 4,782 passengers per month were transported, with approximately 71% being elderly and 29% being handicapped. These passengers were further categorized by 66% ambulatory, 21% semi-ambulatory, and 13% non-ambulatory (those confined to a wheelchair).

Table 3 shows the distribution of trips by purpose. Approximately 52% of SPECTRAN's service was the transportation of elderly persons to nutrition sites throughout the area, 20% to jobs and vocational rehabilitation programs, 12% to social and recreational activities, and 11% for shopping and personal trips. Only 3% of the trips were for medical purposes. Based on a comparison with the first year's service, the only noticeable differences were that the percentage of employment trips increased by approximately 10% while nutrition related trips decreased by approximately 10%. (Beginning in October, SPECTRAN began phasing out the meal delivery trips). Since nutrition-related trips are funded exclusively through the Capital Area Agency on Aging, this decrease directly relates to the fact that the percentage of GRTC-subsidized trips has increased steadily since July, from approximately 30% to 48% in December and January.

Table 4 shows the distribution of trips within SPECTRAN's service area. As expected, over 75% of the trips were in Richmond and Henrico County, with approximately 50% being in Richmond alone. These statistics have remained fairly constant since service began. Approximately 70% of the GRTC's subsidized service was provided in the city of Richmond.

Table 5 is a listing of various other statistics which are routinely calculated for SPECTRAN's monthly report. SPECTRAN's fleet operated approximately 28,000 miles per month, with each vehicle averaging 97 miles per day. The average number of hours on the monthly labor payroll was 2,300. Trips were provided at a rate of 2 per payroll hour and averaged 6 miles in length. Since November, when SPECTRAN began keeping certain budget items on an accrual basis, the cost per payroll hour has fluctuated between \$7 and \$8, with the average being \$7.68. The cost per passenger trip has averaged \$3.81, and the cost per vehicle mile \$0.64. Due to expansion of service through the addition of vehicles to the fleet and the aforementioned change in budgeting, these statistics have changed since service began.

Table 1

SPECTRAN - Summary of Monthly Trips

<u>Month</u>	<u>Number of Trips^a</u>	<u>Cumulative Trips</u>	<u>Average Trips/Mo.</u>
July, 1977	1,778		
August	2,538		
September	2,465		
October	2,653		
November	2,618		
December	2,529		
January, 1978	2,564		
February	2,546		
SUBTOTAL: Pre-GRTC Participation		19,691	2,461
March	3,169		
April	3,693		
May	3,737		
June	4,106		
July	3,582		
August	4,831		
September	4,644		
October	5,273		
November	4,691		
December	4,509		
January, 1979	4,925		
SUBTOTAL: Post-GRTC Participation		47,160	4,287
GRAND TOTAL		66,851	3,518

Sources: Reference 3 and SPECTRAN Operating Reports
 a Passenger trips plus meal delivery trips.

Table 2

SPECTRAN Passenger Characteristics, October 1978 - January 1979

<u>Category</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>January</u>	<u>Average</u>
Elderly	3,620 (72%)	3,265 (70%)	3,217 (71%)	3,462 (70%)	3,391 (71%)
Handicapped	1,401 (28%)	1,406 (30%)	1,292 (29%)	1,463 (30%)	1,391 (29%)
TOTAL	5,021	4,671	4,509	4,925	4,782
Ambulatory	3,410 (68%)	3,046 (65%)	3,022 (67%)	3,161 (64%)	3,160 (66%)
Semi-ambulatory	935 (19%)	985 (21%)	961 (21%)	1,145 (23%)	1,007 (21%)
Non-ambulatory	676 (13%)	640 (14%)	526 (12%)	619 (13%)	615 (13%)
TOTAL	5,021	4,671	4,509	4,925	4,782

Source: SPECTRAN Operating Reports

Table 3

SPECTRAN Trip Purposes, October 1978 - January 1979

<u>Trip Purpose</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>January</u>	<u>Average</u>
Medical/Therapy	133 (2%)	187 (4%)	134 (3%)	178 (4%)	158 (3%)
Employment/Voc. Rehab.	1,026 (19%)	983 (21%)	868 (19%)	990 (20%)	967 (20%)
Nutrition	2,745 (52%)	2,481 (53%)	2,241 (50%)	2,510 (51%)	2,494 (52%)
Social/Recreation	503 (10%)	508 (11%)	699 (16%)	507 (10%)	554 (12%)
Education	82 (2%)	51 (1%)	22 (0%)	83 (2%)	60 (1%)
Shopping/Personal	532 (10%)	461 (10%)	545 (12%)	657 (13%)	549 (11%)
Meal Delivery	252 (5%)	20 (0%)	0	0	68 (1%)
TOTAL	5,273	4,691	4,509	4,925	4,850

Source: SPECTRAN Operating Reports

Table 4

SPECTRAN Trip Distribution, October 1978 - January 1979

<u>Jurisdiction</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>January</u>	<u>Average</u>
Richmond	2,612 (49%)	2,280 (49%)	2,123 (47%)	2,295 (46%)	2,328 (48%)
Henrico County	1,521 (29%)	1,207 (26%)	1,286 (29%)	1,480 (30%)	1,373 (28%)
Chesterfield County	612 (12%)	821 (17%)	691 (15%)	672 (14%)	699 (15%)
Hanover County	326 (6%)	235 (5%)	214 (5%)	240 (5%)	254 (5%)
Goochland County	202 (4%)	148 (3%)	195 (4%)	238 (5%)	196 (4%)
TOTAL	5,273	4,691	4,509	4,925	4,850

Source: SPECTRAN Operating Reports.

Table 5

SPECTRAN Miscellaneous Statistics, October 1978 - January 1979

<u>Statistic</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>January</u>	<u>Average</u>
Total vehicle miles	28,420	27,803	26,741	29,352	28,079
Average mileage/vehicle/day	99.7	100.9	96.4	90.9	97.0
Total payroll hours	2,250	2,203	2,235	2,584	2,318
Average operating hours/vehicle/day	7.9	8.0	8.0	8.0	8.0
Average mileage/passenger-trip ^a	5.4	5.9	5.9	6.0	5.8
Trips/payroll hour ^a	2.3	2.1	2.0	1.9	2.1
Cost/payroll hour	\$6.81	\$8.06 ^b	\$7.93	\$7.06	\$7.68 ^c
Cost/passenger-trip ^a	\$2.91	\$3.79 ^b	\$3.93	\$3.70	\$3.81 ^c
Cost/vehicle mile	\$0.54	\$0.64 ^b	\$0.66	\$0.62	\$0.64 ^c

Source: SPECTRAN Operating Reports.

NOTE: 1 mile = 1.61 kilometers

^aIncludes 252 and 20 trips for meal delivery in October and November, respectively.

^bIn November SPECTRAN began keeping several budget line items on an accrual basis.

^cOctober statistic not included in average.

Since the GRTC collects 40¢ per passenger trip, the subsidy provided by the GRTC averaged \$3.41 per passenger trip, or 90% of the cost, over the referenced 3-month period. Based on FY 76 data (Virginia Statewide Transit Statistical Data, April 1977), the GRTC's annual cost per passenger for its regular transit service was 42¢. The much higher cost for SPECTRAN is typical due to the nature of special transportation services. Another comparative indicator is the cost per vehicle mile, which was \$1.37 for the GRTC in FY 76. It must be remembered that the SPECTRAN statistics are based on its entire operation and not just service provided to the GRTC, which is the basis of the recent \$5.00 charge. The current subsidy is, therefore, \$4.60 per passenger trip.

Tables 6 and 7 present budget information on SPECTRAN, the former being the FY 78 financial statement and the latter being the current budget. In the first year of operation the CAAA provided around 72% of the income, with the GRTC's 7% being the second largest single source of income. The GRTC's support of up to \$125,000, which represents almost 50% of the income, and the CAAA's approximate \$35,000 increase in support have allowed a 134% increase in operating costs under the current budget. As is typical with transportation providers, personnel expenses represent the largest share of the operating costs.

STS

As discussed previously, the STS began operation in July 1978, and it was only in January 1979 that the TTDC voted to move into the provision of service role. Accordingly, the program has been and is in a continuous state of expansion and change, which makes analyses difficult and often inconclusive. However, TPC has just completed a 6-month evaluation for the second half of 1978 (Six Month's Evaluation, July - December 1978), and Table 8 has been duplicated from that report. During all or part of the period, five agencies were under contract with the TTDC and received one or more of the various types of services provided, as explained in the following.

1. SEVAMP leased 2 vehicles from the TTDC and served as an independent contractor to the TTDC.
2. The Hope House Foundation leased 4 vehicles and served as an independent contractor. All vehicles operated were leased; therefore, the fuel, oil, and maintenance costs were included in the lease agreement.

3. The United Cerebral Palsy of Metropolitan Hampton Roads, Inc. turned its vehicles over to the TTDC and leased back 3 vehicles. Maintenance and insurance were provided in the TTDC lease agreement.
4. The Virginia Beach Mental Health/Mental Retardation Services Board leased 1 vehicle.
5. The Southeastern Tidewater Opportunity Project had a lease agreement for maintenance only and the right to preschedule a vehicle for special events. The cost was 50¢ per mile.

Operating costs averaged 55¢ per mile, ranging from 50¢ to 96¢ per mile, and \$1.55 per unit of transportation (passenger trip), ranging from \$1.36 to \$2.05 per unit. Since the individual agencies paid 55% of the costs, the TTDC subsidy averaged 25¢ per mile and 70¢ per unit of transportation. In FY 76 the TTDC's regular transit service cost \$1.40 per vehicle mile and 47¢ per passenger (Virginia Statewide Transit Statistical Data, April 1977).

Handi-Ride

The Handi-Ride program began operation in June 1978, and the basic operating characteristics are presented in Tables 9 and 10. Other data from the driver's manifest have not been summarized by the PTDC. During the first 8 months of operation, the Handi-Ride program attracted almost 3,200 handicapped persons who paid \$3,600 for over \$13,100 worth of transportation service. As evidenced by trips vs. passenger trips, the amount of pooling was rather low, with only 71, or 2%, of the riders sharing rides. Monthly ridership has increased steadily since the initiation of service, approximately 660% since June and 135% since July. The number of identification cards issued also has increased steadily, with the trips per cardholder averaging 3.2 per month. The cost per passenger trip for the 8 months was \$4.11; however, the monthly averages decreased steadily to \$3.65 per passenger trip in January. The cost per mile averaged 74¢, while the average passenger trip length was 5.5 miles.

The deficit, or cost incurred by the PTDC, was \$2.98 per passenger trip, which decreased steadily to \$2.54 per passenger trip in January, and 54¢ per vehicle mile. The PTDC's regular transit service cost 59¢ per passenger and 97¢ per mile in FY-76 (Virginia Statewide Transit Statistical Data, April 1977).

Table 6

SPECTRAN FY 78 Financial Statement

<u>Income</u>	<u>Amount</u>	<u>% of Total</u>
Capital Area Agency on Aging		
— Community Programs Title III	\$ 45,181.50	38.7
— Nutrition Program Title VII	39,354.00	33.7
Greater Richmond Transit Company	8,215.35	7.0
United Way of Greater Richmond	3,005.05	2.6
Fares Collected	2,897.07	2.5
Miscellaneous Agencies & Individuals	<u>18,174.98</u>	15.5
GRAND TOTAL	\$116,827.95	
 <u>Expenses</u>		
Personnel Expenses		
Salaries	\$ 67,931.29	
Hospitalization	847.87	
Payroll Taxes	<u>4,035.22</u>	
SUBTOTAL	\$ 72,814.38	67.9
Vehicle Operating Expenses		
Gasoline and Oil	\$ 9,575.00	
Insurance	7,662.30	
Tolls	415.75	
Maintenance and Equipment	4,020.02	
Fees; Tax and Licenses	<u>2,003.02</u>	
SUBTOTAL	\$ 23,676.09	22.0
Administrative Overhead		
Staff Parking	\$ 67.50	
Accounting and Audit	2,250.00	
Office Supplies	363.31	
Printing and Copying	993.79	
General Equipment	654.86	
Office Rent	1,803.42	
Postage	144.20	
Telephone	1,495.70	
Insurance	709.00	
Petty Cash	422.67	
Promotional	165.56	
Miscellaneous	<u>1,721.93</u>	
SUBTOTAL	\$ 10,791.94	10.1
GRAND TOTAL	\$107,282.41	
Surplus - Deficit, FY 1977-78	\$ 9,545.54*	

Source: SPECTRAN Annual Report

*The surplus was due primarily to an advance in the Title III, Older American Act grant. The remainder of the grant, which was to last till September 1978 was received by SPECTRAN in March 1978 in order to prevent difficulties with cash flow.

Table 7

SPECTRAN FY 79 Budget

	<u>Amount</u>	<u>% of Total</u>
<u>Income</u>		
Capital Area Agency on Aging		
- Community Programs Title III	\$ 35,000	13.5
- Nutrition Program Title VII	84,000	32.3
Greater Richmond Transit Company	125,000	48.1
Chesterfield County	<u>16,000</u>	6.1
GRAND TOTAL	\$260,000	
<u>Expenses</u>		
Personnel Expenses		
Salaries	\$141,630	
Training	2,720	
Hospitalization	8,498	
Payroll Taxes	<u>10,623</u>	
SUBTOTAL	\$163,471	65.0
Vehicle Operating Expenses		
Gasoline and Oil	\$ 38,556	
Insurance	21,650	
Tolls	1,020	
Maintenance and Equipment	10,200	
Fees, Tax and Licenses	<u>2,500</u>	
SUBTOTAL	\$ 73,926	29.4
Administrative Overhead		
Staff Parking	\$ 840	
Accounting and Audit	4,000	
Office Supplies	720	
Printing and Copying	1,080	
Equipment Rental	1,200	
Office Rent	<u> </u>	
Postage	360	
Telephone	1,500	
Insurance	2,800	
Petty Cash	600	
Advertising and Promotion	300	
Miscellaneous	<u>600</u>	
SUBTOTAL	\$ 14,000	5.6
GRAND TOTAL	\$251,397	

Source: Reference 3

Table 8

STS Miscellaneous Operating Statistics, July 1978 - December 1978

ITEM	SEVAMP	% OF TOTAL	HOPE HOUSE	% OF TOTAL	UCP	% OF TOTAL MR SERVICES	% OF VA. BEACH MH/ MR SERVICES	% OF TOTAL	STOP	% OF TOTAL	TOTALS FOR SIX MONTHS	% OF TOTAL
Labor & Fringe	\$ 56,245.48	44.0	\$ 9,534.60	38.3	\$ 3,676.50	35.8	\$ 4,960.58	60.5	-0-	-0-	\$ 74,418.16	43.4
Fuel & Oil	\$ 10,307.53	8.1	-0-	-0-	\$ 2,919.46	28.4	\$ 1,880.68	22.9	-0-	-0-	\$ 15,107.67	8.8
Maintenance	\$ 8,492.99	6.6	-0-	-0-	-0-	-0-	\$ 541.93	6.6	-0-	-0-	\$ 9,034.92	5.3
Insurance	\$ 37,977.74	29.7	\$ 3,532.44	14.2	-0-	-0-	\$ 821.33	10.0	-0-	-0-	\$ 42,331.51	24.7
Leases & Rentals	\$ 9,727.08	7.6	\$ 10,237.60	41.1	\$ 2,626.05	25.5	-0-	-0-	\$ 242.00	100.0	\$ 22,832.73	13.3
Administration	\$ 5,176.49	4.0	\$ 1,596.81	6.4	\$ 1,060.00	10.3	-0-	-0-	-0-	-0-	\$ 7,833.30	4.6
Totals	\$ 127,927.31	100.0	\$ 24,901.45	100.0	\$ 10,282.01	100.0	\$ 8,204.52	100.0	\$ 242.00	100.0	\$ 171,558.29	100.0
Mileage	257,449		25,899		17,507		10,108		484		311,447	
Cost Per Mile	\$ 0.50		\$ 0.96		\$ 0.59		\$ 0.81		\$ 0.50		\$ 0.55	
Number of Transportation Units	85,607*		12,176		7,560		N/A		N/A		105,343	
Cost Per Unit	\$ 1.49		2.05		1.36						1.55	

* Not Including December

Table 9

Handi-Ride Miscellaneous Program Data

<u>Month</u>	<u>Passenger Trips</u>	<u>Trips</u>	<u>Mileage^a</u>	<u>Cost</u>	<u>Revenue</u>	<u>Deficit</u>	<u>Cumulative # I.D. Cards</u>
June, 1978	82	80	607	\$ 408.80	\$ 68.00	\$ 340.80	38
July	265	264	1,719	1,229.30	325.00	904.30	63
August	339	326	1,983	1,486.80	324.00	1,162.80	90
September	376	359	2,094	1,616.20	448.75	1,167.45	117
October	474	465	2,791	2,040.10	566.80	1,473.30	134
November	469	458	2,688	1,935.60	572.80	1,362.80	164
December	570	564	2,872	2,144.50	607.00	1,537.50	185
January, 1979	623	611	2,933	2,271.20	689.00	1,582.20	230
TOTALS	3,198	3,127	17,687	\$13,132.50	\$3,601.35	\$9,531.15	230

Source: Peninsula Transportation District Commission

NOTE: 1 mile = 1.61 kilometers

^aMileage for which passengers were being carried.

Table 10
Handi-Ride Analysis of Program Data

Month	Miles Per ^a Pass. Trip	Cost Per Pass. Trip	Cost Per Trip	Cost Per ^a Mile	Deficit Per		Deficit Per ^a Mile
					Pass. Trip	Trip	
June, 1978	7.4	\$4.99	\$5.11	\$0.67	\$4.16	\$4.26	\$0.56
July	6.5	4.64	4.66	0.72	3.41	3.43	0.53
August	5.8	4.39	4.56	0.75	3.43	3.57	0.59
September	5.6	4.30	4.50	0.77	3.10	3.25	0.56
October	5.9	4.30	4.39	0.73	3.11	3.17	0.53
November	5.7	4.13	4.23	0.72	2.91	2.98	0.51
December	5.0	3.76	3.80	0.75	2.70	2.73	0.54
January, 1979	4.7	3.65	3.72	0.77	2.54	2.59	0.54
TOTALS	5.5	\$4.11	\$4.20	\$0.74	\$2.98	\$3.05	\$0.54

Source: Peninsula Transportation District Commission

NOTE: 1 mile = 1.61 kilometers

^aMileage for which passengers were being carried.

RADAR

RADAR has been in operation for several years; however, serious management problems were encountered in 1978. Due to the nature of the problems, questions were raised as to the validity and accuracy of RADAR's operating statistics. Although repeated attempts have been made to obtain information from the new management, no data have been obtained.

Summary of Operational Characteristics

Table 11 lists several of the key statistics for each of the operating programs for which data are available. The reader should refer to the text for the derivation of the statistics. Although this table is presented for comparative purposes, one must be extremely cautious about drawing conclusions from the data. The STS data are essentially of a preliminary nature and basically represent the operating characteristics of existing client-specific transportation services now being subsidized by the STS. Although part of the SPECTRAN service is client-specific, i.e., service to the nutrition sites, the balance of the service and the part subsidized by the GRTC is to the general elderly and handicapped population. The Handi-Ride service is limited to the general handicapped population.

Table 11

Comparison of Operational Statistics

<u>Statistic</u>	<u>SYSTEM</u>		
	<u>SPECTRAN</u> ^a	<u>STS</u> ^b	<u>Handi-Ride</u> ^c
Passenger trips/month	4,782	17,557	623
Mileage/month	28,100	51,900	2,900
Cost/passenger trip	\$3.81	\$1.55	\$3.65
Cost/vehicle mile	\$0.64	\$0.55	\$0.77
Subsidy/passenger trip	\$3.41 ^d	\$0.70	\$2.54
Subsidy/vehicle mile	N/A	\$0.25	\$0.54

NOTE: 1 mile = 1.6 kilometers

^aAverage for 10/78-1/79, including all of SPECTRAN's services.

^bAverage for first 6 months - 7/78-12/78.

^cJanuary 1979 statistics.

^dDoes not reflect recent \$5.00 charge, which results in a subsidy of \$4.60.

CONCLUSIONS

Conclusions based on the findings and analysis of operational characteristics are presented in the following.

Special Efforts Planning

1. With the exception of Kingsport, the MPO's in Virginia's urbanized areas responded to the elderly and the handicapped transportation planning requirements by conducting specific studies of the transportation needs of and alternative methods of providing transportation to the target population. In the Kingsport area, which includes a small portion of southwest Virginia, the elderly and the handicapped needs were addressed in the public transportation study. The studies recommendations are in various stages of implementation, and continued planning activities are being conducted as necessary.
2. Problems of identification, especially of the handicapped, were encountered in every area, and mostly secondary data sources were utilized to derive estimates and even location of the target population. The elderly were generally well organized and had key focal agencies, typically the area's "agency on aging", which could provide input to the planning effort. Non-elderly handicapped persons did not have central focal agencies, and attempts at self-identification generally failed.
3. A key element of the identification problem was the lack of specific and uniform definitions of the target population. Depending on the particular program or the available data, an elderly person was defined as a person 60, 62, or 65 years of age and over. Most areas recognized the very broad definition of the handicapped in the Department of Transportation regulations; however, none of the secondary data sources utilized such a definition.
4. In order to determine the transportation needs of the elderly and the handicapped, most MPO's conducted surveys of existing services and distributed questionnaires to the target population to determine their trip-making characteristics. These efforts met varying degrees of success and the results were utilized to various extents, as described previously in this report.

5. Based generally on the results of the needs assessments, various alternatives for providing transportation for the elderly and handicapped were developed. After an evaluation procedure, the MPO's recommended one alternative and varying levels of implementation detail, as described previously in this report.
6. The utilization of standard school buses for transporting the elderly and the handicapped was not considered viable in any area due to unacceptable design features, time of need, and requirements imposed by the school systems.
7. It appears that the taxi companies were given the opportunity to participate in the special efforts planning. Depending on the level of participation chosen by the taxi companies, the various transportation alternatives and ultimate recommendations frequently reflected the interests of the private providers. In several areas, the taxi companies have participated or will soon participate in special efforts projects.

Special Efforts Projects

1. With the exception of Kingsport, which is currently developing its special efforts projects, the MPO's in Virginia opted to meet the special efforts project requirements by complying with example 1 in the elderly and the handicapped regulations (Federal Register, April 30, 1976). Provided strictly as an example of a satisfactory special effort, it specifies a "program for wheelchair users and semi-ambulatory handicapped persons that will involve the expenditure of an average annual dollar amount equivalent to a minimum of five percent of the section 5 apportionment to the urbanized area". The example further says that the "funds may be derived from sources other than section 5", and that the "service is not restricted to a particularized organizational or institutional clientele". There seems to be some confusion among the MPO's about the UMTA's interpretation of the example; however, this author was assured by the UMTA's regional representative that the wording is straightforward and is being interpreted literally. The apparent problem with utilizing existing expenditures as "equivalent" Section 5 money is in finding existing services to the wheelchair bound and semi-ambulatory which are not restricted to certain clientele.
2. In both the Lynchburg and Roanoke urbanized areas, the 5% criterion was met by programming a combination of Section 5

funds and funds from sources other than Section 5. Section 5 funds were committed to the purchase of mini-buses with lifts and maintenance services to RADAR in Roanoke and to the retrofit of 2 GLTC buses with wheelchair lifts.

3. In Northern Virginia the MPO met the 5% criterion by programming Section 5 funds to purchase buses with lifts.
4. The MPO's in Peninsula, Richmond, and Tri-Cities programmed 5% of Section 5 funds for the support of special transportation systems or projects in the area. On the Peninsula the deficit cost of the taxi trip after a \$1.00 fare is applied is paid by the PTDC with 50% Section 5 funds and 50% District funds. The GRTC pays the difference between a 40¢ fare and an average trip cost of \$5.00 incurred by SPECTRAN with 50% Section 5 and 50% city of Richmond funds. The GRTC subsidy represents a greater percentage of SPECTRAN's revenue than the percentage of semi- and non-ambulatory users; therefore, it is questionable whether the requirements are being met. This matter is being considered by the MPO. After deducting the revenue obtained from a 20¢ fare from the expenses, the GCNP will bill the PAT for the difference, which will be paid with 50% Section 5 and 50% city of Petersburg funds.
5. In the Southeastern area, the MPO programmed 5% of Section 5 funds for the purchase of vans with wheelchair lifts and for partial operational support of the STS program. The agencies under contract with the TTDC contribute 55% of the costs of the contracted services. These contracted costs are generally direct costs and do not include overhead or other administrative costs incurred by the STS Division. Since no fares are being charged, the total costs incurred by the TTDC are eligible for the UMTA's Section 5 operating assistance. The aforementioned 55% funds are considered to be a 50% local match and the UMTA is billed for a matching amount, such that the TTDC actually receives 110% of the contracted costs. The extra 10%, which is provided equally by the agency and the UMTA, goes toward offsetting the overhead and other administrative costs of the STS Division.
6. Each implemented or proposed project has, of necessity, been designed based on the institutional, political, and economic framework existing in the area. Thus, it becomes meaningless to compare the systems with the idea of determining what should or should not have been undertaken.

7. From the perspective of the user, the basic measure of effectiveness of a special efforts project is the degree to which the transportation needs of the elderly and the handicapped are being met. To evaluate this measure it is necessary to compare the demand with the amount of service being provided. Due to problems encountered in the initial identification of the elderly and handicapped, it was difficult for the MPO's to derive realistic information on the demand. Of the four areas having implemented projects, only Richmond has demand figures developed in the planning effort. In this case the estimated number of daily unmet trips is more than 4 times SPECTRAN's current monthly ridership. This comparison must be viewed with caution due to the aforementioned identification problems.
8. Although comparative statistics are provided, it would be inconclusive to compare the efficiency of the implemented systems or programs due to the varying stages of development and the different target groups. It may never be valid to compare operating characteristics due to the different travel characteristics of the different user groups.
9. Due to the factors indicated in numbers 6 through 8, it is impossible to make any concluding statements concerning the "best" special project. Rather, the following observations are made.
 - a. A system such as RADAR which relies on reimbursement for contracted services has serious problems with "front-end" money.
 - b. The TTDC's service is the most effective in terms of the total number of trips taken by the elderly and the handicapped which receive some form of subsidy. This is due simply to the flexibility and wide range of subsidies offered.
 - c. The TTDC's system is also the most effective in terms of the coordination of local existing services. It is effective because of the financial incentive to join the STS system.
 - d. The results of the Handi-Ride program indicate that the use of taxis for individual trips has definite cost advantages. Although the costs per passenger for SPECTRAN and Handi-Ride are comparable, the statistic for SPECTRAN includes the trips to the nutrition sites, which include a large amount of ride sharing. When the

cost for the GRTC-sponsored trips is separated, the cost is significantly higher than the taxi cost. SPECTRAN would, of course, be using vans with wheelchair lifts.

- e. Based on the Handi-Ride program to date, the question of obtaining insurance and the high cost of insurance is not an issue when taxis are used. Both SPECTRAN and STS incur high insurance costs; however, the lack of key information prevents a valid comparison of the two ways in which coverage is provided.
10. None of the specialized transportation systems are unionized, and all have been successful to some degree in obtaining existing transit company union approval for the utilization of federal funds.

REFERENCES

1. "Transportation Improvement Program", Federal Register, Part II, Volume 40, Number 181, Wednesday, September 17, 1975.
2. "Transportation for Elderly and Handicapped Persons", Federal Register, Part II, Volume 41, Number 85, Friday, April 30, 1976.
3. "Operations and Management Assessment of Specialized Transportation Service, Phase I", A report prepared for the Richmond Area's Metropolitan Transportation Planning Organization by Simpson and Curtin, Inc., September 1978.
4. "Virginia Statewide Transit Statistical Data, Summary of Fiscal Year 1976 Financial, Service, and Operational Characteristics and Trends Analysis for Fiscal Years 1974, 1975, and 1976", Virginia Department of Highways and Transportation, April 1977.
5. "Six Months' Evaluation, Special Transportation for the Elderly and Handicapped", July-December, 1978, A report prepared for the Southeastern Virginia Planning District Commission by The Planning Council, January 1979.

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APPENDIX A

Questions to MPO's Concerning Transportation
For the Elderly and Handicapped

Questions to MPO's concerning Transportation
For the Elderly and Handicapped

1. Within the transportation planning process, what are the specific items or actions considered to address UMTA's special efforts requirement?
(Note: The following list of questions is derived from the DOT advisory information on the special efforts planning. It is recognized that most, if not all, urbanized areas have met the special efforts requirement by undertaking a specific planning study which addresses these questions. Attention should be given only to those questions not covered adequately in the study.)
 - a) Was particular care directed toward serving the travel needs of concentrations of elderly and how?
 - b) How are the E & H themselves, and public and private health and welfare agencies and consumer groups involved in the process?
 - c) What specific planning activities focus on wheelchair users and the semiambulatory, especially as to their location and needs?
 - d) How is the question of planning E & H service that is reasonable by comparison with service provided to the general public and that meets a significant fraction of their transportation needs in a reasonable time addressed?
 - e) What special attention is given to the employed handicapped person or to the handicapped person for whom transportation is a major barrier to employment or job training?
 - f) How were the service alternatives evaluated and selected?
 - g) To what extent was consideration given to coordination and rationalization of existing resources and services and a reduced fare local taxi service?
 - h) How was the question of giving maximum feasible opportunity to provide service to either new or existing private transportation providers addressed?

2. What is the estimated number of E & H in the area, how was this information obtained, and what specific problems were encountered?

3. What specific projects for the E & H are or have been contained in the urbanized area's TIP?

4. What organizational arrangements or responsibility assignments have been made to either address the transportation needs of or provide the service to the E & H? (A chronological listing of steps or actions with commentary as to problems encountered, etc. is needed.) Are these arrangements working out as anticipated? Are there any particular advantages or disadvantages to these arrangements?

5. What are the specific goals and objectives for the provision of service to the E & H?
6. Description of E & H projects - where applicable, the following information is needed for a detailed description of the E & H projects.
 - a) Number, size, and age of vehicles used in providing transportation, and other special equipment, e.g. radios, lifts, ramps, etc.
 - b) Operation of service, e.g. headways, length, etc. of routing, demand responsive, dispatching procedures, times of operation, fare systems, contract service, service priorities, service area, eligibility requirements, user restrictions, coordination and integration of service with other providers, especially from private sector.
 - c) Personnel and salary ranges, especially of drivers.
 - d) Other physical facilities.
7. Financial aspects of E & H projects - where applicable, the following information is needed for a detailed financial description of the the E & H projects.
 - a) Source of capital funding.
 - b) Operational budget (in as much detail as possible), including amount and sources of revenue, amount and distribution of expenditures.
8. What efforts are being made to market the service?
9. What procedures have been established to monitor and evaluate the service?
10. What has been the quantitative response to the service, e.g. E & H ridership, number of trips and mileage for demand responsive service, etc.?
11. What has been the qualitative response to the service, e.g. complaints, suggestions, approvals, etc.?
12. Have any surveys of the users been conducted to determine origins and destinations, purpose of trip, or other characteristics of the trip or trip-maker? If so, what are the results?
13. Have there been specific problems encountered with coordinating services, e.g. compliance with governmental requirements or regulations, etc.?
14. Are drivers required to have any special training, e.g. defensive driving, sensitivity to E & H needs, etc.? Have any labor problems, e.g. 13(c), been encountered.?

15. How is the equipment maintained? Is the equipment reliable and durable? Have any special problems been encountered?
16. Was the use of school buses considered?
17. What amount of insurance is carried on the vehicles? How much does it cost? Was it difficult to obtain insurance coverage? If so, how were the difficulties overcome?
18. What is or has been the role of taxi operators?
19. What other comments can be made regarding problems encountered, recommendations to others, ways to improve service, etc?

APPENDIX B

Names and Addresses for
Transportation Planners of the MPO's

Names and Addresses of Transportation Planners

1. Lynchburg Urbanized Area
Mr. W. G. McChesney
Central Virginia Planning District Commission
P. O. Box 2526
Lynchburg, Virginia 24501
(804) 845-3491
2. Roanoke Urbanized Area
Mr. Karl D. Bossmeier
Fifth Planning District Commission
P. O. Box 2569
Roanoke, Virginia 24010
(703) 343-4417
3. Tri-Cities Urbanized Area
Mr. Joseph J. Vinsh
Crater Planning District Commission
P. O. Box 1808
Petersburg, Virginia 23803
(804) 861-1666
4. Peninsula Urbanized Area
Mr. Joseph D. Paulus
Peninsula Planning District Commission
2017 Cunningham Drive
Hampton, Virginia 23666
(804) 838-4238
5. Richmond Urbanized Area
Mr. William R. Steinmetz
c/o Overman Robinson Brown
700 Building Suite 1521
Richmond, Virginia 23219
(804) 643-4048
6. Southeastern Urbanized Area
Mr. Dwight L. Farmer
Southeastern Virginia Planning District Commission
16 Koger Executive Center
Norfolk, Virginia 23502
(804) 461-3200
7. Northern Virginia Urbanized Area
Mr. Thomas E. Warwick
Metropolitan Washington Council of Governments
1225 Connecticut Avenue, N. W.
Washington, D. C. 20036
(202) 223-6800

8. Kingsport, Tennessee Urbanized Area
Ms. Betsy Dale
City of Kingsport
225 West Center Street
Kingsport, Tennessee 37660
(615) 245-5131

OR

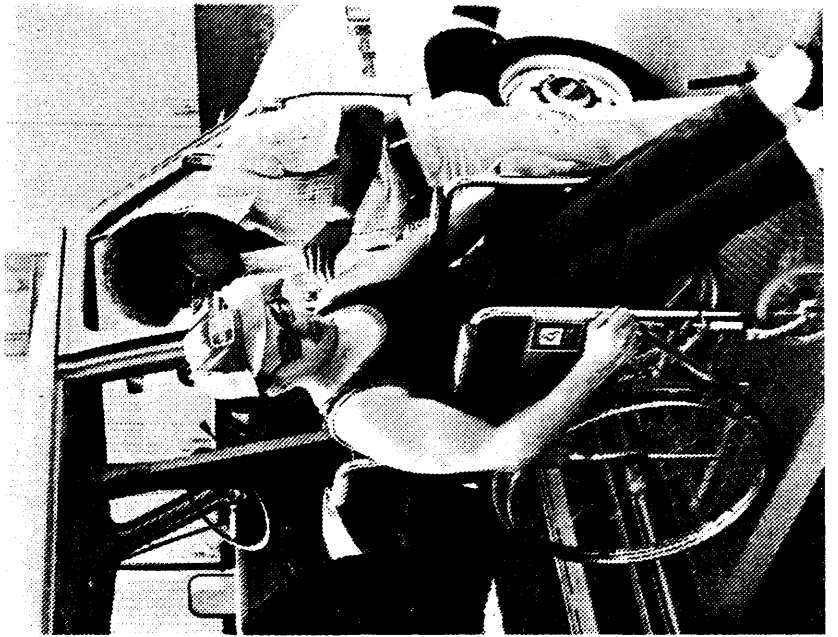
Mr. Edward C. McElwaine
LENOWISCO Planning District Commission
U. S. 58-421 West
Duffield, Virginia 24244
(703) 431-2206

APPENDIX C
Marketing Activities

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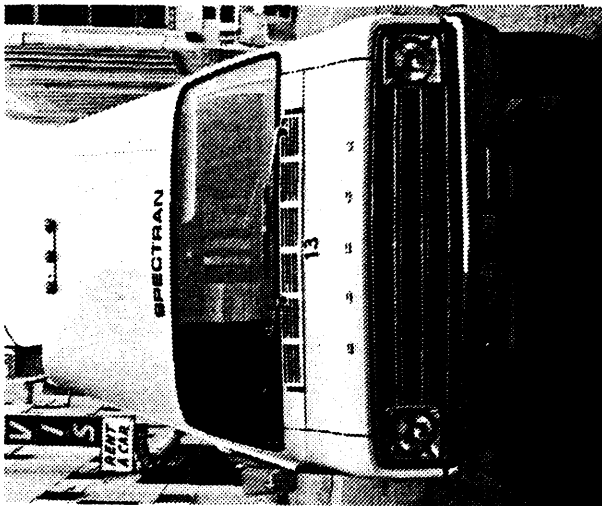


CAPITAL AREA
SPECIALIZED TRANSPORTATION
FOR THE
ELDERLY AND HANDICAPPED, INC.



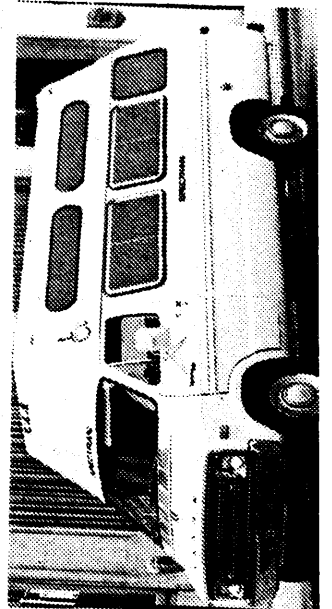
Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
Richmond, Virginia 23219



SPECTRAN is a non-profit community service corporation supported by federal funds provided by the Greater Richmond Transit Company and the Capital Area Agency on Aging.

SPECTRAN is an Equal Opportunity Employer.



SPECTRAN stands for **SPECIALIZED TRANSPORTATION** for the Elderly and Handicapped. It is a unique non-profit service for those individuals in the Richmond Metropolitan Area who are unable to use existing modes of transportation because of age or disability. **SPECTRAN** is also a resource for public and private agencies providing social services, nutrition, employment and rehabilitation.

What Area Does SPECTRAN Serve?

SPECTRAN's fifteen mini-buses and vans (6 of them equipped with wheel-chair lifts) serve the City of Richmond, Henrico, Chesterfield and Hanover Counties. You may use **SPECTRAN** for any of your needs whether it be shopping, recreation, employment or a doctor's appointment. Our service is now available 7 days a week and in the evenings.

Is SPECTRAN Like a Taxi-Cab?

No. We cannot provide "same day" taxi-type service, and there may be other people riding in the bus along with you. We can, though, provide service within 24 hours using our "Tomorrow Bus" service.

In order to receive **SPECTRAN** service you have to call and make a reservation at least 24 hours in advance. If you call early in the day it will be easier for us to reserve a seat for you on the following day. We, unfortunately, cannot serve everyone who calls and requests service due to the high demand. We recommend, therefore, that you call early. Just dial **788-1720**, between 9:00 a.m. and 5:00 p.m., Monday through Friday.

How Much Does SPECTRAN Cost?

In Richmond and Henrico County: Two **GRTC Senior - 10** or **Disability-10** tickets per one-way trip for all eligible ambulatory and wheelchair-bound riders. Each trip costs \$40 in tickets. All individuals using **GRTC** reduced fare tickets must have **GRTC** elderly or handicapped cards. Eligibility for use of the tickets is 65 years of age or handicapped. For those individuals who are between the ages of 60 and 64 and who are **NOT** considered handicapped, the cost per trip is \$3.50.

In Chesterfield and Hanover Counties: \$3.50 per one way trip for all ambulatory and non-ambulatory riders. Eligibility for these fares is 60 years of age or handicapped.

Attendants may ride with non-ambulatory individuals without charge.

1. **SPECTRAN** provides door-to-door service with priority given to those individuals who are non-ambulatory (in wheelchairs) and those who are semi-ambulatory.

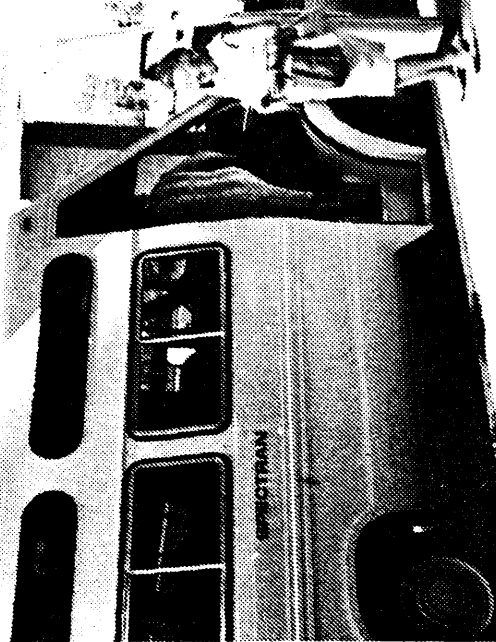
2. We cannot take you down a flight of stairs, but we can take you down a ramp and into the van.

3. Please be ready to leave at the scheduled time and if you have to cancel a trip please call our office as soon as possible.

4. Your comfort and safety are our first concern. Our Driver-Attendants complete courses in First-Aid, CPR, Defensive Driving and Assistance Techniques.

5. If you have any questions or comments call: **788-1720**.

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WHAT IS HANDI-RIDE?

HANDI-RIDE is a demonstration program supported by the Peninsula Transportation District Commission to provide special transportation services for the physically and mentally handicapped, (ambulatory and semi-ambulatory) persons who are unable, without special facilities or special planning to utilize existing mass transportation facilities and services.

HOW DOES THE SERVICE WORK?

The service is provided door-to-door using 27 vehicles from Langley Cabs and Mathis Taxi. The service operates only within and between the Cities of Hampton and Newport News.

WHAT ARE THE DIFFERENT TYPES OF SERVICE?

HANDI-RIDE operates on a "reservation basis" to accommodate trips made on relatively short notice that are non-recurring such as medical appointments or rehabilitative treatments. Infrequent recreation, shopping or social trips are also provided on a limited basis. All reservations must be made at least 24 hours in advance, and should be called into one of the participating taxicab companies.

HANDI-RIDE also operates on a "subscription basis" in which the service is provided according to a fixed regular schedule such as routine work, education or medical trips, etc.

Subscription service is arranged for trips repeated at least three times a week and is prescheduled when a user joins the program. Any deviations from the normal pattern, such as a temporary cancellation of a subscription trip, should be called into the designated taxicab company which is handling the individual's subscription requests immediately. Otherwise, the rider need not contact the operating agency and the service will be provided.

WHEN DOES THE SERVICE OPERATE?

The hours of operation for the HANDI-RIDE service are from 6:00 A.M. to 6:00 P.M. weekdays and Saturdays dependent upon demand. No service will be provided on Sundays or designated holidays. The hours of operation for receiving reservations are from 8:00 A.M. to 5:00 P.M. weekdays and Saturdays.

HOW MUCH DOES HANDI-RIDE COST?

The cost to each HANDI-RIDE passenger for the service is \$1.00 per trip. A ticket for the \$1.00 amount must be used and can be purchased from local social service agencies, hospitals, and/or the EASYRIDE/HANDI-RIDE offices. No service will be provided to individuals without the proper HANDI-RIDE tickets. The remainder of the cost for the ride will be reimbursed by the P- T- D- C-. At the end of the taxi trip, the passenger or the driver records the amount of the trip on the designated line of the ticket. The passenger then signs the ticket at the bottom to verify the actual amount of the ride. The ticket is given back to the driver and will be turned into the cab company at the end of the day.

Individuals who are accompanying HANDI-RIDE passengers as attendants must also secure a HANDI-RIDE I.D. Card and the cost to the attendant will be \$1.00 per trip.

When "pooling" of rides does occur, each HANDI-RIDE passenger will pay the initial \$1.00 fee. The taxicab company will record the total charge for the paid trips to include any deviations from the original trip and will not charge the start-up loading fee for the additional passengers.

HOW DO I APPLY FOR THE SERVICE?

All potential riders of the HANDI-RIDE program must fill out an application and have it signed by the applicant's physician before he or she can use the service. Applications can be obtained at 3400 Victoria Boulevard, Hampton, VA 23661, or by calling -722-2837.

The eligibility of each applicant will be determined by the EASYRIDE/HANDI-RIDE staff based upon the submitted verification. A list of qualified individuals will be delivered to the contracted agency or business. The eligible applicants will be issued HANDI-RIDE identification cards to be used on each trip. Escort I.D. Cards are also available for those individuals who assist a rider during their trip.

SPECIAL SERVICES AND RESTRICTIONS

1. Your comfort and safety are our first concern. The drivers will assist you to get to the cab and will place your wheelchair or walker in the trunk of the car when necessary.
2. Please be ready to leave at the scheduled time and have your ticket and I.D. Card ready.
3. If you have to cancel a trip, please call the taxi company

as soon as possible.

4. A ticket is good for only one trip and several stops along the way to your destination are not permitted.

5. We cannot take you down a flight of stairs, but we can assist you down a ramp or walkway to the vehicle.

6. The drivers cannot handle grocery bags or other baggage for the rider.

7. If you have any questions or comments contact Vickey Fox, 3400 Victoria Blvd, Hampton, VA 23661, or call 722-2837.

APPENDIX D
Monitoring and Evaluation



Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
 Richmond, Virginia 23219
 (804) 788-1720

SPECTRAN GENERAL REPORT
 Vehicle report: Ridership

SPECTRAN VEHICLE NO.					
PASSENGER CLASSIFICATIONS					
Elderly					
Handicapped					
Other					
TOTAL					
PASSENGER MOBILITY CATEGORIES					
Ambulatory					
Semi-Ambulatory					
Non-Ambulatory					
TOTAL					
TRIP CLASSIFICATION					
Medical/Therapy					
Employment/Voc. Rehab.					
Nutrition					
Socialization/Recreation					
Education					
Shopping/Personal					
Meal Delivery					
TOTAL					
TRIP DISTRIBUTION					
Richmond					
Henrico County					
Chesterfield County					
Hanover County					
Goochland County					
TOTAL					


Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
 Richmond, Virginia 23219
 (804) 788-1720

**SPECTRAN GENERAL REPORT
 (A) System Statistics**

PASSENGER CLASSIFICATIONS		PASSENGER MOBILITY CATEGORIES				
Elderly		Ambulatory				
Handicapped		Semi-Ambulatory				
Other		Non-Ambulatory				
TOTAL		TOTAL				
TRIP CLASSIFICATIONS & FUNDING SOURCES	CAAA	GRTC	Fare Paying	Welfare	Other	TOTAL
Medical/Therapy						
Emplymnt/Voc. Rehab.						
Nutrition						
Social/Recreation						
Education						
Shopping/Personal						
Meal delivery						
TOTAL						
	TRIP DISTRIBUTION		UNMET DEMAND			
	All Trips	GRTC	Individual	Program		
Richmond						
Henrico County						
Chesterfield County						
Hanover County						
Goochland County						
TOTAL						
VEHICLE STATISTICS			NOTES			
Total Vehicle Miles						
Av. Mileage per Vehicle-Day						
Total Vehicle Operating Hrs.						
Av. Operating Hrs./Veh.-Day						
Av. Mileage per Veh. Trip						
Trips per Veh. Operating Hr.						
Cost per Veh. Operating Hr.						
Cost per Vehicle-Trip						
Cost per Vehicle-Mile						



Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
 Richmond, Virginia 23219
 (804) 788-1720

SPECTRAN GENERAL REPORT
(F) Vehicle Report: Operating Data

No.	I. D. Number	Total Mileage	Monthly Mileage	Vehicle Oper.Hrs	Gasoline (gals.)	Gasoline \$	Mainten. \$
1	B32BE7X002596						
2	B32BE7X002595						
3	B32BE7X002598						
4	B32BE7X002597						
5	CGL357U108793						
6	CGL358U108748						
7	CGL357U120992						
8	B36BE7X085771						
9	CGL368U166701						
10	CGL368U166149						
11	B35BF8X120633						
12	B35BF8X120637						
13	B35BF8X120635						
14	B35BF8X120636						
15	B35BF8X120634						
TOTAL							



Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
 Richmond, Virginia 23219
 (804) 788-1720

SPECTRAN GENERAL REPORT
(G) Vehicle Report: Maintenance

VEH. NO.	DESCRIPTION	DATE REPAIR	DATE PAYMNT.	INVOICE NO.	SERVICE CO.	AMOUNT \$	DRVR
TOTAL							



Capital Area Specialized Transportation for the Elderly and Handicapped, Inc.

6 North Sixth Street
Richmond, Virginia 23219

(804) 788-1720

DAILY VEHICLE REPORT

	Trips	Tickets
Richmond		
Henrico		
Chesterfld.		X
Hanover		
Goochland		
TOTAL		

DATE VEHICLE #

DRIVER

HOUR	NAME	FARE	ORIGIN	DESTINATION	
8 00					PRE-OP. INSPECT.
8 15					GASOLINE
8 30					WATER
8 45					BATTERY
9 00					BRAKES
9 15					OIL
9 30					SAFETY EQUIP.
9 45					TIRES
10 00					MIRRORS
10 15					LIGHTS
10 30					CLEAN
10 45					
11 00					MILEAGE
11 15					BEGIN
11 30					END
11 45					TOTAL
12 00					
12 15					TOTAL
12 30					HOURS
12 45					
1 00					FUEL
1 15					GALS.
1 30					COST
1 45					
2 00					REMARKS:
2 15					
2 30					
2 45					
3 00					
3 15					
3 30					
3 45					
4 00					DRIVER
4 15					
4 30					
4 45					
5 00					
5 15					
5 30					
	TOTAL				

DRIVER'S TRIP BY TRIP RECORD

DATE _____ VEHICLE NO. _____

Trip	Origin	Destination	PASSENGER CLASSIFICATION				TRIP PURPOSE							Driver's Initials		
			Elderly		Handicapped		Medical	Employment	Nutrition	Social Recreat	Education	Shopping/ Recreation	Other			
			Amb.	Non-Amb.	Amb.	Non-Amb.										
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16*																

*If more than 16 trips, use second page.