Credits

This research report was prepared by Peter Schauer Associates, Boonville, Missouri, with Patricia Weaver Associates, Lawrence, Kansas, and Dr. Joe Floyd, Eastern Montana College, Billings, Montana. Research Assistants Sandy Day and Lynne Schauer, assisted substantively in the report preparation, as well as Doris Barnhart, Sandy Broughton, and Tony Peterson.

The cooperation and assistance of the Project Advisory Committee, the South Dakota Department of Transportation, the South Dakota transportation operators who supplied data and allowed site visits and the citizens of South Dakota who responded to the telephone survey are acknowledged and appreciated.

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Funding for this project was made available by the State of South Dakota Department of Transportation, Office of Research, through funds received from the United States Department of Transportation, Urban Mass Transportation Administration. The United States Government, the State of South Dakota, and no person or entity assumes any liability for the contents of this report or the use thereof.

Peter Schauer Associates

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February 10, 1992

David Huft, Research Engineer
South Dakota Department of Transportation
Office of Research, Room B-116
700 East Broadway Avenue
Pierre, South Dakota 57501-2587

Dear Mr. Huft:

It is with a sense of accomplishment and relief that this report is transmitted to your office. The sense of relief is derived from completing a formidable task in a short time. In over thirteen years of providing consulting services, this has been one of the most ambitious, urgent, short-lived research projects I have ever agreed to conduct. Illustrative of the urgency surrounding this report, I received preliminary official notice from you that the project would be awarded to me on a Saturday and the urgent pace of the report has been continuous since then.

The study project team made every effort to be certain that the facts in this report are accurate and the assumptions are reasonable. Several key assumptions may not be judged reasonable by some, but they were used by direction of you as communicated in your January 28, 1992 letter to me. Those key assumptions are:

> "The FY93-FY97 estimates assume that the entire funding authorized by ISTEA will in fact be appropriated. Federal budgetary problems could prevent this from actually occurring.
>
> Admittedly, these assumptions could fail, but these figures remain our best estimate of available FTA funding.

Rural Capital Funding Needs

The panel developed two significant recommendations regarding estimation of rural capital funding needs:

- Distribute FY93-FY95 capital expenditures to avoid huge capital investment in a single year. The present draft addresses the vehicle replacement backlog by purchasing many vehicles in FY93. The technical panel agreed that it would be impossible to generate the required local match in a single year, but that a three-year schedule would be feasible.

- In each fiscal year, Section 16(b)(2) funds, with 80/20 match, should be used to fund as many vehicle purchases as possible. After 16(b)(2) funds are exhausted, purchases should be financed with discretionary Section 3 funds, using a 50/50 match ratio. Of the local match, 20% should be considered to come from local sources, similarly to the 20% match required for 16(b)(2). The other 30% should be considered a need which is yet unmet, the "shortfall" between expenditures and available funding.

As we discussed by phone, these assumptions imply certain policy decisions. They also assume the availability of discretionary Section 3 funding. It would be good to caution the reader of possible dangers, but in the panel's mind, the assumptions are the most reasonable scenario." (Huft, January 28, 1992, Correspondence to Schauer, pages 2-3)

Per your request, the reader is now cautioned and alerted to the possibility that the amount shown as a "shortfall" could be understated and the amount shown as local match for the Section 3 capital grants could still be difficult for locals to raise. Further, Section 3 grants are competitive and those with an interest in mobility for South Dakota citizens will have to work earnestly and aggressively to receive Section 3 grant awards.

Over the course of the study, the project team developed a high regard for the transit system managers in the State of South Dakota. Everyone contacted, from the transit manager in Sioux Falls to the transit manager in Rapid City to the rural transit managers, seemed genuinely committed to mobility. In recognition of our regard for these transit managers, this report is transmitted with the hope that the findings of this report will coalesce with their continued dedicated efforts to benefit the citizens of South Dakota. Thank you and best wishes.

Sincerely,

Peter M. Schauer

Peter M. Schauer
Peter Schauer Associates

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Enclosures

Executive Summary

Research Project SD91-18

South Dakota Transportation Funding Needs Assessment

Table of Contents

Introduction

Persons giving thoughtful consideration or deliberating about issues which will affect the future of South Dakota will find mobility for South Dakota citizens an issue worthy of concern as the state approaches the 21st Century. Mobility for South Dakota citizens is a concern because adequate mobility is a precursor to a healthy economy. The relationship between availability of transportation services and economic health has been well documented.[1] Mobility or access to the community, including retail, financial, health, educational, and social services is essential to every citizen and every employer in South Dakota.

Background

Public transportation services are provided to the citizens of South Dakota through a variety of agencies in the state. The transportation services of primary interest in this study include those operated by public and private non-profit agencies serving the general public and special populations. The services operate in urbanized areas of the state, as well as non-urbanized cities, counties, and regions of the state. Funding for these agencies include a mix of both federal and local funds, as well as fares, donations, and fee-for-service contracts.

There are two urbanized areas in South Dakota as defined by the Urban Mass Transportation Act: Minnehaha (Sioux Falls) and Pennington (Rapid City) Counties.[2] Both urbanized areas receive formula allocations from Section 9 of the Urban Mass Transportation Act, which is distributed in each urbanized area of 50,000 population or more to fund capital, operating, and administrative costs in the provision of public transportation. FY 1991 allocations to the urbanized areas were approximately $310,400 to Rapid City and $534,700 to Sioux Falls, for a total of $845,100.

Public transit services in Sioux Falls are provided by Sioux Falls Transit and Sioux Falls Paratransit which operate fixed route and paratransit services. Sioux Falls Transit operates 9 routes with a total fleet size of 26 buses. Average annual ridership is 448,278 passenger trips. Rapid Transit provides transit service in Rapid City. While currently operating as a demand-response service, the agency will implement a fixed route service next year. Total annual ridership is 73,400 passenger trips.

Public transit services also operate in many of the non-urbanized portions of South Dakota. Non-urbanized transportation, by Urban Mass Transportation Administration definition, is any transportation provided in areas of less than 50,000 population. The primary federal funding source for rural public transportation services is Section 18 of the Urban Mass Transportation Act which provides capital, administrative, and operating funds. The FY 1991 allocation to South Dakota was approximately $424,600. Fifteen agencies currently receive operating funds in South Dakota through the Section 18 program.

Specialized services in the state include those targeted for specific user groups; primarily elderly or disabled passengers, either in urban or rural areas. The South Dakota Department of Social Services and the Department of Transportation receive money from Title III-B of the Older Americans' Act to fund capital purchases and operating expenses. Twenty-one agencies in South Dakota receive operating funds from the Title III-B program for transportation services.

In addition to the Title III-B program, Section 16(b)(2) of the Urban Mass Transportation Act provides capital assistance to private non-profit agencies for transportation of the elderly and disabled. Section 16(b)(2) funds are provided to the South Dakota Department of Transportation on a formula basis from the U.S. Department of Transportation Urban Mass Transportation Administration. The FY 1991 allocation to South Dakota was $219,500. Fifty-six agencies have received capital assistance from the Section 16(b)(2) program since its inception; twelve agencies received funding from the program in the past year. During FY 1990, 139 vehicles were operated under the program, traveling approximately 1.4 million miles and carrying 1 million passengers.[3]

Purpose of Report

This study was commissioned by the South Dakota Department of Transportation (SDDOT) to assess the transit industry in South Dakota and to determine the costs to sustain or improve existing mobility in the state. Several research objectives were specified for the conduct of this study:

- To assess the market for public and specialized transportation services in South Dakota in terms of demand (both presently served and unserved), citizens' willingness to use public transportation, and sources of financial support.

- To estimate capital and operating costs required during the next five years to sustain existing public transportation services, to extend existing services into adjacent unserved areas, and to establish new operations in remaining unserved markets.

- To estimate the impact of the Americans with Disabilities Act (ADA) on public transportation funding needs in South Dakota.

- To describe and evaluate funding mechanisms and allocation formulas that neighboring states use to fund public transportation.

Research Tasks

The research objectives were accomplished by following a methodology which consisted of sequential and independent sets of activities to accomplish the following tasks:

- Literature was reviewed pertinent to South Dakota's rural and urban public and specialized transportation needs.

- Existing providers of publicly funded mass transit services were identified using lists supplied by SDDOT and their existing needs for capital replacements, capital expansions, and administrative and operating costs for a five-year period, FY 1993 to FY 1997, were determined. This task involved site visits to twenty transit providers; Urban Mass Transportation Administration (UMTA) Section 9 programs, UMTA Section 16(b)(2) transportation providers, UMTA Section 18 providers, Administration on Aging Title III-B programs; and an on-site visit was made to the Rosebud Sioux Reservation. Transportation programs were observed in all areas of the state from Lemmon to Yankton and from Custer to Aberdeen, as well as site visits to Rapid City and Sioux Falls.

- A survey was mailed to eighty-six transportation providers to identify geographic areas currently served by publicly funded mass transit service providers and to make qualitative and quantitative assessments regarding the adequacy of these services, taking into account population and income characteristics of each area. The mailed survey was also used to further clarify capital needs and administration and operating costs for the period FY 1993 to FY 1997.

- The mailed survey, site visits and literature review were used to identify geographic areas and/or population categories which are presently unserved by publicly funded mass transit operators and allowed development of capital, administrative, and operating cost estimates to address unserved transit needs. The estimate was separated into needs which could be addressed by extension of services by existing operators and those which would require establishment of new transit operations. The estimate also was categorized by federal transportation program.

  To help clarify the population categories which are presently unserved, estimate transit demand and assess citizens' willingness to use transit, a telephone survey of 403 randomly-selected individuals was conducted and several mathematical models were used to assess the data.

- Literature was solicited, received, and analyzed from Iowa, Minnesota, North Dakota, Montana, Wyoming and Nebraska concerning their state transit aid programs. A telephone survey of appropriate state officials was conducted after the literature analysis, and neighboring states' policies and regulations regarding funding mechanisms and allocation formulas for support of public transportation were further analyzed and described.

Findings

The major finding is that there is unmet demand for transit services in all areas of South Dakota and the market for services is six to fourteen percent of the current population (42,000-98,000 persons).

The other principal findings of the report are:

- The citizens of South Dakota are not knowledgeable about existing available transit services but have strong positive beliefs about transit.

- Most citizens (93 percent) believe a high quality of transit service should be provided to the general public or people with needs.

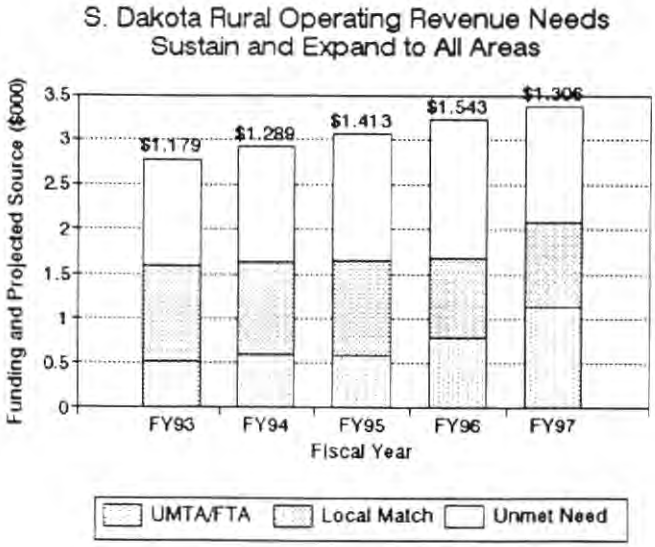
- About six percent (5.7 percent) of the current population uses transit and about fourteen percent say they will. Two thirds of the population are unlikely to ever use transit.

- Significant unmet demand for transit exists and is estimated to be 3,700,000 unmet trips.

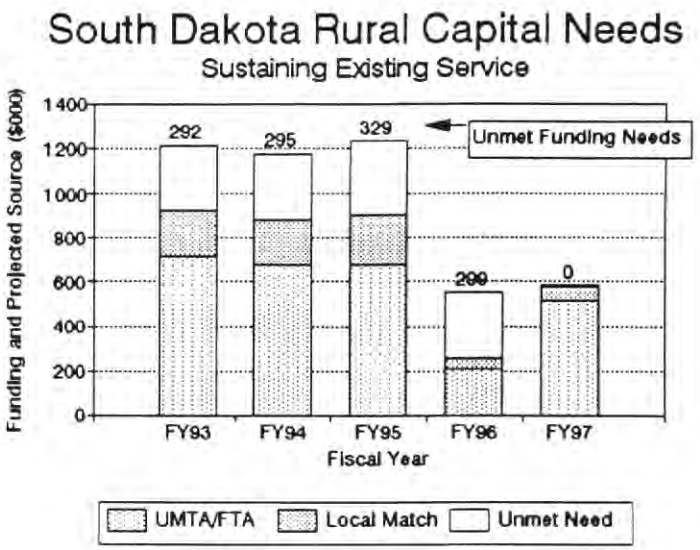
- The estimated cost to provide services which would capture 13 to 36 percent of those unmet trips, (depending on the population classifications of the county), meet citizens expectations for transit and bring that expected level of service throughout the state (excluding the urban areas) would be $8,288,900 for FY 1993. FY 1993 through FY 1995 are considerably higher than subsequent years due to the high mileage and advanced age of much of the fleet operating in South Dakota. With anticipated federal funds, speculative federal funds, farebox revenues, and existing local match applied against these totals, the additional needed revenues required to support the rural public and specialized service would be $1,800,200 in FY 1993 for all areas of the state.[4] Additional needed revenues for Sioux Falls in FY93 are estimated at $539,000; no additional revenues are projected for Rapid City (a surplus of funds allocated to Rapid City is projected given assumed funding levels).

- Additional revenues for urban specialized services total $101,200. Total additional revenues needed in FY93 after federal funds, farebox revenues, and estimated local match are applied would be approximately $2,440,400 to provide service throughout the state.

- Additional revenue needs for operating and administration (not capital) in rural parts of the state range from no additional needed revenues (sustain existing services) to $1,179,300 (sustain, and expand into all areas of the state) in FY 1993, after federal funding, farebox revenue, and local match are applied.[5]



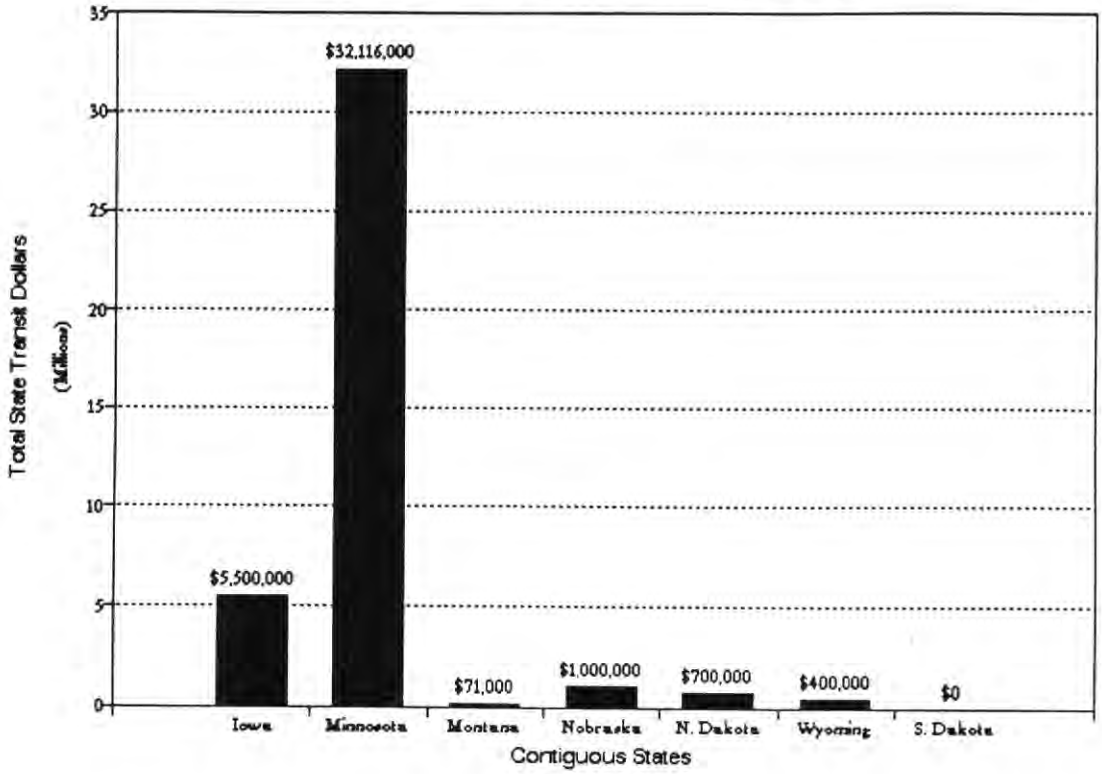
- Rural capital needs for FY 1993 range from $1,216,000 to $1,536,000, depending on the alternative selected. Additional rural capital revenue needs range from $292,000 to $382,200 in FY 1993. Additional capital revenue needed to sustain the existing services in rural areas are estimated at $292,000 in FY93 as displayed in the adjacent figure. By FY97, no unmet funding needs to sustain existing programs are anticipated. However, to expand into all rural areas of the state, unmet capital needs in FY93 will be $382,200; by FY97 unmet capital needs would be approximately $218,900.



- The lottery was the most popular source of funds selected by citizens (43.6 percent) as a source for other funding for transit. About a third (30.5 percent) believe some tax or fee should supply other funding for transit. With regard to the cost of service, over sixty percent (64.7 percent) thought users should pay a reasonable fee or pay on a sliding scale. Less than ten percent (9.3 percent) thought the user should pay the total cost and a fifth (20.9 percent) thought there should be no cost to the needy.

- All capital estimates for the next five years include the impact of implementing ADA requirements. The average estimated vehicle cost of $32,000 for rural and specialized services includes the additional cost of providing a lift and securement positions in each vehicle to provide accessibility.

State Transit Funding
In States Contiguous to South Dakota



- South Dakota does not provide any state aid for transit. All the contiguous states provide some state aid ranging from FY 1991 amounts of $32,116,000 in Minnesota to $71,000 in Montana. Allocation procedures range from "first-come, first-served" to formulas based on demographic characteristics and transit performance measurements.

- The new Intermodal Surface Transportation Efficiency Act of 1991 is expected to provide an increased source of transit revenues for the state. Preliminary estimates indicate approximately 100 percent increase in Section 18, a 40 percent increase in Section 9, and a 59 percent increase in Section 16(b)(2) in FY 1993 compared with FY 1991 funding levels. Local matching abilities are problematic to capture possible increased federal funding.

- Local matching ability to capture possible increased federal funding is not known.

Recommendations

Recommendations derived from this research focus on planning and funding passenger transportation and are as follows:

Planning for Public Transportation in South Dakota

- Detailed Financial Plans and Operating Plans

  Before new and existing projects are funded, a detailed financial plan and operating plan should be made and the state should receive assurances that the project will continue over the useful life of the capital equipment.

- Local Involvement and Board Development

  The appropriate level of local involvement in the planning process should be established and assistance in training and planning should be offered to interested local groups, especially local transit boards.

- Technical Assistance

  The SDDOT should serve as a centralized source of data, technical assistance and expertise for urban and rural transit. However, the extent of required technical assistance can only be determined after further research determines the amount and type of assistance that is most beneficial to South Dakota from a policy standpoint. As a starting point, the state should provide technical assistance in long-range financial planning and budgeting for transit, coordination and service district boundaries development, public education about transit, a statewide fleet maintenance management information system, and a procedure to provide training and competency testing for transit managers.

  To adequately conduct the myriad of technical assistance activities, additional staff would be needed. Additional analysis should be conducted to determine the best level of staffing for the South Dakota Department of Transportation. This analysis should also verify the current administrative structural arrangements of the group currently managing public transit, determine whether or not the group is properly named, and focus on qualitative analysis of the current technical assistance and administrative group.

Funding of Public Transportation in South Dakota

- General Funding Levels

  While this report has identified funding levels to sustain and expand services, the sources for additional funds or procedures by which any possible additional funds might be made available are policy issues and outside the scope of this research. However, some guidance on the sources of funds to operate services is available from the telephone survey and the survey of contiguous states' transit funding.

  The telephone survey revealed that the majority of the states' residents believe that a public transportation system should exist in South Dakota, one which is available to all persons at a reasonable or sliding scale cost. A reasonable or sliding scale cost needs further research to determine the exact meaning; at the very least, sliding scale means the total cost of the service is met from sources in addition to farebox recovery.

  The telephone respondents thought the best source of additional funds for assisting transit was the lottery. However, none of the contiguous states uses a lottery for funding transit (Pennsylvania does use lottery proceeds). A variety of sources of funds are used by contiguous states, but the largest amount of additional transit funds (beyond federal programs and locally contributed match funds) are state appropriated funds from general revenue.

  Investigations and research should be conducted to determine the level of transit services most beneficial to South Dakota and within the financial resources of the state. As these issues are determined, critical considerations which should receive attention are the source of any new funds, matching ratios for new funds including any farebox recovery requirement, allocation procedures between rural and urban services, and procedures to allocate funds between existing services and possible new or expanded services.

- Operating Assistance

  From the possible service alternatives presented in this report (sustain existing services, expand service to adjacent unserved areas, and expand to all areas of the state), policy makers should determine which alternative is most beneficial to South Dakota. After an alternative is selected, the most reasonable sources to fund that alternative should be identified.

- Capital Assistance

  Capital assistance needs will be determined by the selected service alternative. However, given the aged fleet and the need to replace vehicles, policy makers should determine additional sources of capital funds and consider seeking additional federal aid through an UMTA Section 3 capital assistance grant.

  Policy makers should also determine acceptable capital (vehicle) use regulations and require a coordination plan for all UMTA 16(b)(2) vehicles in an effort to limit exclusive use "closed-door" service. All vehicles should be open to as many different groups of users as possible. Finally, policy makers should examine the implications of the selected operating alternative and prepare a phased detailed capital replacement plan for South Dakota.

Summary Recommendations

The following suggestions may assist those concerned with transit and mobility in South Dakota.

- Discover and clarify who has the authority to establish, recommend and investigate policy issues raised by this research.

- After the above groups have been clarified, develop a work program to establish an action plan to address the policy issues. It is important to allow an adequate amount of time for implementing the action plan.

- The action plan should contain steps for public review which will allow those without the authority to set policy the opportunity to offer suggestions concerning policy.

In view of the known aged fleet, problems with raising local match funds and problematic financial support of transit systems, it is apparent that those who are concerned with mobility and transit in South Dakota must take action. Perhaps a daunting prospect, it is one that at least to some degree has been addressed by all the states contiguous to South Dakota.

Endnotes

1. Gillis, William R. *The Relevance of Rural Transportation.* Profitability and Mobility in Rural America. William R. Gillis, Editor. University Park: Pennsylvania State University, 1989. pp. 7-8.

2. In December, 1991, the new Intermodal Surface Transportation Efficiency Act (ISTEA) was passed by the United States Congress and signed into law. The act changed the name of the Urban Mass Transportation Administration (UMTA) to the Federal Transit Administration (FTA). The main text of this report was prepared just prior to this change. The reader should note that funding was received from UMTA, but is now anticipated from FTA. The reader is further advised that while the name of the Administration has changed, the principal sections of the law which previously provided funding have not had a name change and are expected to continue at some unknown funding level.

3. South Dakota Department of Transportation, Local Government Assistance Branch, *Public and Specialized Transportation in South Dakota. Statistical Report for FY90*, Pierre, South Dakota, no date, p. 5.

4. Anticipated federal funds refer to those monies distributed to South Dakota by formula: FTA Section 9, Section 16(b)(2), and Section 18.

   Speculative federal funds refers to Section 3 Discretionary Capital Grant Funds under the Intermodal Surface Transportation Efficiency Act of 1991. Given the old age and high mileage of much of the fleet, it was found that an estimated 79 vehicles are eligible for replacement in FY93 in South Dakota rural and specialized programs. To replace that number of vehicles, a discretionary capital assistance grant under Section 3 of the FTA will need to be secured, or other sources must be found. The project advisory committee directed the study team to assume that the vehicles could be replaced over a three-year period with the a receipt of multi-year discretionary capital grant (3-year). This is speculative and the reader is advised that additional capital revenue needs could increase considerably if the Section 3 Discretionary Grant funds are not received.

5. Local match for rural areas is shown, by direction of the project advisory committee, to be considerably greater than existing, known match. The reader is cautioned that additional local match will be needed to meet capital replacement needs.

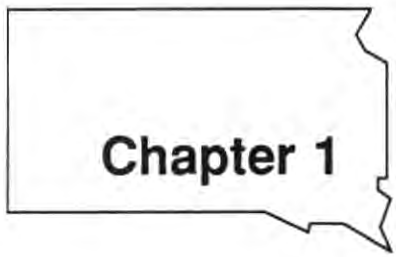
South Dakota Transportation Funding Needs Assessment

Table of Contents

Appendices

Tables

Figures



Chapter 1

Introduction

Persons giving thoughtful consideration about issues which affect the future of South Dakota find mobility for South Dakota citizens an issue worthy of concern as the state approaches the 21st century. Mobility for South Dakota citizens is a concern because adequate mobility is a precursor to a healthy economy. The relationship between availability of transportation services and economic health has been well documented.[1]

Mobility or access to the community, including retail, financial, health, educational, and social services is essential to every citizen and every employer of South Dakota. Access to transportation is important not only for its direct impact on citizens, but also through its indirect impact on economic development activity in the state. Access to workers, access to goods, and overall quality of life can be pivotal factors in a firm's decision to remain in South Dakota or a firm's decision to relocate to South Dakota. A perception of isolation in the state due to lack of transportation services is likely to adversely affect development efforts and thereby hinder economic development and deleteriously influence the economy.

This study was commissioned by the South Dakota Department of Transportation to assess the public and specialized transit industry in the state and to determine the costs to sustain or improve existing mobility. Several research objectives were specified for the conduct of this study:

- To assess the market for public and specialized transportation services in South Dakota in terms of demand (both presently served and unserved), citizens' willingness to use public transportation, and sources of financial support.

- To estimate capital and operating costs required during the next five years to sustain existing public transportation services, to extend existing services into adjacent unserved areas, and to establish new operations in remaining unserved markets.

- To estimate the impact of the Americans with Disabilities Act on public transportation funding needs in South Dakota.

- To describe and evaluate funding mechanisms and allocation formulas that neighboring states use to fund public transportation.

The results of this study are based on analysis of current and projected demographic and economic conditions in the state and an assessment of existing South Dakota public and specialized transportation services. Demand projections for public and specialized public transportation in South Dakota are based on an assessment of current providers, a mathematical model to predict demand, a telephone survey to assess the citizen's willingness to use public transportation, and the costs of delivery of the services that citizens are willing to use. The following chapter, "Study Background," describes additional reasons for conducting this research and methods used throughout the research.

Chapter Endnotes

1. Gillis, William R. *The Relevance of Rural Transportation.* Profitability and Mobility in Rural America. William R. Gillis, Editor. University Park: Pennsylvania State University, 1989. pp. 7-8.

Chapter 2

Study Background

2.1 Introduction

This chapter presents background information concerning the operating environment for transportation services in South Dakota. The purpose of the background information in this chapter is to first establish a framework for the research and then to describe the research methodology in the context of that framework. (A more quantitative and detailed presentation of the operating environment and inventory of transportation services is contained in Chapter 3.) Based on the general background information, a rationale for the study is then presented. Following the rationale for the study is a description of the research methodology and study approach. The chapter concludes with both a summary and a preview of the next chapter.

2.2 Public Transportation Services in South Dakota

South Dakota's approximate 76,000 square miles of land mass are divided into 66 counties, approximately half of which have populations of 5,000 individuals or fewer. Only two counties have populations greater than 50,000 individuals. The extremely low density of population (approximately nine persons per square mile), the long distances between regional trade centers, and climatic extremes present a formidable challenge to those working to ensure adequate mobility to South Dakota citizens.

Only twelve communities in South Dakota exceed 5,000 in population and the population has gradually gravitated towards them. Consequently these twelve communities have become regional trade centers for hundreds of small towns and villages in the state. The population which remains in these small towns and villages has become increasingly older, as younger people leave the rural areas to find jobs, education and services. While America's population of individuals over age 65 represents approximately 12.5 percent of the total, South Dakota's most rural counties have, on average, more than 18 percent of their population over age 65. In addition, people 85 years and older are the most rapidly increasing age group of all. So, while the numbers of people in the rural areas have declined, the age of those remaining has increased.

As the overall population has decreased in the outlying areas, so have the services necessary to directly support the population. The numbers of doctors and dentists, pharmacies, full service grocery stores, banks, and schools have declined. Coinciding with a decline in overall services has been the decline of the rural transportation infrastructure. Rail, air, and intercity bus services have been withdrawn almost entirely, with the exception of service in a few of the largest communities along principal highways. Survival in most rural areas of the state requires exclusive reliance on the private automobile.

While the private automobile is the transportation mode of choice for most Americans, including South Dakotans, the impact is severe for individuals who do not have adequate access to the private automobile for one reason or another. Mobility limitations may exist for those who are unable to drive due to advanced age or disability or who have insufficient resources to own or operate a car. Others may lack sufficient household resources to own more than one car that enables the family wage-earners to get to work and provides the rest of the family with access to needed services such as schools, doctors, or grocery stores.

Public and specialized transportation programs have been developed in South Dakota over the past twenty years to meet certain identified needs and to service those who are often most isolated, the elderly. The development of these programs has relied heavily on federal funds, primarily from the Urban Mass Transportation Administration of the U.S. Department of Transportation (UMTA) and the Administration on Aging (AoA).[1] The four major sources of transportation funds in South Dakota are commonly referred to as the Section 18, Section 16(b)(2), Section 9, and Title III(B) programs. The first three of those four programs are funded by UMTA; the fourth, the Title III-B program, is funded under the federal Older Americans' Act and distributed by the Administration on Aging to South Dakota.

Section 18 funds, distributed from UMTA and administered by the South Dakota Department of Transportation, provide capital, operating, and administration funds in support of public transportation in nonurbanized South Dakota. Nonurbanized areas area defined in the program as those with less than 50,000 population. Eligible recipients of Section 18 funds include public bodies, private non-profit organization, and American Indian tribes. In FY 1991, South Dakota received an allocation of $425,000 from UMTA's Section 18 program for rural public transportation services, approximately $.84 per person in the non-urbanized areas of the state.

The Section 16(b)(2) program, also a federal program administered by SDDOT, provides capital assistance for transportation services made available to the elderly and disabled. Eligible recipients are private non-profit organization and American Indian tribes. South Dakota received $220,000 from UMTA's Section 16(B)(2) program in FY 1991 to purchase capital improvements for the state's private non-profit agencies serving the elderly and disabled.

The Section 9 program is a funding program for public transportation in urbanized areas of greater than 50,000 population and provides funds for capital, operating, and administration of the programs. In FY 1991, local transportation providers had access to approximately $845,000 from UMTA Section 9 program for urban transit.

The Title III-B program of the Older Americans' Act provides funding from capital purchases and operating expenses. In FY 1991, $99,937 from the Administration on Aging Title III-B program for the elderly was provided for transportation to Section 18 transportation providers out of a total of approximately $700,000. Title III-B funds are authorized for allocation to a variety of organizations for many purposes in addition to transportation; e.g., information and referral, outreach, in-home homemaker services, etc.

With the limited federal funding allocated on the basis of population to South Dakota, the South Dakota Department of Transportation has sponsored the development of services to provide both public and specialized transportation. Approximately 80 agencies in South Dakota provide some form of transportation service to approximately three-fourths of the state's area. Excluding rides provided in Sioux Falls and Rapid City, approximately 1.3 million trips have been provided each year. About 45 percent of the riders have been elderly, 45 percent have been disabled, and the remaining ten percent has been divided between the general public and school-age children. Twenty-eight percent of the trips provided take people to nutrition sites, nineteen percent of the trips are rides to work, and shopping trips account for an additional nineteen percent of the passengers. Other primary trip purposes include rides to the doctor, to school, and for social activities.

The urbanized areas of South Dakota, Rapid City and Sioux Falls, have extensive general public as well as specialized transportation services. Rapid City Transit provides an average of 73,400 trips each year. Sioux Falls Transit and Paratransit provide an average of 521,800 trips each year. Passengers utilize the transit service for a variety of trip purposes. While detailed trip logs are not maintained in the same manner as they are in rural South Dakota, the trip purposes in urban areas are more likely than rural systems to be focused on journey to work and school trips. The UMTA Section 9 allocation on a per capita basis for expenditures in the urbanized areas of Sioux Falls and Rapid City is $4.07.

Additional local resources and donations or fares provide the remainder of the funds to support passenger transportation service in the state. Each federal transit funding program requires a specific local match as a prerequisite for participation.

The challenge for this study is to determine what the demands for transportation services are in South Dakota, whether the current providers are able to meet these demands, and what level of resources is needed to meet the projected demand for

transportation services. The next section of this chapter "Rationale for the Study" further clarifies this issue and explains why it is important to meet this challenge.

2.3 Rationale for the Study

For some time the assumption has prevailed that if adequate streets, roads, and highways were constructed and maintained, then automatically, satisfactory levels of mobility for residents would be achieved. Not until President Johnson's War on Poverty, with accompanying significant development of social services, did planners and managers of social services realize that mobility, even with adequate roads and bridges, was a problem. For both rural and urban residents the problem is consonant with "quality of life" issues and can be catastrophic if a mobility problem prevents or limits access to vital services such as health care. Those without access to an automobile or who have some other barrier to mobility are often denied the opportunity to receive the benefits of resources and opportunities such as mental and physical health care, social programs, employment, job training and other educational facilities, religious facilities, recreational and cultural activities, and shopping areas.[2]

The rural mobility problem has distinct characteristics. It has continued and worsened over the last decade due to the increasing numbers of elderly in rural areas who are either unable to drive or who have limited driving ability and the decline of the passenger transportation industry in rural areas. Funding for rural public transportation has not been easy to secure, for a variety of reasons, but a confounding and continuing issue is the myth that rural families are stronger than urban ones and therefore in less need of public support for services such as transportation.

> "In fact, social support networks in rural areas are not as large nor as readily available as they once were. It is, therefore, unfair to expect rural familial support to shoulder more of the burden than in urban areas, and it is untenable and inequitable to use family support as a justification for lower service expenditures in rural areas. This concern has become more timely as policy makers, facing increased fiscal constraints at all governmental levels, are struggling to find ways to help maintain family caregiving and to prevent the substitution of formal for informal care."[3]

The critical issue for providing mobility in a predominately rural state is the identification of both a reasonable service delivery mechanism and a service level expectation concomitant with service standards. To date no standards have been developed which specify a minimum level of mobility for individuals. There exists no minimum level of service that can be compared to other public services such as road construction or postal delivery. In the early history of the United States, Congress mandated that everyone should have postal service six days a week, even though service to rural areas was not "profitable." Public outcry over past attempts to discontinue Saturday delivery has resulted in continued six days per week service. No comparable

standards exist for rural or urban public transportation.

If a minimum standard for transportation service in South Dakota can be identified, then operating costs can be estimated and a funding allocation scheme for provision of the minimum standard can be developed. The next section of this chapter "Study Approach and Research Design" outlines the procedures and techniques used to identify service standards, cost estimates, and a funding allocation scheme for South Dakota.

2.4. Study Approach and Research Design

This section reports on the research procedures, the selection of survey instruments, the sites visited, and data assembly.

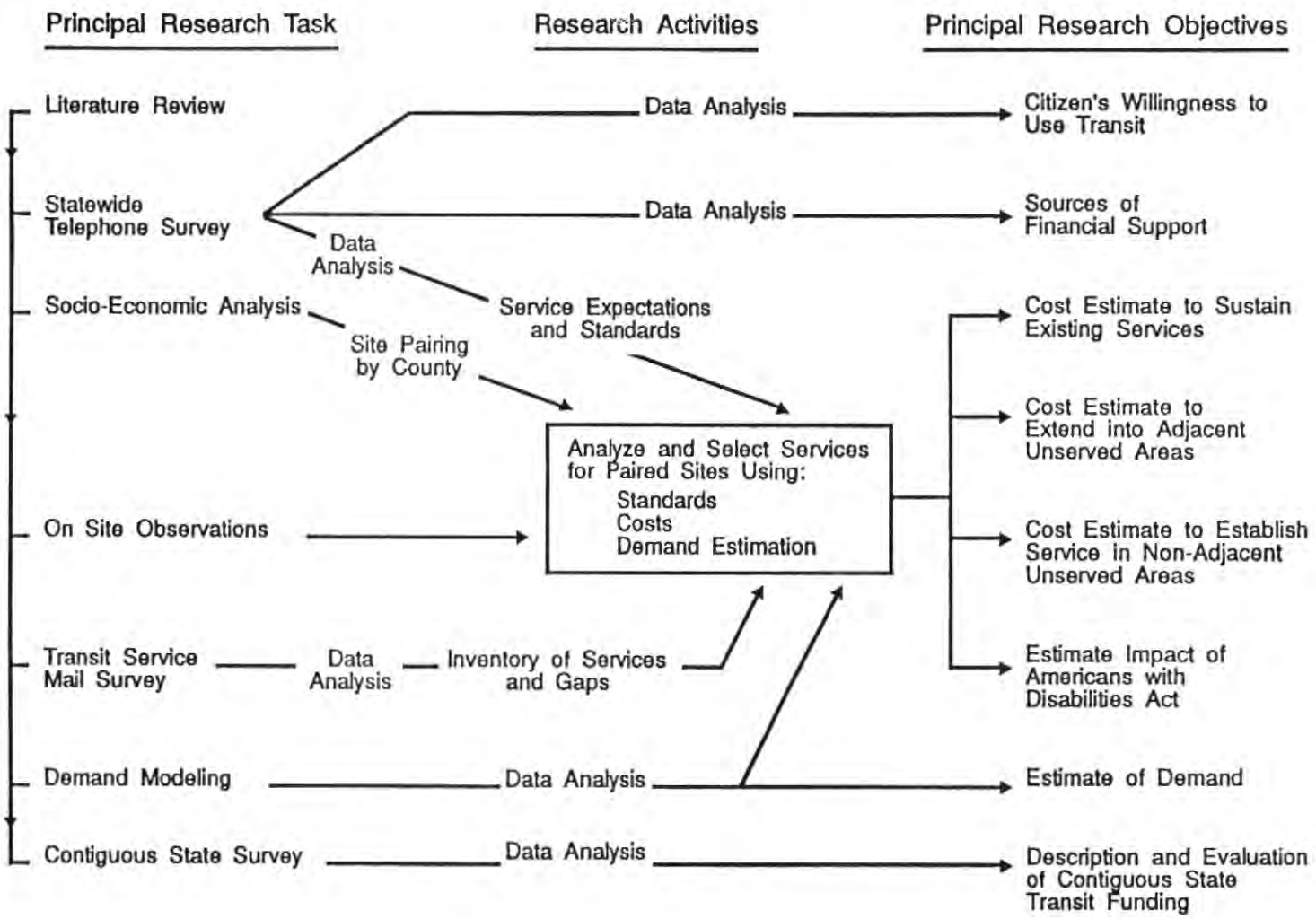
This study was conducted under the direction of the South Dakota Department of Transportation's Office of Research. A Project Advisory Committee, selected and convened by the Office of Research, provided suggestions on the design and implementation of the study. The membership list of the Project Advisory Committee is provided in Appendix A.

The research process consisted of several sequential and independent sets of activities. Figure 2-1 is a schematic presentation of the research design and shows the relative interrelationship and independence of the principal tasks, activities and objectives. A description of each of the principal tasks and activities follows.

The literature review was conducted before any of the other activities were initiated. Relevant documents collected and reviewed included: the most current U.S. Census data available from the South Dakota State Data Center in Vermillion, existing current transit performance evaluations and reports maintained by the South Dakota Department of Transportation, all existing transportation development plans produced for metropolitan areas of South Dakota, and research literature in the field.

The statewide telephone survey of the general public was conducted during the early stages of the research project. The service attitudes, beliefs, and expectations held by the respondents were of critical importance in the establishment of service standards. In turn, the service expectations and standards were central to selecting operating programs for use in the paired site analysis.

Figure 2-1
Research Activities Schematic



The transit provider mail survey was distributed to 86 current transportation providers and 45 were returned, 41 of which were returned in time for inclusion in this study. The list of providers, supplied by the South Dakota Department of Transportation, and information about the mail survey are provided in Appendix F. The mail survey, and the review of available transit system plans, were used to inventory existing services, identify costs, and discover gaps in the service areas. Appendix B provides a list of sites visited for data collection. Data from the on-site observations and the transit provider mail survey were reviewed in their constituent parts to allow selection of operating services that best corresponded to service expectations.

The demand modeling process was the most difficult aspect of the research design. The concepts of transit need and demand are complex. Table 2.1 illustrates the complex relationship of these concepts. As a result of the complexity of the concepts, no entirely satisfactory method of assessment exists.

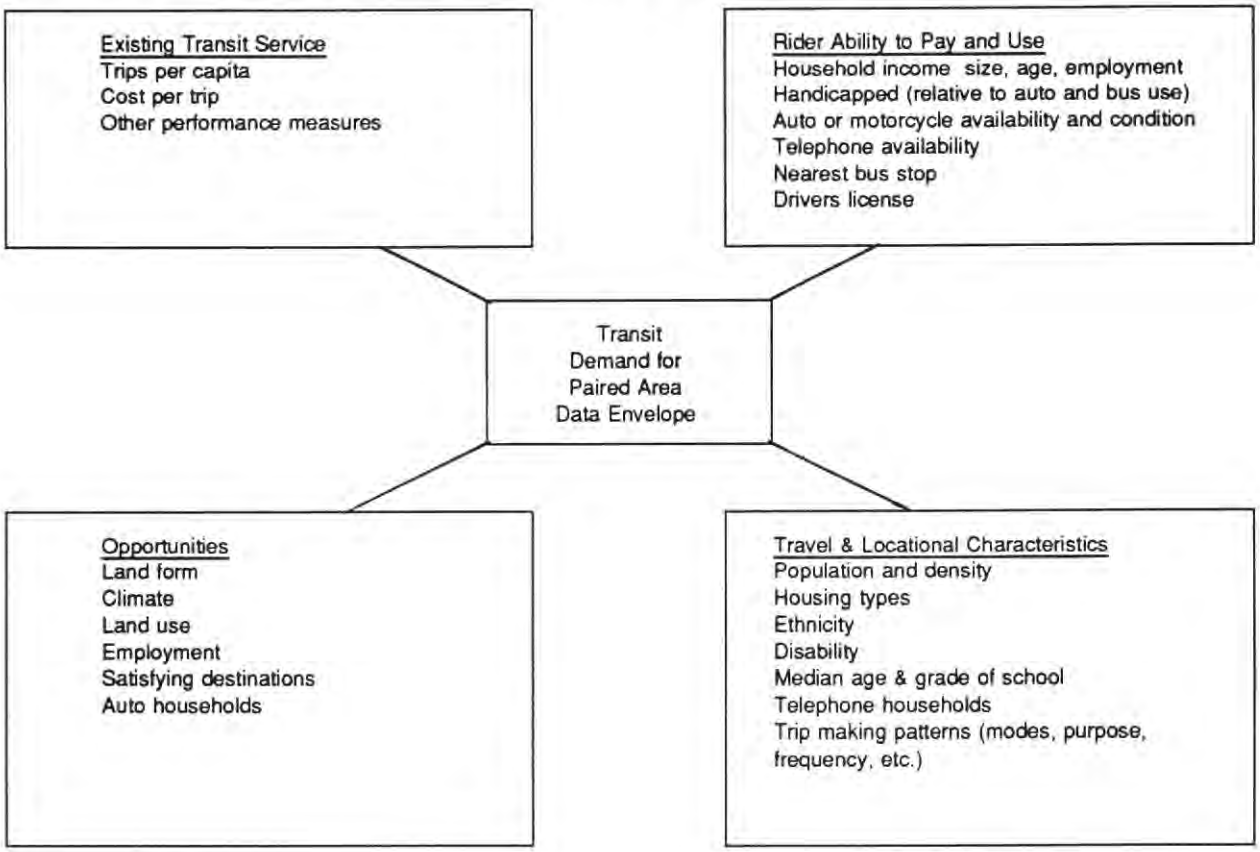
The term "demand" in this report is used in its economic sense. (How much transit service will be consumed at a given price.) "Need", on the other hand, refers to the social consequence of not having transit service. If lack of transit prevents persons from reaching essential shopping or medical attention, then there is a "need" for such service. There is "demand" for transit service, however, only when someone is willing to pay for it.[4] As described in Table 2-1, demand for transportation services is derived from market behavior as it relates to "consumer wants, prices of services, service attributes, and financial resources." Our effort in this area was to assess demand derived from a mathematical model and pair it with representative sites to calibrate the estimates to South Dakota conditions. Three demand models were used initially and a single demand model was selected to calibrate the paired sites demand estimation.

Table 2-1
Concepts of Demand and Need [5]

Concept	Phenomenon to Which Concept Relates
Need for Transportation Services	Mobility requirements as perceived by expert opinion.
Wants for Transportation Services	Mobility requirements as individuals perceive them and as related to cultural, education, and social status.
Demand for Transportation Services	Market behavior as related to consumer wants, prices of services, service attributes, and financial resources.
Quantity of Transportation Services Demanded	Consumption of transportation services given values of determinants of demand.
Market Shortage of Services	Excess demand: at existing prices. Transportation quantity demanded exceeds quantity supplied.
Normative Shortage of Transportation Services	Extent to which quantity of transportation services needed exceeds quantity of services demanded at existing prices.
Total Shortage of Transportation Services	Extent to which quantity of transportation services needs exceeds quantity of services supplied at existing prices. (A unique quantity equal to the sum of market and normative shortages at a given price.)

The strategy of site pairing (representative versus candidate) is an appropriate study tool in rural area studies. Previous studies generally have concluded that a deficiency exists in available research methodology because findings in one area do not necessarily apply to another area.[6] The strategy of site pairing overcomes that deficiency. Firstly, site pairing does not propose to transfer results from a studied area to an unstudied area, but rather stipulates that results only within studied sites are valid. Secondly, the site pairing strategy employs the method of pairing sites by mutually similar characteristics. Sight pairing is a more appropriate concept for predicting transit trip-making in rural and small urban areas than is the classical regression approach, which attempts to establish a relationship between relative need and explanatory socioeconomic variables. This study used the data envelope concept, illustrated in Figure 2-2, and compared existing service providers among paired systems and geographic areas.

Figure 2-2
Conceptual Transit Demand Model Based on Data Envelope Concept[7]



Finally, the most accurate but costly method of predicting demand is to conduct a service demonstration. A careful description of the demonstration conditions allows observers to make statements that under "these conditions we can expect X riders." In fact, South Dakota has many existing systems in a variety of geographic areas that can be thought of as service demonstrations. Existing representative systems and their service areas were paired with like service areas using the data envelope concept (Figure 2-2).

After the selected paired sites were determined and a cost for representative service was established, a financial analysis was conducted to estimate the cost to sustain existing services, the cost to extend existing services into adjacent unserved areas, and the cost to establish service in non-adjacent unserved areas. A separate analysis of the fiscal impact of the Americans with Disabilities Act was conducted and the results are included in the final total cost estimates.

The survey of contiguous states' transit funding was an independent research activity and resulted in the description and evaluation of the neighboring states' transit funding amounts and allocation schemes. The survey design was adapted from earlier research conducted by the North Carolina A&T State University Transportation Institute.[8] The research process consisted of soliciting technical materials, enabling legislation, allocation formulas, and other literature from contiguous states. After studying the technical materials, an interview was conducted with an appropriate (an individual who is involved with the state funding process at the state office level) state official. The technical material review and interview data were combined into a narrative and examined to discover implications for South Dakota.

Specific analysis techniques used in the principal research tasks will be described in later chapters. They include mathematical modeling of transit demand, operations and capital cost projections for South Dakota transportation, and univariate and bivariate analysis of telephone surveys conducted with a representative sampling of South Dakota citizens. In summary, the research scheme consisted of several independent and sequential research activities. To achieve each research objective the data were collected, tabulated, and then subjected to analysis. The following chapters discuss the detailed analysis of the data and the results.

2.5. Chapter Summary

A state's economic health and "quality of life" includes access to adequate mobility as a key indicator. The special geographic, demographic and social characteristics found expressed in South Dakota present a significant challenge to ensuring adequate mobility to its citizens. Adequate mobility is not ensured by well maintained roads and bridges for the automobile. While the automobile is generally recognized as the travel mode of choice for most people, there is a significant population in the state who are unable to meet their travel needs with the private automobile due to the lack of physical or financial resources.

The next chapter "Citizen's Willingness to Use Public Transportation: Beliefs and Attitudes in South Dakota" investigates the number of people who use transit to meet their travel needs and their attitudes about transit. The chapter describes the results of a statewide telephone survey and draws conclusions about citizens' willingness to use transit and their expectations for transit in the special geographic, demographic and social environment of South Dakota. The chapter focuses special attention on identification of data to provide guidance on the critical issues of service standards and minimum levels of mobility for individuals as well as assessing the market for public transportation.

Chapter Endnotes

1. In December 1991, the new Intermodal Surface Transportation Efficiency Act (ISTEA) was passed by the United States Congress and signed into law. The Act changed the name of the Urban Mass Transportation Administration (UMTA) to the Federal Transit Administration (FTA). The text of this report was prepared just prior to this change. The reader should note that funding was received from UMTA, but is now anticipated from FTA. The reader is further advised that, while the name of the Administration has changed, the principal sections of the law which previously provided funding have not had a name change and are expected to continue at some unknown funding level.

2. Mix, C. and J. Dickey. "Rural Public Transportation in Virginia", Transportation Research Record, No. 56, 1974.

3. Stone, Robyn I. *Rural Caregiving: Implications for the Aging Network.* Prepared for presentation at the National Resource Center for Rural Elderly's National Symposium: The Future of Aging in Rural America, Kansas City, Missouri, July, 1991.

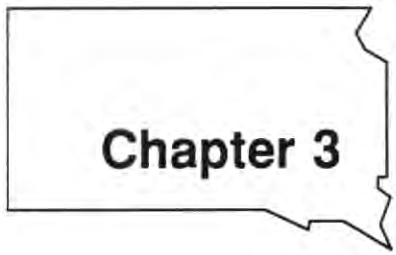
4. U.S. Senate Committee on Agriculture and Forestry, Subcommittee on Rural Development, The Transportation of People in Rural Areas. (Washington, D.C.) Government Printing Office, February 27, 1974, p.7.

5. Lago, Armando M., & Burkhardt, Jon E., Ecosometrics, Inc. Bethesda, MD. "Rural Transportation Needs and Demands: Definition and Measurement," in T. J. Tardiff, A. Saltzman & K. Lundegard (Eds.) Proceedings of the Conference on Rural and Small City Transit Policy, Institute of Transportation Studies, University of California, Berkeley and Irvine and the Secretary of the State Business and Transportation Agency of California, June 1978.

6. California Department of Transportation, Division of Mass Transportation and Transportation Planning, Transit Needs in Small California Communities, Interim Report, Report No. DMT 013. Sacramento, CA: Caltrans, April 1976.

7. Model adapted from California Department of Transportation, Division of Mass Transportation Planning, Transit Needs in Small California Communities, Interim Report, Report No. DMT 013. Sacramento, CA: Caltrans, April 1976.

8. Kidder, Alice E. Sources of Non-Federal Support for Public Transportation Programs in Non-Urbanized areas, Urban Mass Transportation Administration, Report No, NC-11-0004. June, 1978.



Citizen's Willingness to Use Public Transit: Beliefs and Attitudes in South Dakota

In the previous Chapter the concept of "demand" was distinguished from "need" and it was explained that transit demand is an economic term which measures how much transit service will be consumed at a given price. While mathematical models provide an approximate measure of transit demand based on travel patterns measured in representative communities, mathematical models do not address variances of actual rider behavior based on service configuration of discrete communities.

For example, the expectation for the level of usage of a transit service would vary depending on convenience, reliability, and fares. One method to calibrate mathematical models which measure demand for service is to request information from citizens concerning their travel preferences and then make modifications which correspond to the stated preferences. As a result, the service that is provided will more closely match the expectations of the community and demand estimations will more likely reflect actual utilization.

To make certain that the service levels used to determine predicted demand and to facilitate the analysis of funding requirements (conducted in Chapter 6), an investigation was conducted to determine South Dakota citizen's preferences for and about transit. The investigation consisted of a statewide telephone survey of 403 randomly-selected respondents in the state of South Dakota. The respondents' perceived need for public transportation, the respondents' knowledge of transportation, and the respondents' history of use of public transportation were investigated. Opinions were also solicited to determine both the views on actual and ideal public transportation in South Dakota.

This chapter reports those findings that are constituent findings, central to the research methodology. Unless otherwise noted, findings discussed in this chapter are

not reported unless the likelihood of a similar outcome occurring by chance is less than five times in one hundred (.05 significance level). Ancillary findings, additional information on the constituent findings and the complete survey methodology is contained in Appendix E.

This chapter reports on the willingness to use transit (used to estimate the size of the market), the evaluation of the quality of existing service (used in later chapters to establish model systems for analysis of cost and service characteristics), the expectations for transit (used in later chapters to establish quantity and cost of service) and the perceived sources of financial support (used to guide financial considerations). The chapter concludes with a summary of all the findings both constituent, central findings and ancillary findings.

3.1 Citizens' Knowledge and Use of Public Transportation

Nearly one-half of the respondents did not know the names of any of the 82 systems of public or special transportation in the state of South Dakota. An additional one-third only knew the name of one system.

Nearly two-thirds of the respondents reported that they had never ridden on public transportation while 28.5 percent said that they had ridden, but had quit. Only 5.7 percent (23 respondents) reported being current users of public transportation. No statistically significant profile of a typical rider can be offered. Ridership was not related to sex, education level, income, distance from residence to grocery store, hospital or doctor. However, ridership was related to age and occupation. Transit riders are older than non-riders. The average age of those who had never ridden was 42.5; of those who had quit riding, the average age was 47.3; and of those who were riders, the average age was 46.5.

Thirteen occupational categories were indicated by respondents to the telephone survey: professional, managerial, technical service, other service, sales, skilled labor, unskilled labor, small business (rancher), housewife, student, retired, disabled, and unemployed. Respondents who indicated their occupations were sales, non-technical services, unskilled labor, and students were the most likely to say they had never ridden. Of the 5.7 percent of the respondents who are riders, the greatest percentage of current riders was from the occupational group "technical services" (9.7 percent).

Additionally, 12.1 percent of the respondents, who reported they had **never** ridden, indicated that a member of their household had ridden at some time. Therefore, 43.6 percent of the 403 households included a member who had or did use public transportation. Six respondents, who did not themselves **currently** use public transportation, reported that a member of their household did. Therefore, 7.2 percent

of the 403 households contacted included a member who was a current user of public transportation.

The most common frequency of use reported by respondents, who use public transportation, was two or three times per year. The most common purpose for public transportation trips were ranked as follows: social and recreational, medical or dental appointments, and school-related. The most commonly mentioned reasons for using public transportation were ranked as follows: weather, relief of auto congestion, ecology, and convenience of schedule. About 43 percent of the respondents who used public transportation said they would use it more if there was better availability or lower cost.

The most common reason for having quit using public transportation was that the respondent no longer had a need to use it. The second most common reason was that public transportation was no longer available. About a third of the respondents who had quit using public transportation reported that they might use it again if changes were made, and once again, the two most common changes mentioned were better availability and lower cost.

The most common reason given for never having used public transportation was "do not have any need." The second most common reason was that "no public transportation was available." About one-third of the respondents who had never used public transportation said they might if changes were made. The two most common changes mentioned were availability and expanded service.

Respondents who reported that they had never used public transportation because it was no longer available lived further from both hospitals and doctors than other respondents. Respondents employed in service professions, retired, or students were the most likely to say that they would ride again if changes were made. Respondents who indicated that they would use public transportation, if it were made available, lived further from the nearest doctor than other respondents, and were younger than other respondents. Respondents who were employed in technical services and sales were more likely than other respondents to indicate that they would begin riding public transportation if it were made available.

The following section profiles public opinion about public transportation in the state.

3.2 Citizen Opinions and Evaluation of Public Transportation

Respondents rated the overall quality of public transportation in South Dakota as fair. When asked if public transportation was inadequate, adequate, or too adequate and cuts were necessary, the most common answer given by 47 percent of the respondents was that they "did not know." The next most frequent response was "inadequate" stated by 41 percent of the respondents.

The most common improvement mentioned by respondents, who thought public transportation was "inadequate and needed improvement," was "better availability," followed by "expanded services and more buses." Respondents favored using lottery funds to provide the improvements (Table 3-1).

When asked what the best thing about public transportation in South Dakota was, the most common answer was "don't know," followed by "good for the disadvantaged." When asked what the worst thing was, over one-third of the respondents said "there was not any public transportation in South Dakota," and 28 percent said "they did not know what the worst thing is."

The majority of respondents did not report many lost opportunities or serious or dangerous situations resulting from a lack of available transportation when asked to respond to a list of consequences of a lack of transportation. About four percent reported having skipped at least one meal because of the lack of transportation, while three percent said that they had turned down a job or lost an educational opportunity. Two and a half percent said they had not voted because of a lack of transportation. Eighty-eight percent reported that none of the opportunities listed had been lost. Six and a half percent indicated one lost opportunity or negative consequence due to problems of transportation. Four percent reported two types of lost opportunities or negative consequences. People reporting these events lived further from hospitals than those not reporting events; were younger than those not reporting these events, were less educated than persons not reporting these events; and were poorer economically than respondents not reporting these events.

Table 3-1
Preferences For Public Transportation System Characteristics

To Whom Available	(n)	Percent of (n)
All People	279	72.1%
People with Needs	84	21.7%
For No one	3	.8%
Don't Know	21	5.4%

Where Available	(n)	Percent of (n)
Everywhere-Point to Point	194	51.2%
In Cities Only	65	17.2%
Everywhere, but local	87	23.0%
Don't Know	33	8.7%

Cost of Service	(n)	Percent of (n)
No Cost	9	2.3%
No Cost to Needy	81	20.9%
Reasonable Fee	123	31.7%
Sliding Scale	128	33.0%
Pay Total Cost	36	9.3%
Don't Know	11	2.8%

Source of Other Funding	(n)	Percent of (n)
Lottery	143	43.6%
Don't Know	54	16.5%
Gas Tax	43	13.1%
Sales Tax	19	5.8%
Income Tax	18	5.5%
Advertising	15	4.6%
License Fee	11	3.4%
Other Tax	9	2.7%
Other	16	4.9%

Days of Service	(n)	Percent of (n)
7 Days per Week	217	57.7%
6 Days per Week	41	10.9%
5 Days per Week	57	15.2%
4 or Less Days/Week	35	9.3%
Don't Know	26	6.9%

Hours of Service	(n)	Percent of (n)
24 Hours per Day	107	27.9%
15-18 Hours per Day	124	32.3%
8-10 Hours per Day	129	33.6%
Don't Know	24	6.3%

3.3 Summary of Citizens' Knowledge and Beliefs About Public Transportation

This section summarizes respondents' knowledge, beliefs and opinions about public transportation and specifies their ideas on service standards.

3.3.1 Lack of Service Knowledge.

Respondents did not seem to know a lot about public transportation in South Dakota. Forty-seven percent of the respondents did not know the name of any public transportation system in the state. When asked if public transportation in South Dakota was inadequate, if improvements were necessary, if it was adequate, or if it was more than adequate and cuts were necessary to save money, the most common answer was "don't know" (46.6%). When asked to evaluate the quality of public transportation on a 1 to 5 scale where 1 is poor, 2 is fair, 3 is good, 4 is very good, and 5 is excellent, the most common answer was also "don't know" (25.6%). All of these findings show respondents have a lack of knowledge about current services.

3.3.2 Public Transportation Not Highly Rated.

Respondents who did have knowledge of public transportation in South Dakota did not evaluate the quality of public transportation very highly. Forty-one percent of the respondents felt public transportation in South Dakota was inadequate and in need of improvement as compared to 11.1 percent who felt it was adequate and 1.3 percent who felt it was more than adequate and that cuts were necessary. When asked to evaluate the quality of public transportation on the 1 to 5 scale mentioned above, public transportation received a mean score of 2.25, a score much closer to fair than to good. When asked what was the worst thing about public transportation in South Dakota over one-third of the respondents said "the worst thing was that it did not exist."

3.3.3 High Standard of Service Desired and Some Level Should be Provided.

Respondents set a high standard for the type of public transportation system they would like to see in South Dakota as revealed in Table 3-1. Nearly three quarters of the respondents believe public transportation should be made available to all people in South Dakota. Over ninety percent (93.8%) believe transportation should be provided to the general public or people with needs. Over one-half of the respondents believed public transportation should be available from any point in the state to any other point. Another 23 percent said that public transportation should be available everywhere in the state, but only for local trips. And 17.2 percent said it should only be available in cities. Over ninety percent (91.4%) believe some service should be provided in all or specific areas of South Dakota.

Fifty-seven percent of the respondents believe that there should be seven days per week service, another 11 percent said that service should be available six days per week and 15.2 percent said that service should be available 5 days per week. About one-third of the respondents believe that service should be available 8 to 10 hours per day, another one-third believed that it should be available 15 to 18 hours per day and 28 percent believed that service should be available 24 hours per day. Urban respondents were more likely than rural respondents to believe public transportation should be available to all people, to believe service should be available for a reasonable fee, to believe service should be available 6 or 7 days per week, and to believe service should be available 15 to 18 hours per day.

3.3.4 Public Transportation Should be Available for a Reasonable Fee or Sliding Scale in Concert With Other Funds.

About two-thirds of the respondents believed that public transportation should be available for a reasonable fee or on a sliding scale basis; another 21 percent believed that it should be free to the disadvantaged. Most respondents favored the lottery, in addition to user fees, to provide funding for public transportation. About 85 percent of the respondents agreed or strongly agreed with the statement "that people have to get to certain destinations and if they do not have the means to get to those destinations, transportation should be provided." Finally, about 54 percent of the respondents agreed with the statement "that all people have a right to get to where they want to go and if they do not have the means to get there, transportation should be provided for them."

3.3.5 Six to Fourteen Percent of the Population Will Use Public Transportation.

About 6 percent (5.7%) of the respondents currently use public transportation. About 30 percent (32.4%) of those who quit riding and 32.2 percent of those who never rode said they would ride if certain changes were made. However, the 32 percent that say they would ride must be factored to gain a more accurate estimate of actual use. Previous research has shown behavior intent inquiries are notoriously inaccurate and that individuals who responded "no" on a survey are better predictors of their actual behavior than those who responded "yes." Therefore, the percentage expressing positive intentions must be reduced by division using a factor (number) between 3 and 5 in order to transform positive intention to actual use estimates.[1]

Factoring the 32 percent of non-riders and former riders who said they would ride if changes were made by 4 gives a predicted actual use of 8 percent. Therefore, it can be stated that the predicted market for public transit ranges form 6 percent (those who are currently using the existing services) to 14 percent (those who are not using the existing services but who said they would use the service if changes were made and those who are currently using the existing services). The 6 to 14 percent of the population in South Dakota who would actually use the service would use it according to the following patterns; about one-half will use the service several times per year; the

other half will use the service several times or more per month. (About a one-third of the monthly users will use it two or three times per week or more.)

A "no changes could get me to ride" response is considered a better predictor of actual rider behavior, so consequently, approximately two-thirds of the population are unlikely to ever use transit, regardless of the changes implemented. The population remaining who did not indicate that they are current riders, potential riders, or unlikely riders (approximately 19 percent of the population), are not satisfactorily defined. This population, even though they might demand transportation, are not included in aggregated estimates of demand for transit in South Dakota because of their ambiguous status.

3.4 Chapter Summary

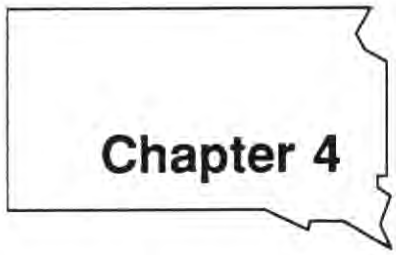
Citizens responding to the telephone survey had limited knowledge of transit. At the same time, their expectations for adequate service levels were high. However, it is likely that two-thirds of the people in the state will never use public transit. Six to fourteen percent of the citizens of South Dakota will likely use transit sometime during the course of a year.

Even though the survey revealed a modest knowledge and use of existing services by respondents, public transportation services are currently being provided to address what are believed to be the most prominent mobility needs of the citizens of South Dakota. However, the resources currently available may be insufficient to address the mobility problems of those who are unaware of the services but, nonetheless, need transportation. Further, the resources may be inadequate to address gaps in service or meet the demands of those respondents who say they would like to use transit if certain changes were made.

The next chapter, "Inventory of Existing Transit Service: Analysis of Transit Demand in South Dakota," assesses current transportation services in the state and estimates the demand for additional services. It also addresses gaps due to non-existent service or inadequately funded service. The chapter then aggregates South Dakota counties by socioeconomic factors and identifies paired like-counties for application of the service expectations and standards derived from the statewide telephone survey.

Chapter Endnotes

1. Ira M. Sheskin, "Relationship Between Survey Behavioral Intent and Actual Behavior in Transit Usage," Transportation Research Record, No. 1297. Washington, D.C.: Transportation Research Board, 1991.



Chapter 4

Inventory of Existing Transit Services: Analysis of Transit Demand in South Dakota

4.1 Introduction to Transit Demand Modeling in South Dakota

Development in South Dakota was spurred early in its history by a transportation industry, the railroads. The period of the late 1800's and early 1900's marked a period of growth for South Dakota communities as they served the agricultural markets of small family farms.

Since 1920, however, demographic, social, and economic factors have changed rural South Dakota, in a manner similar to the other rural Plains states. The farm economy has suffered from depressions and droughts. As discussed in Chapter 2, significant outmigration from most of South Dakota's counties has changed population densities and challenged all types of services in the state, including transportation.

In the previous chapter, citizens' attitudes and beliefs about transit were assessed. Included in this examination was a summary of current transit usage by South Dakotans and the likelihood of their future transit usage. It was determined that approximately six to fourteen percent of the population of South Dakota are likely to use transit at least several times per year. This estimate represents an expressed demand for transit services in South Dakota based on current knowledge of services. The next step involves calculating total trips demanded by citizens in the state.

The demand model utilized in this study first requires identification of counties relatively well-served by existing transit services and that are demographically representative of a group of counties. Data collected from these identified representative sites are utilized to calibrate demand estimation formulas and calculate demand of these counties. The resulting calibrated demand formula then is applied to other paired sites, i.e., sites with characteristics similar to the representative area.

This chapter provides a description of the three primary elements necessary to an analysis of transit demand in South Dakota: (1) a profile of socio-economic characteristics of the state with a classification scheme for South Dakota counties based

on characteristics found to positively correlate with transit usage, (2) an inventory of transit services in the state and current markets being served, and (3) a profile of the transit market in the state and likely transit behaviors. Further, this chapter provides transit demand estimates on a county-by-county basis utilizing these three elements.

4.2. Socio-Economic Description of South Dakota: 1990 and Beyond

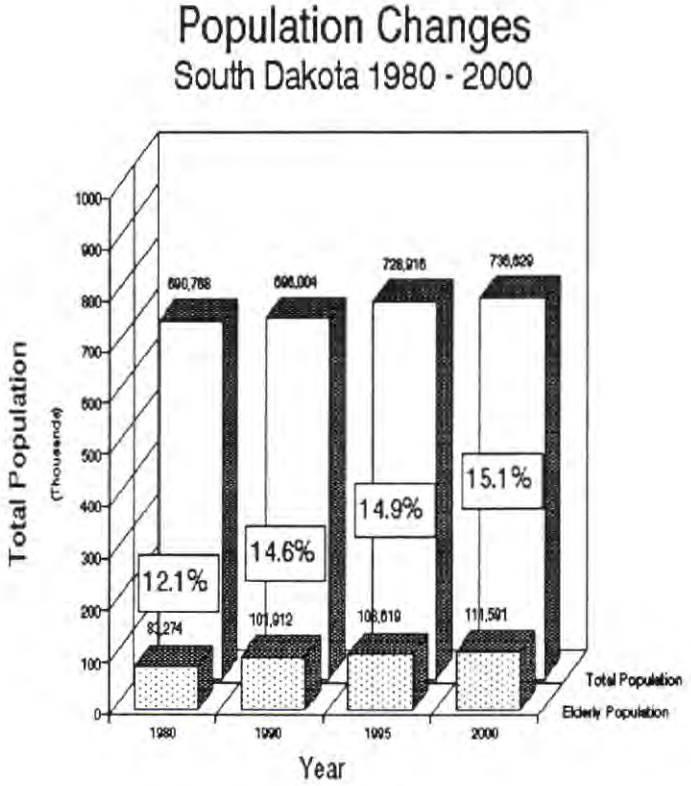
A socio-economic profile of South Dakota was conducted for three primary purposes: (1) to validate the representativeness of the telephone survey, (2) to prepare a profile of South Dakota counties through which a classification scheme could be developed for pairing sites, and (3) to provide the data with which to calculate transit demand in the calibrated models.

South Dakota is characterized by very low density population in all but two counties, Pennington and Minnehaha. While the state ranks 16th in the country in land mass, it ranks 45th in the country in population. Approximately twelve percent of the land mass in South Dakota is tribal or Native American-owned lands. Statewide, the population density per square mile is slightly over nine persons.

In the West-River area of the state, excluding Pennington County and the Black Hills area, population density is only two persons per square mile. Population density is important to transportation planning in that the cost of providing transportation is a direct function of mileage. Low population density translates directly to overall higher cost per passenger to purchase transportation, whether that purchase is made by the consumer using personal automobile transportation or the transportation is purchased publicly.

Further, analysis of transit demand is heavily dependent on demographic factors as they exist today and projections for change over the next several years. Some of the key variables in modeling transit demand include estimates of total population, transit dependent populations (elderly, disabled, and low income), and minority populations. Each of these factors have been found to predict demand for public transit services. These groups typically are more likely users of public transportation services since access to the personal automobile is usually more limited. Economic factors such as poverty level and automobile ownership also are considered key variables in demand prediction as an indicator of groups that are more frequent users of public transportation.

Figure 4-1
South Dakota Population Change 1980 - 2000[1]



4.2.1 Population Trends

Table 4-1 provides county-by-county detail of key population indicators for South Dakota based on the 1990 Census. Total population in South Dakota, based on the recently-released 1990 U.S. Census data, is set at 696,004, an increase of approximately 5,000 over the 1980 population.

Of the total population, slightly more than 100,000 individuals are classified as "elderly," that is, 65 years of age and older. The elderly in South Dakota represent 14.6 percent of the total population. In 1980, only 12.1 percent of the population was elderly. An estimated three percent of the total non-elderly population is considered transportation disabled.[2] One percent of the total population is estimated as homeless.[3]

As Figure 4-1 illustrates, the population of persons over 65 as a percentage of total population increased 2.5 percent from 1980 to 1990. Population projections through the year 2000 predict relatively little change in overall population; however, the percent of citizens over 65 years of age will increase to 15 percent of the total.[4]

4.2.2 Economic Status

Of the approximately 180,000 families in South Dakota, an estimated 23,000 are low-income families. While 1990 economic data from the U.S. Census will not be available until spring, 1992, the State Data Center in Vermillion believes that the economic status in the state has not changed significantly since 1980.

The 1980 U.S. Census listed 12.6 percent of South Dakota families in the low-income category. Median household income in 1980 ranged from lows in Buffalo and Sanborn counties of $9,500 and $9,759, respectively; to high median household incomes in Hughes and Minnehaha counties of $20,484 and $20,535. Per capita income in 1980 ranged from a low in Buffalo and Shannon counties of $2,637 and $2,642, respectively; to high per capita income of $7,206 and $7,217 in Minnehaha and Hughes counties.

1990 Census data on automobile ownership also is not yet available. However, by projecting ownership from the 1980 Census, an assumption can be made that of the estimated 260,000 total households in South Dakota, approximately 17,000 households (6.6 percent) do not own an automobile. Average household size in South Dakota is 2.69 persons.

Table 4-1
South Dakota County-by-County Demographic Analysis: 1990

	Total Population	Elderly Population	Disabled Population (a)	Minority Population (b)	American Indian Population (c)
Aurora	3,135	681	74	49	42
Beadle	18,253	3,330	448	316	161
Bennett	3,206	379	85	1,497	1,481
Bon Homme	7,089	1,594	165	189	154
Brookings	25,207	2,981	667	551	156
Brown	35,580	5,362	907	1,198	979
Brule	5,485	910	137	407	383
Buffalo	1,759	132	49	1,366	1,365
Butte	7,914	1,266	199	285	114
Campbell	1,965	399	47	5	3
Charles Mix	9,131	1,607	226	2,009	1,992
Clark	4,403	955	103	27	12
Clay	13,186	1,364	355	630	393
Codington	22,698	3,622	572	353	260
Corson	4,195	456	112	2,044	2,032
Custer	6,179	926	158	179	155
Davison	17,503	3,044	434	341	243
Day	6,978	1,618	161	478	468
Deuel	4,522	937	106	24	10
Dewey	5,523	459	152	3,703	3,680
Douglas	3,746	783	89	25	22
Edmunds	4,356	998	101	27	18
Fall River	7,353	1,527	175	1,046	449
Faulk	2,744	572	65	7	6
Grant	8,372	1,509	206	58	31
Gregory	5,359	891	134	294	284
Haakon	2,624	306	69	55	36
Hamlin	4,974	1,126	115	30	10
Hand	4,272	869	102	21	5
Hanson	2,994	487	75	7	7
Harding	1,669	229	43	24	16
Hughes	14,817	1,763	392	1,091	993
Hutchinson	8,262	2,135	184	41	21
Hyde	1,696	397	39	59	57
Jackson	2,811	354	74	1,202	1,192
Jerauld	2,425	588	55	12	5

Table 4-1 (continued)	Total Population	Elderly Population	Disabled Population (a)	Minority Population (b)	American Indian
Jones	1,324	227	33	8	6
Kingsbury	5,925	1,372	137	20	11
Lake	10,550	1,917	259	82	33
Lawrence	20,655	2,952	531	705	534
Lincoln	15,427	2,209	397	135	57
Lyman	3,638	486	95	1,059	1,051
Marshall	4,844	1,057	114	276	270
McCook	5,688	1,291	132	36	28
McPherson	3,228	889	70	5	2
Meade	21,878	2,154	592	1,226	392
Mellette	2,137	280	56	1,004	999
Miner	3,272	800	74	5	4
Minnehaha	123,809	14,393	3,282	3,355	1,675
Moody	6,507	1,157	161	556	527
Pennington	81,343	8,133	2,196	8,574	5,804
Perkins	3,932	827	93	73	56
Potter	3,190	685	75	33	26
Roberts	9,914	1,867	241	2,299	2,280
Sanborn	2,833	537	69	3	0
Shannon	9,902	526	281	9,403	9,372
Spink	7,981	1,476	195	72	61
Stanley	2,453	266	66	159	155
Sully	1,589	242	40	17	15
Todd	8,352	475	236	6,921	6,881
Tripp	6,924	1,191	172	679	670
Turner	8,576	1,928	199	34	24
Union	10,189	1,693	255	98	34
Walworth	6,087	1,273	144	481	467
Yankton	19,252	2,878	491	591	412
Ziebach	2,220	173	61	1,430	1,420
TOTAL	696,004	101,912	17,623	58,989	50,501

[Source: U.S. Bureau of the Census, 1990; except as otherwise noted.]

a) Estimated calculated by the following: [(Total population 1990 - the total estimated elderly population 1990) * Total percent of disabled population]. Assumption of 3 percent non-elderly disabled population was derived from the South Dakota Section 16(b)(2) State Management Plan, January, 1990.

b) 1990 Census of Populations and Housing- Summary, Profile 1, Characteristics of the Population by County, Race, Pg 7. Minority figure calculated by the following: (Total population 1990- Total white population 1990).

c) 1990 Census of Populations and Housing- Summary, Profile 1, Characteristics of the Population by County, Race, Pg 7.

4.2.3 Employment Status and Location of Employment

Overall employment growth for all industries throughout the state for the decade of the 80's was approximately 18 percent.[5] In the summer of 1991, South Dakota's unemployment rate was 3.4 percent, compared with a overall U.S. rate of 6.6 percent. South Dakota's unemployment rate was at the same level as its previous year rate, at the same time that the U.S. unemployment rate increased 1.5 percent.

South Dakota's employment is distributed somewhat evenly among the three major industries of agriculture, service, and manufacturing. Agriculturally-related jobs provide approximately 13 percent of state employment, the service industry provides 16 percent employment, and 10 percent of the jobs are related to manufacturing.

Tourist-related development has spurred significant growth for Pennington County over the past decade. The two urbanized areas, Pennington and Minnehaha, led the rest of the state in service-industry employment growth. Growth in Minnehaha County was approximately 54 percent, Pennington County's growth was set at 42 percent, compared with employment growth in the rural areas of approximately 28 percent.

4.2.4 Indian Reservations of South Dakota: Special Demographic Considerations

There are nine reservations in South Dakota representing a total population of 53,656. A map of American Indian Reservations in South Dakota is shown in Figure 4-2.

Transportation service and need data for South Dakota Indian Reservations were collected utilizing several methods: (1) review of available literature on transit demand for Native American Tribes (2) a mail-out survey to existing transportation programs, (3) a site visit to one tribal service, and (4) follow-up telephone interviews with the tribes in South Dakota.

A significant problem in conducting transportation studies on Indian Reservations is the inconsistency of data, both demographic and transit operations. The U.S. Census, the Bureau of Indian Affairs, and the tribes themselves all collect and maintain data for the area; but rarely do these figures coincide. Further, the data that was verified was generally based on the impressions of those individuals interviewed. Most of the tribes contacted did not have basic statistical data prepared and available to the public.

Follow-up telephone interviews were conducted with six of the nine tribes. Telephone interviews were not completed for the Lower Brule, Standing Rock, or Rosebud Reservations, although a site visit was completed on the Rosebud Sioux Reservation. The estimate for the percentage of households with no car available was based on interviews from the six reservations that were able to provide the information.

Figure 4-2
South Dakota Indian Reservations

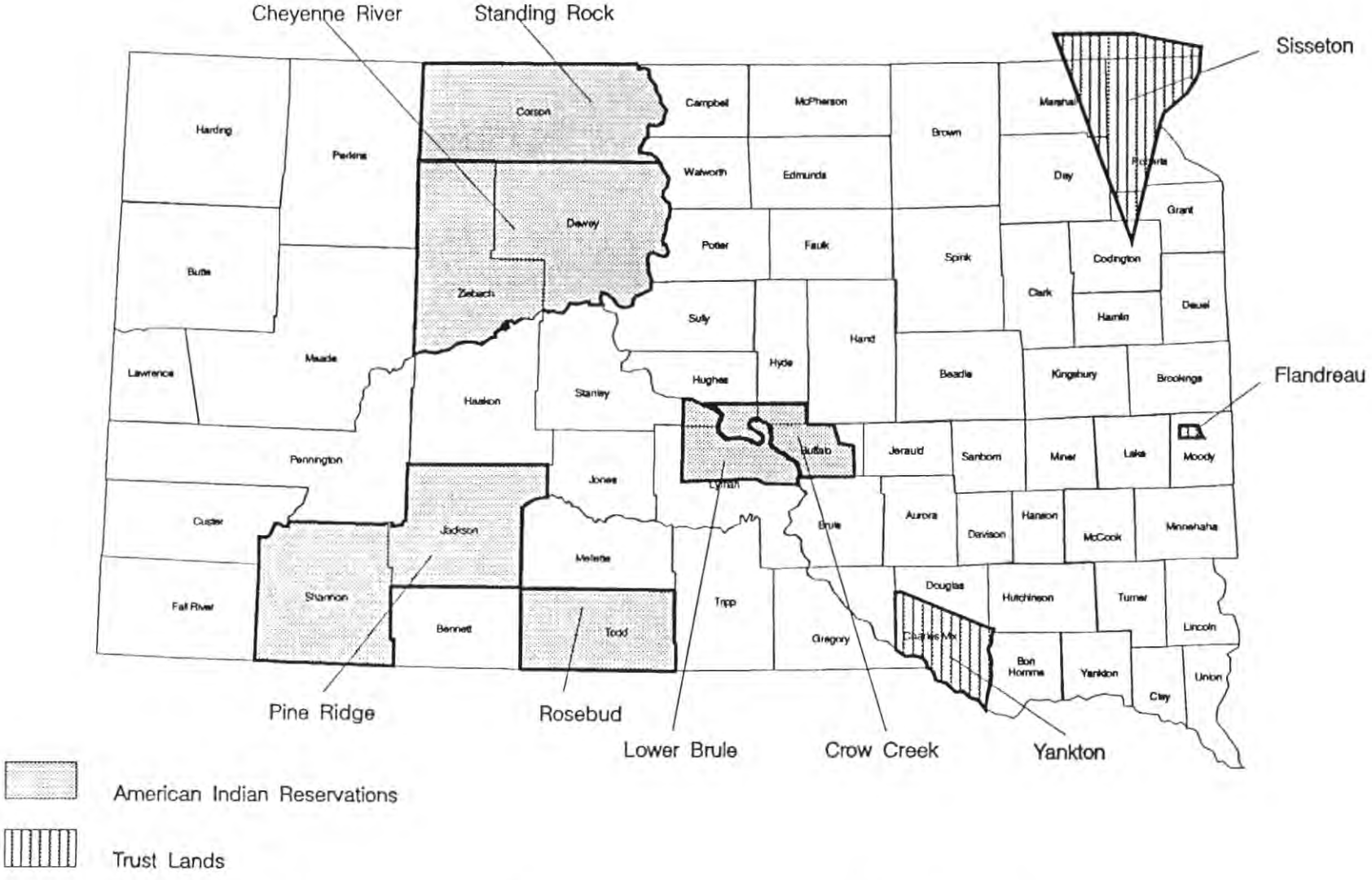


Table 4-2 provides a summary of population characteristics on Indian Reservations, as reported by the U.S. Census. Total population reported on the Reservations is estimated at 53,656. Elderly population is estimated at 1,627, only three percent of the total.

Table 4-2
South Dakota Indian Reservations
Population Characteristics

RESERVATION	Total Population	Elderly Population	Disabled Population	General Public
Cheyenne River	7,743	224	232	7,287
Crow Creek	1,756	77	53	1,626
Flandreau	279	14	8	257
Lower Brule	1,123	36	34	1,053
Pine Ridge	12,189	532	366	11,291
Rosebud	9,606	354	288	8,964
Sisseton	10,496	169	315	10,012
Standing Rock	4,195	105	126	3,964
Yankton	6,269	116	188	5,965
TOTAL	53,656	1,627	1,610	50,419

Source: U.S. Bureau of the Census, 1990, and Bureau of Indian Affairs.

The extremes of demographic factors on South Dakota Indian Reservations seem to be under-represented in official U.S. Census data. The numbers of elderly tend to be higher than reported, household size appears to be understated while household income appears to be overstated. Further, according to Tribal representatives, household automobile ownership is much lower than reported. Tribal representatives generally indicated that zero-car households represent approximately 40-60 percent of total households on the Reservation.

This report utilized the U.S. Census and Bureau of Indian Affairs-reported data to calculate transit demand because of uniform availability of all data points. The reader should be advised that if the predictors such as elderly population and zero-car

households are, in fact, as significantly under-reported as indicated by tribal representatives, transit demand will also be significantly underestimated. A summary of transportation on South Dakota Indian Reservations is provided in Appendix C.

4.2.5 Socio-Economic Analysis and Summary: Classifying South Dakota Counties for Site Pairing

Transportation policy developed at the state level must be based on common characteristics and assumptions for all parts of the state, or unique characteristics of identifiable sub-state units. Recognizing diversity within the common sub-state units of South Dakota is particularly important in the analysis of passenger transportation. Travel purpose, distances, and mode choice usually vary significantly depending on size of the community, age of community residents and availability of employment (reflected in income levels).

South Dakota is made up of a variety of types of communities, ranging from a rural cluster of a few homes and a post office, to the large urban cities of Sioux Falls and Rapid City, with accompanying services and merchants of all types. In conceptualizing the needs of a state, it is helpful to divide the state into just a few categories based on common characteristics.

Analysis of demographic characteristics of the sixty-six counties in South Dakota revealed useful information in developing a procedure to assess transit demand. All but two of the state's counties fall within the definition of "rural" or "nonurbanized," as defined by the Urban Mass Transportation Administration; however, characteristics of the remaining 64 counties still reflect differences in socio-economic patterns. Based on national statistics and several site visits to South Dakota counties, it was hypothesized that as the population in the county decreased, the percentage of older persons would increase. In addition, because of more limited local employment, retail, and service opportunities, it was anticipated that average income levels generally would be lower in the less populated areas.

A classification scheme of counties based on population stratification, was developed to test this hypothesis. Counties were divided into four categories: dispersed rural, small rural, rural, and urban. The categories rely most heavily on total population of the county. Secondary factors utilized in this grouping include population trends in the county (Is the population increasing or decreasing?) and level of transit services available in the county. Figure 4.3 provides a map of South Dakota by county classification scheme. The level of transit services available in the county was determined by the transit services inventory and site visits discussed in Section 4.3. The guiding principle, in the use of transit service level in grouping counties, was that of differentiated service standards based on community size and location.

Figure 4-3
South Dakota by County Classification Scheme

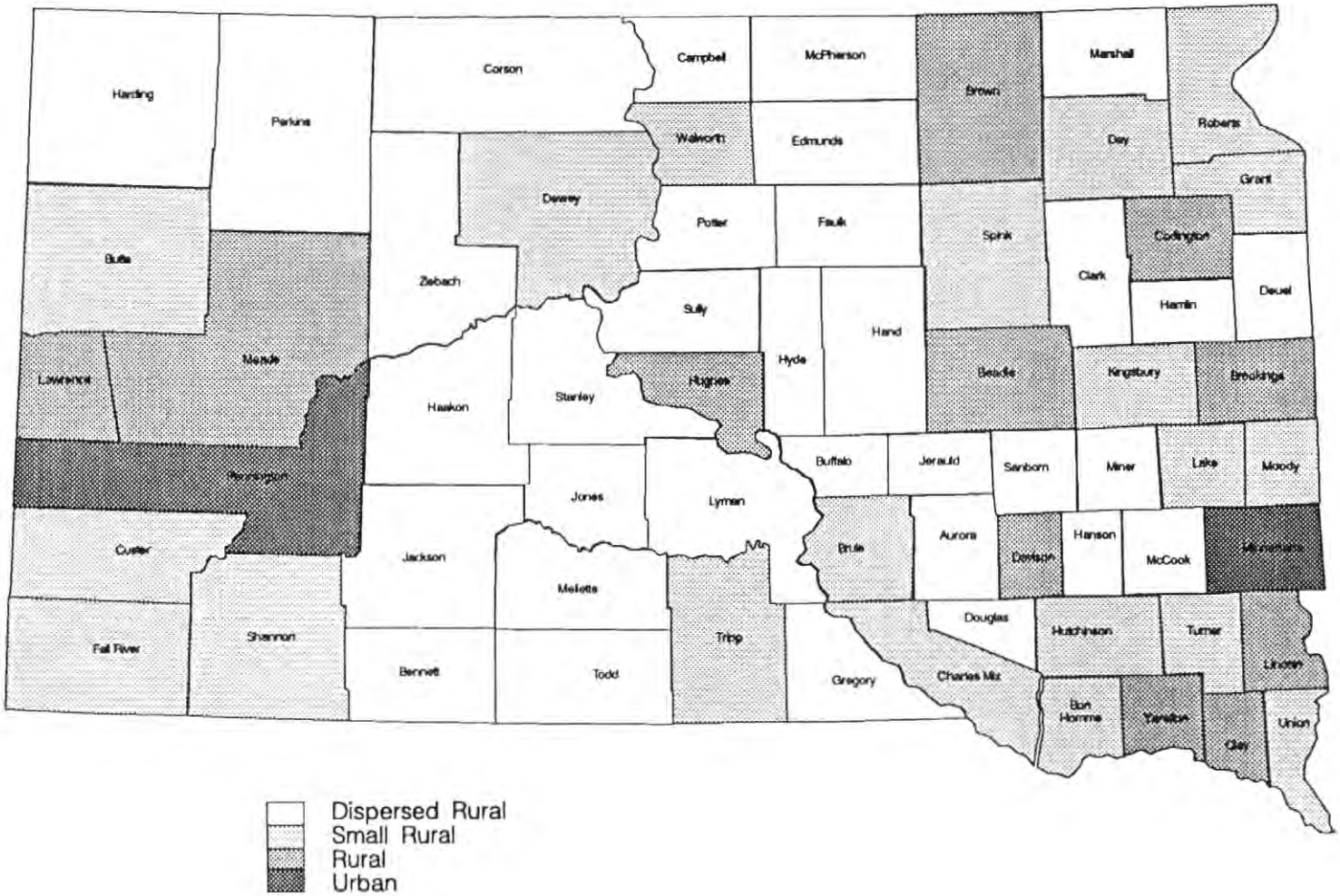


Table 4-3 lists the characteristics of each county classification and the counties that are included in those categories. As described in this table, the dispersed rural counties are characterized having a population of less than 5,000 people, or 5,000 to 6,000 population with a decline over the last ten years. In dispersed rural counties, there are limited or no full service grocery stores and limited or no health services in the county. Thirty-two counties meet these criteria in South Dakota.

Small Rural counties have populations of 5,000 to 10,000; or populations of 10,000 to 11,000 with population decline over the past ten years. The twenty-one Small Rural counties in South Dakota have limited full service grocery merchants and limited or no health services. Eleven Rural counties have populations between 10,000 and 50,000 with full service groceries, a health clinic and other medical services, and serves as a regional business center. Finally, the two urban counties in South Dakota (Minnehaha and Pennington) provide all major services and multiple transportation services.

Table 4-3
Demographic Grouping of South Dakota Counties by Population, Population Trends, and Services

Group	Group Description	Counties		
Dispersed Rural	0 - 4,999 population or 5,000 - 6,000 population, with decline over last 10 years. Limited or no full service (produce) grocery merchants. Limited or no health services.	Aurora	Gregory	Marshall
		Bennett	Haakon	McCook
		Buffalo	Hamlin	McPherson
		Campbell	Hand	Mellette
		Clark	Hanson	Miner
		Corson	Harding	Perkins
		Deuel	Hyde	Potter
		Douglas	Jackson	Sanborn
		Edmunds	Jerauld	Stanley
		Faulk	Jones	Sully
			Lyman	Ziebach
Small Rural	5,000 - 10,000 population or 10,000 - 11,000 population, with decline over last 10 years. Limited full service (produce) grocery merchants. Limited or no health services.	Bon Homme	Grant	Spink
		Brule	Hutchinson	Todd
		Butte	Kingsbury	Tripp
		Charles Mix	Lake	Turner
		Custer	Moody	Union
		Day	Roberts	Walworth
		Dewey	Shannon	
		Fall River		
Rural	10,000 - 49,999 population. Full service grocery merchant. Health clinic and other medical services. Regional business center.	Beadle	Codington	Lincoln
		Brookings	Davison	Meade
		Brown	Hughes	Yankton
		Clay	Lawrence	
Urban	50,000 + population. All major services. Multiple transportation providers.	Minnehaha	Pennington	

To determine the validity of this grouping as indicative of a particular set of transportation behaviors and needs, age, income status, and zero-car households were compared among the four county classification. In fact, communities in the dispersed rural counties do have the highest percentage of elderly, the lowest per capita income, and the lowest automobile ownership per household. Table 4-4 summarizes these factors.

Table 4-4
Mobility Indicators for South Dakota Counties

County Classification	Dispersed Rural	Small Rural	Rural	Urban	Statewide Average
Percent Elderly	18.7	17.4	14.1	11.0	15.3
Zero-car households (a)	13.5	8.2	6.7	2.1	7.6
Average Median Household Income (1980) (b)	$ 12,633	$ 13,752	$ 17,275	$ 18,950	$15,650
Relative to Income Base in Urban Area	-33%	-27%	-8.8%		
Average Per Capita Income (b)	$ 4,417	$ 4,886	$ 5,983	$ 6,900	$5,550
Relative to Income Base in Urban Area	-36%	-29%	-13%		

Sources: U.S. Bureau of the Census, 1990; except as otherwise noted.

(a) Estimation based on constant proportion of the total in 1980.

(b) U.S. Dept of Commerce, Bureau of the Census, General Social and Economic Characteristics, 1980, South Dakota, Table 180, Poverty Status in 1979 of Families and Persons for Counties: 1980, pg. 43-202 to 43-217.

Based on the county classification system developed for South Dakota, several important statements can be made:

- The ratio of elderly residents to total population continues to increase as the counties become more rural.

- Rural counties are over-represented in zero-car ownership households. Several of the Indian Reservations may have zero-car ownership rates exceeding 40 percent.

- The more rural counties have a lower per capita and median household income than the urban counties.

These factors, as predictors of transit demand, lend support to the belief that transit demand will exist in all areas of the state, not just in the more transit-traditional urban counties.

The next section provides a profile of transit services in South Dakota developed through a written survey, site visits, and relevant program documents. This profile provides additional data on which to develop demand estimates by using actual transit behavior in the state.

4.3 Existing Public Transit Services in South Dakota: Transit Services Inventory

4.3.1 Purpose and Methodology of the Transit Service Inventory

A thorough knowledge of the characteristics of South Dakota transportation providers is important to the research design of this study for developing paired sites and identifying potential gaps or needed expansion of transportation services. Information about organizational operating characteristics, strengths, weaknesses, and constraints will contribute to the reliability of the model developed to assess unmet transportation demand in the state.

Data were collected for the transit service inventory from several sources. Historical operations data and funding data were collected from documents provided by the South Dakota Department of Transportation. The state management plan, for both the Section 18 and 16(b)(2) programs, previous studies, annual statistical compendia, transportation development plans, and intra-agency memos reporting operational statistics, provided background information on existing transportation services in South Dakota.

In addition to existing system data, a written survey was developed for distribution to all transit providers, both public and specialized, in the state. The

purpose of the survey was to update operational statistics of existing systems, to determine plans for service development, and to determine service gaps and problems, as perceived by the providers. A copy of the survey form used in this study is attached in Appendix F. The survey was developed by the project team with review and comment from SDDOT staff and the Project Advisory Committee.

The mailing list for the agency written survey was provided by the South Dakota Department of Transportation and was sent to 86 South Dakota transportation providers. A total of 41 usable surveys (of a total of 45 surveys returned) were included in the database, a response rate of 47 percent.

Because surveys were not received from all provider agencies in the state, and data on the returned surveys were incomplete in some cases, the written survey cannot be used as a comprehensive inventory. However, the response provides a sufficient sample from which to draw conclusions about the status of South Dakota transit, to determine development trends for the future, and to make a general assessment of service gaps in the state.

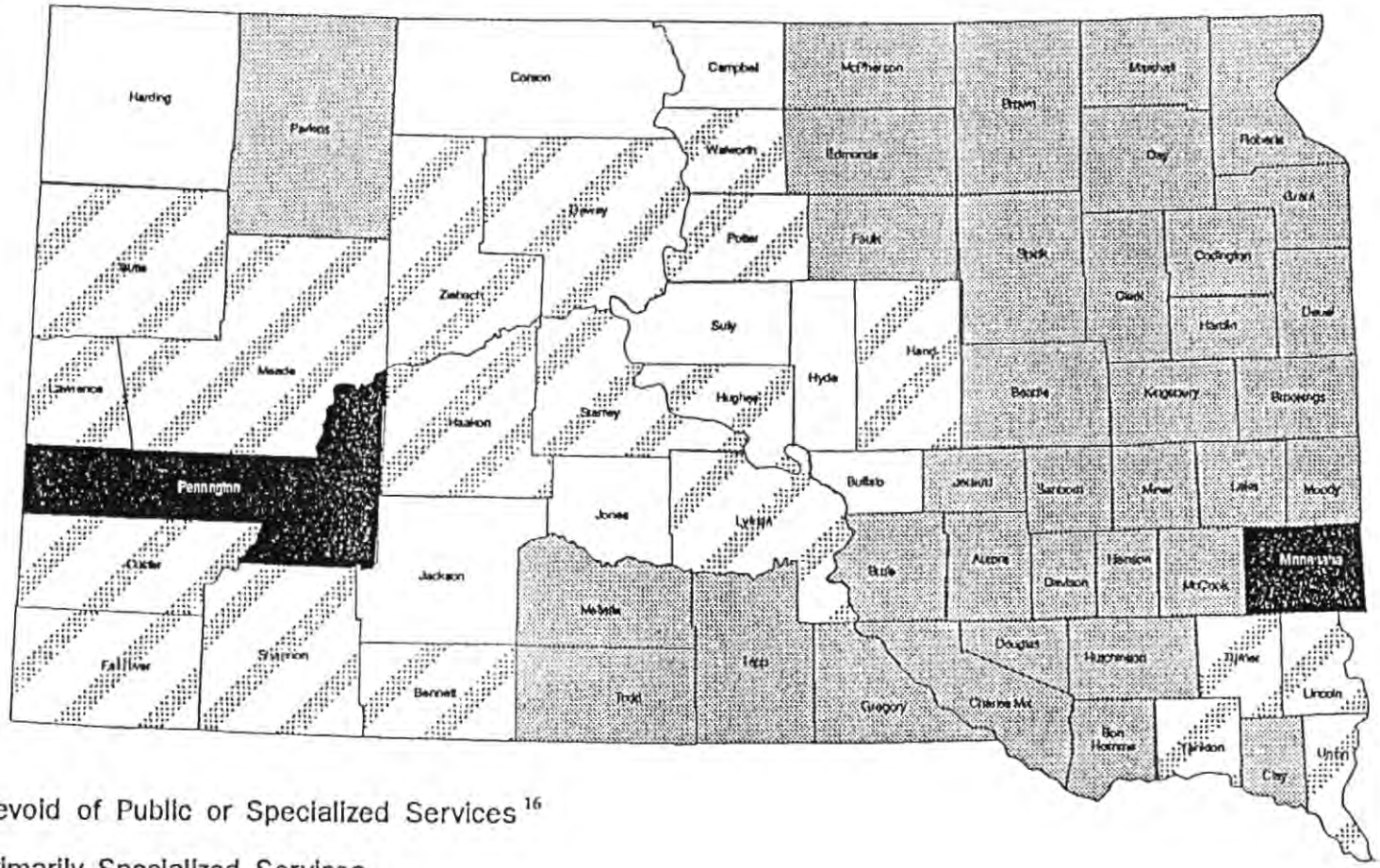
As a strategy to verify inventory data, in-person site visits were held with twenty of the providers in the state, representing Section 18, Section 16(b)(2), Section 9, and Title III-B recipients, and a representative of tribal transportation services. The sites visited, the individuals contacted, and the date of the contact is listed in Appendix B.

Public transportation services are provided to the citizens of South Dakota through a variety of agencies in the state. The transportation services of primary interest in this study include those operated by public and private non-profit agencies serving the general public and special populations. The services operate in both urbanized areas of the state, as well as non-urbanized cities, counties, and regions of the state. Figure 4-4 provides a map of distribution of passenger transportation services in South Dakota by service type. Funding for these agencies include a mix of both federal and local funds, as well as fares, donations, and fee-for-service contracts. The following sections describe the services provided in South Dakota.

4.3.1.1 Urban Public Transit Services

There are two urbanized areas in South Dakota as defined by the Urban Mass Transportation Act: Minnehaha (Sioux Falls) and Pennington (Rapid City) Counties. Both urbanized areas receive formula allocations from Section 9 of the Urban Mass Transportation Act, which is distributed in each urbanized area of 50,000 population or more to fund capital, operating, and administration costs in the provision of public transportation. FY91 allocations to the urbanized areas were approximately $310,400 to Rapid City and $534,700 to Sioux Falls, for a total of $845,100.

Figure 4-4
South Dakota Passenger Transportation Services by Type



- Devoid of Public or Specialized Services [16]
- Primarily Specialized Services
- Public Services
- Extensive Urban Public and Specialized Services

The transit agency providing public transit services in Sioux Falls is Sioux Falls Transit which operates both fixed route and paratransit services. Sioux Falls Transit operates 9 routes with a total fleet size of 26 buses. Average annual ridership is 448,278 passenger trips.

Rapid Transit provides transit service in Rapid City. While currently operating as a demand-response service, the agency will implement a fixed route service next year. Total annual ridership is 73,400 passenger trips.

4.3.1.2 Rural Transit Services

Transportation services operate in many of the non-urbanized portions of South Dakota. Non-urbanized transportation, by Urban Mass Transportation Administration definition, is any transportation provided in areas of less than 50,000 population. The primary funding source for rural public transportation services is Section 18 of the Urban Mass Transportation Act which provides capital, administrative, and operating funds. The FY91 allocation to South Dakota was approximately $424,600.

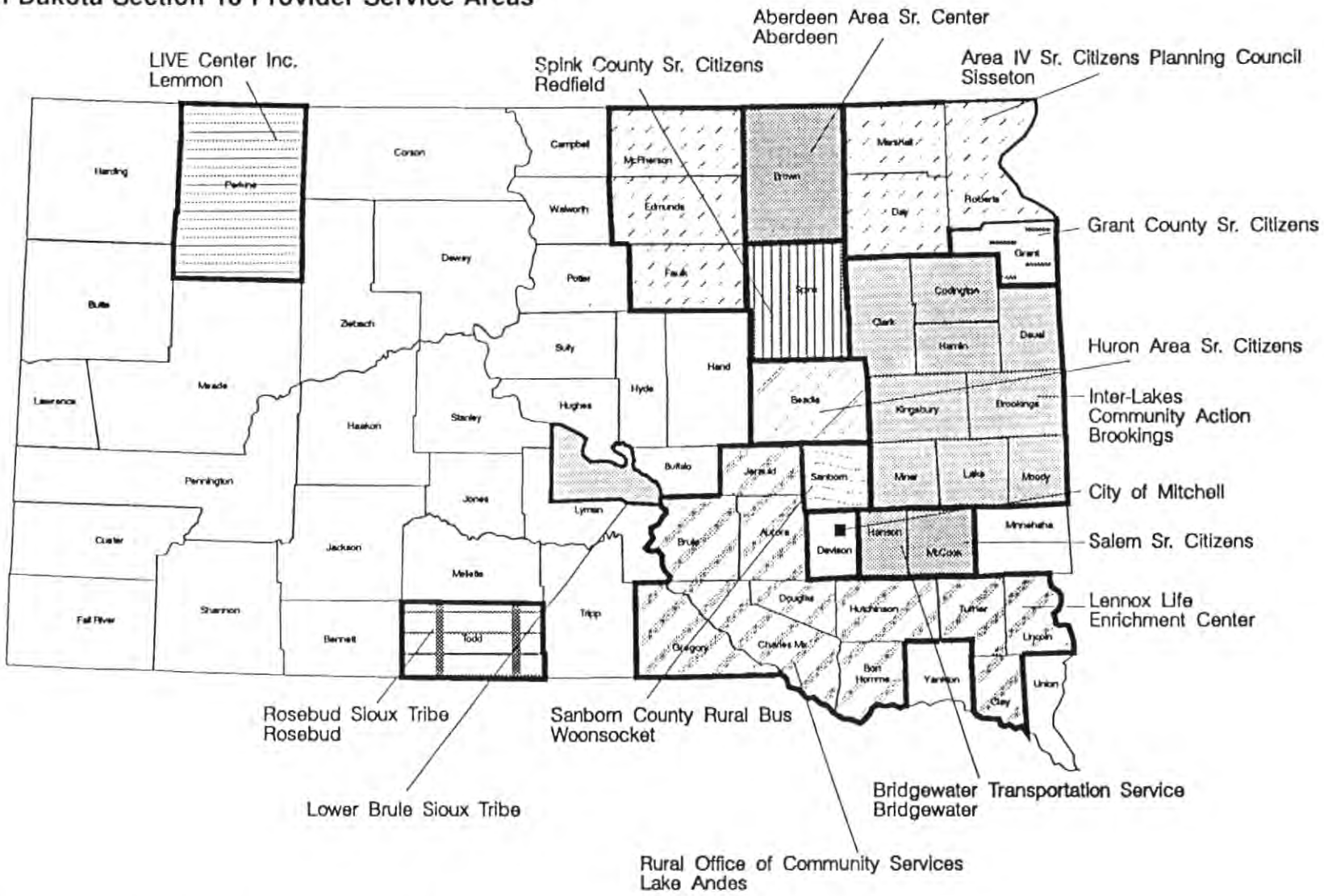
Fifteen agencies currently receive operating funds in South Dakota through the Section 18 program. Figure 4-5 provides a map illustrating the service areas of these agencies. A total of 76 vehicles were operated in FY90 under the Section 18 program, traveling approximately 610,000 miles and providing 375,000 passenger trips.[6]

4.3.1.3 Specialized Transportation Services

Specialized services in the state include those targeted for specific user groups; primarily elderly or disabled passengers, either in urban or rural areas. The South Dakota Department of Social Services and the Department of Transportation receive money from Title III-B of the Older Americans' Act to fund capital purchases and operating expenses. Administrative expenses also are eligible expenses in funds distributed to the Department of Transportation, however, no administrative costs are expended from the Title III-B funds. Twenty-one agencies in South Dakota receive operating funds from the Title III-B program for transportation services.

In addition to the Title III-B program, Section 16(b)(2) of the Mass Transportation Act provides capital assistance to private non profit agencies for transportation of the elderly and disabled. Section 16(b)(2) funds are provided to the South Dakota Department of Transportation on a formula basis from the U.S. Department of Transportation Urban Mass Transportation Administration. The FY91 allocation to South Dakota was $219,500. Fifty-six agencies have received capital assistance from the Section 16(b)(2) program since its inception; twelve agencies received funding from the program in the past year. During FY90, 139 vehicles were operated under the program, traveling approximately 1.4 million miles and carrying 1 million passengers.[7]

Figure 4-5
South Dakota Section 18 Provider Service Areas



The map in Figure 4-4 indicates twenty counties served primarily by specialized services. Another county, Jackson County, is shown as devoid of service. While Wamblee in Jackson County does provide very limited specialized service, the service was sufficiently limited to be excluded from the inventory of counties with specialized service (i.e., no provider survey indicated service in the county, no indication of service was listed in the *Public and Special Transportation in South Dakota Statistical Report for Fiscal Year 1990* or in a January 1990 Fact Sheet: *Public and Special Transportation in South Dakota,* nor was service indicated in inventory investigations).

Table 4-5 provides a summary of transportation allocations for public and specialized transportation for the past three years.

Table 4-5
Transportation Funding Allocation*

Federal Funding	FY89	FY90	FY91
UMTA Section 18	$411,600	$408,500	$424,600
UMTA Section 16(b)(2)	$219,400	$219,400	$219,500
UMTA Section 9	$767,400	$787,600	$845,100
AoA Title III-B	$253,000	$255,400	$268,100

* Rounded to the nearest $100.

4.3.2 Operating Characteristics of South Dakota Transit Services

The following sections describe various components of the operating characteristics of South Dakota Transit Services including, legal status of the providers, service characteristics, staffing characteristics, performance indicators, organizational characteristics, equipment replacement schedules, and funding characteristics.

4.3.2.1 Service Delivery Characteristics

Thirty-nine of the forty-one respondents are direct providers of transportation; in addition, many other services are provided by these agencies. Approximately half of the agencies provide health care, social services, and/or nutrition services. Other common services offered included counseling, job training and information/referral services.

Fifty-eight percent indicated that they operate their own transportation systems with staff assigned specifically for that purpose. Staff members included paid drivers with a component within the organization to administer and operate the program. An average of five drivers are employed by each agency. Approximately 46 percent of the

responding agencies indicated that agency vehicles are driven by non-transportation staff members, such as caseworkers. Forty-one percent of the agencies indicated that personal vehicles of agency staff are used to provide, operate or arrange client transportation.

Only about 24 percent of the agencies contract or purchase services from another organization. Approximately 30 percent of the agencies use volunteers or family members to organize, provide or arrange transportation. Twenty-four percent of the agencies implement a system of paid-in-advance user subsidy (cash, script, token or ticket). Only one out of the 41 agencies indicated that they are not involved in passenger transportation in any manner.

Thirty-nine percent offer a repetitively scheduled transportation service, operating on regular routes. Thirty agencies or 73 percent provide demand-responsive (Call-a Ride, Reserve-a-Ride) service. Eleven out of the thirty agencies that offer demand-responsive service require advance reservations.

About half of the agencies that responded offer regularly scheduled transportation, but do not operate on an established route system. Fifty-eight percent of the agencies provide-on-need or emergency basis service or service as related to casework. This type of service is directly tied to the high percentage of transportation services provided for health care and social services.

The highest rated trip purpose for passengers in 1990, according to the *South Dakota DOT Statistical Report for Public and Special Transportation in South Dakota*, was for nutrition and consisted of 24 percent of the total trips made. Trips for education comprised 21 percent of the total trip purposes. On the 1991 written surveys, completed by providers for this study, the highest rated trip purpose was health and medical-related trips representing approximately 20 percent of the total trips provided by agencies. Trips for nutrition purposes comprised another 20 percent of the total trips provided. Employment-related trips related represented approximately 9 percent of the total on the written surveys.

All agencies that provide direct services do so during the weekdays. Slightly less than half of the agencies provide services on Saturday and Sunday. The average number of days of service in a year that agencies use for budget purposes is 241.

Almost two-thirds of staff hours are devoted to the function of providing direct transportation to passengers, as reflected by the 74 percent total average annual staff hours provided by drivers. Rural and specialized service agencies also spend about 20 percent of their staff hours on administrative functions. A relatively small portion, less than 10 percent, of staff hours are devoted to the functions of maintenance and dispatch.

Not unexpectedly, urban public systems reported greater allocation of staff time to the maintenance and dispatch functions. Still, over half the total staff hours are

devoted to the function of providing drivers. Urban public systems also have a higher proportion of staff hours devoted to the function of providing maintenance. It is likely that it is more cost effective for large providers to retain, on staff, their maintenance personnel, while small providers are more likely to contract for such services.

4.3.2.2 Transit Performance Indicators

Three basic performance measures illustrate relative performance of South Dakota transit agencies. Agencies are divided into two groups; first, those that receive funding through Section 16(b)(2); and second, those agencies that receive funding through Section 18. As discussed earlier in this report, the Section 16(b)(2) program is a supplemental program to UMTA capital assistance program to assist agencies in providing transportation to the elderly and disabled population where "public transportation services are unavailable, insufficient, or inappropriate."[8] Section 18 funds are available to agencies for expenditures for public transportation projects in areas with population less than 50,000 people.

Table 4-6 provides performance indicators for a list of agencies and sub-agencies that operated Section 16(b)(2) vehicles in FY90. Costs per passenger mile reported ranged from eleven cents/mile to ninety-nine cents/mile.

Only gross comparisons within the discrete UMTA funding classifications can be made, and even then the comparisons can only be made accurately between similar operating schemes, geographic conditions, and cultural conditions. For example, UMTA Section 18 data should not be compared with UMTA Section 16(b)(2) and neither should be compared with UMTA Section 9. Within UMTA Section 9, it is difficult to compare Rapid Transit's demand responsive service with Sioux Falls Transit, which operates in a fixed route mode.

Meaningful comparisons can only be made after it is verified that systems are operating in identical schemes in similar geographic and cultural conditions with identical accounting methodologies. However, gross comparisons can be made, and with the above caveats noted, the following observations are offered.

Given the wide variance of conditions that cloud meaningful cost comparisons satisfactorily, national comparative data has not been prepared for UMTA Section 18 or UMTA Section 16(b)(2) programs. No detailed data with significant variables noted is available that can be used to compare individual operating programs. However, national UMTA Section 18 anecdotal evidence indicates that costs per vehicle mile in the range of $1.50-$2.00 are reasonable, and costs of $3.00-$4.00 per passenger trip are common throughout the United States. Most of the current South Dakota UMTA Section 18 programs operate within these ranges, but additional research is required to make definitive statements about efficiency and effectiveness.

Table 4-6
Performance Indicators for Section 16(B)(2) Providers: 1990[9]

Agency	Cost/Mile (a)	Cost/Passenger (a)	Passenger/Mile (a)
Aberdeen Area Senior Citizens Center - Aberdeen	.36/.22	.34/.38	1.05/.58
ADVANCE - Brookings	.44/.33	.41/.70	1.08/.47
Area IV Senior Citizens Planning Council	.55	.41	1.34
Eureka Transportation System	.11	1.03	.10
Wester Community Van	.64	.19	3.33
Takakwitha Transportation Project - Sisseton	.26	.77	.34
Bennett County Senior Citizens - Martin			
Kyle Transportation System	.32	1.56	.21
Martin Transportation System	.37	.62	.59
Black Hills Workshop & Training Center - Rapid City	.28/.20	.33/.36	.85/.56
Black Hills Foundation for Education	.35	.44	.79
Excellence - Sturgis - Deadwood	.24	.99	.24
Blue Blanket Valley Senior Citizens - Hoven	.39	.42	.93
Bridgewater Senior Citizens Center - Bridgewater	.18	.40	.46
Capital Area Counseling Service/Community Coord. Serv.	.59	.80	.74
Chamberlain Adjustment Training Center - Chamberlain	.32/.15	.24/.53	1.34/.28
Children Home Society - Sioux Falls	.32/.13	.35/.78	.91/.16
Children Home Society - West Rv Children Hm. Rockerville	.19	.52	.36
Community Coordinating Services - Ft. Pierre and Pierre	.82	.68	1.21
Crippled Children Hospital and School - Sioux Falls	.69	2.04	.34
Dakota Mental Health Center - Mitchell	.17	.32	.54
Eastern Pennington County Transit System - Wall	.51	5.59	.09
Every Citizen Counts Organization - Madison	.72/.47/.24	.46/.26/.26	1.58/1.82/.93
Fall River County Elderly & Handicapped service Hot Springs	.30	.58	.52
Grant County Senior Citizens - Milbank	.57	.71	.81
Haakon Co. Prairie Transportation Service - Philip	.42	.96	.43
Hill City Senior Citizens - Hill City	.66	.24	2.77
Human Service Agency - Watertown	.99	.26	3.81
Huron Area Adjustment Training Center - Huron	.35	.37	.97
Huron Area Senior Center - Huron	.38	.21	1.82
Inter-Lakes Community Action Madison			
Brookings Transportation System	.22	.46	.47
Duel County Transportation System	.28	.50	.55
Lake County Transportation System - Madison	.46	.06	7.64
Watertown Transportation System	.27	.46	.59
	.42	.26	1.61
Lennox Life Enrichment for Elderly -Lennox	1.21	.96	1.26
LIVE-Center - Lemmon	.71	.46	1.53
McCrossan Boys Ranch - Rural Sioux Falls	.08	.56	.31
Mead County Senior Citizens	.30	.73	.41
Center - Sturgis	.31	.75	.41
Miller Transportation System	.54	.98	.55

Table 4-6 Continued Agency	Cost/Mile	Cost/Passenger	Passenger/Mile
Mitchell Area Adjustment Training Center - Mitchell	.91 .33	1.33 .34	.68 1.0
Mitchell Area Senior Citizens - RSVP - Mitchell	.42	.74	.57
Mobridge Senior Citizens Center - Mobridge	.28	1.07	.26
Morningside Manor - Alcester	.76	6.09	.16
North Central Health Service - Spearfish Belle Fourche Health Care Center - Belle Fourche David Dorsett Home - Spearfish Lake Preston Transportation System - Lake Preston	 1.58 .25 .62	 6.30 1.23 .87	 .25 .20 .71
Northern Hills Training Center - Spearfish	.48 .23	.48 .32	1.26 .72
Oahe Adult Habilitation and Education - Pierre	.43	.89	.48
Project C.A.R. - Sioux Falls	.34	.98	.35
Rural Office of Community Services Aurora County Trans System- White Lake Centerville Transportation System - Centerville	 .18 1.12	 1.02 6.09	 .18 .18
Salem Senior Citizens Center - Salem	.60	.39	1.54
Scotland Good Samaritan Center - Scotland	.48	.58	.83
Senior Citizens Services - Sioux Falls	.30	.89	.34
Senior Citizens Services of Vermillion - Vermillion	.28/.16	.33/.39	.82/.40
Sinte Gleske Oyate Transportation - Rosebud Indian Rs.	.19	.29	.67
Sioux Falls Chap No. 1, Disabled Am. Veteran's - Sioux Falls	.53	2.20	.24
Sioux Vocational Services, Sioux Falls	.34/.36/.17	.41/.33/1.05	.84/1.10/.17
Sisseton-Whapeton Sioux Tribe - Tribal Elderly Program	.18	.30	.60
South Central Adjustment Training Center - Winner	.20	.08	2.58
South Dakota Assoc of the Deaf - Sioux Falls	.30	.73	.41
Southeast Mental Health Center - Sioux Falls	.49	.97	.50
Southeast SD Activity Center - Vermillion	.28/.70	.57/.31	.50/2.30
Southern Hills Developmental Services	.20	.22	.58
Spike County Senior Citizens - Redfield	.20	.27	.74
West River Mental Health Center - Rapid City Area Rapid City Area Spearfish Area	.25 .44 .16	.44 .65 .63	.58 .67 .25
Yankton Area Adjustment Training Center - Yankton	.33 .20 1.12 .18	.25 .64 .11 .57	1.34 .31 10.35 .32
Yankton Enrichment Services	.33	3.37	.10

(a) cells with more than one measure indicates that statistics on multiple vehicles for that agency.

Table 4-7 lists the performance indicators for the Section 18 grantees provide transportation in South Dakota. Costs per mile were reported in the range from 67 cents/mile to $2.86/mile.

Table 4-7
Performance Indicators for Section 18 Providers: 1990[10]

Agency	Cost/Mile	Cost/Passenger	Passenger/Mile
Aberdeen Area Senior Center	1.53	1.61	.95
Area IV Senior Citizens Planning Council	1.11	1.44	.77
Bridgewater Senior Center	1.0	2.32	.43
Grant County Senior Citizens	2.53	3.12	.81
Huron Area Senior Citizens	1.88	1.17	1.60
Inter-lakes Community Action	1.4	1.33	1.05
Lennox Life Enrichment for the Elderly	2.86	2.28	1.29
LIVE Center	.67	1.72	.39
Lower Brule Sioux Tribe	1.10	10.03	.11
City of Mitchell	1.69	2.43	.69
Rosebud Sioux Tribe	.78	1.48	.53
Rural Office of Community Service	1.12	2.14	.52
Salem Senior Citizens	1.80	1.17	1.54
Sanborn County	.92	3.79	.24
Spink County Senior Citizens	.98	1.19	.82
Average	1.15	1.61	.72

4.3.2.3 Organizational Characteristics and Coordination Activities

The survey section concerning coordination requested agency managers' opinions about the issue of coordination with other organizations. When asked if an agency would want to participate in a system of arranging and coordinating the provision of transportation for the clients of other organizations, 41 percent of the respondents said "yes, definitely" and 18 percent responded "perhaps." Twenty-three percent indicated that it was "doubtful that they would want to coordinate" or that they "definitely would not want to participate in the arrangement and coordination of services." Eighteen

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percent indicated that they "definitely would not want to participate in coordination activities."

Thirty of the responding agencies have coordinated or entered into cooperative arrangements with other organizations to provide transportation in the past. The remaining have not engaged in coordination activities at all.

Agencies were also asked to identify the likely client response to coordination of services and shared ridership with clients from other organizations. Only one-third of the respondents indicated that there would be no anticipated problems with their clients riding with clients from other agencies. About 46 percent indicated that some problems could be expected. Finally, 21.2 percent of the respondents indicated that there would be numerous problems with such a system and of that number, 2.6 percent indicated that it would be impossible, clients could not ride with clients of other agencies.

Respondents were asked to identify specific problems with coordination. The following lists specific comments identified by respondents as problems.

- **Federal Regulations**
  People not understanding regulations.
  Those under 60 must pay actual cost.
  They change so fast- no one can keep up.

- **Contractual Specifications**
  Some nursing homes will not make a contract.
  Insurance and liability coverage.

- **State Regulations**
  Primary service to elderly/handicapped only.
  Center may only transport severely and persistently mentally ill.
  State social service does not want to reimburse us for services.

- **Your Organization's Regulations**
  Riders over 55 or wheelchair/severely physically handicapped.
  A few board members do not agree with expansion.

- **Other Organization's Regulations**
  Protecting own turf.
  Insurance requirements.
  Riders involved only with own agency- or needs to go out of city limits.
  Their needs and time schedules- especially school system.
  Schools, Head Start, say they cannot provide to others.

- **Expected Reduction in Quality/Coverage/Efficiency of Services**
  Not nearly enough vehicles drivers and money available.
  With more staff, better quality/coverage, etc.

- **Accountability/Paperwork/Billing Problems**
  Coordination of all agencies would need Central/Executive full-time administration.
  Sometimes the wait for a payment could be as long as two months.
  Need $40,000 to hire an accountant.
  More staff- which means more money.

- **Client Attitudes/Preferences**
  Some elderly are set in ways- riding with school age or adjustment training center.
  Elderly seem to prefer separate services; each agency/organization has special-needs clients.
  Some clients don't show up or they're not at the pick up points. Many times the clients are drunk.
  All clients are deaf.
  You can't be everything to everyone all of the time!
  Behavior problems.
  Clients feel they are owed this service and that becomes a problem. Some clients who ride a lot don't get along with each other.

- **Geographic Location (too many miles to nearest other provider)**
  Clients on the Pine Ridge Reservation have a hard time getting transportation to their apartments and it is too far for us to go to get them.
  We have this problem with people in the county (15 miles out of town).

- **Not Enough Vehicles**
  Many agencies have no vehicles.
  Mostly all our vehicles have over 100,000 miles.
  We have more requests which makes it hard when one doesn't have enough vehicles.
  Must have mini-buses as well as accessible vehicles with lifts for the vehicles with lifts do not have much room.

- **Not enough Seats on Existing Vehicles**
  On occasion, need another lift.
  Cannot fit own clients in vehicles at times.
  Need a wheelchair vehicle that can adequately seat people.
  Our vehicles tend to be full at this point.
  If required services accelerate, one vehicle will not be enough.

- **Other**
  Public transportation not available.
  Schedules and destinations & number of riders to serve.
  Only to their particular need-based clientele.
  Coordination.
  Not enough staff driver man hours.
  Auto insurance liability.
  Since all clients are deaf, the driver must know sign language to communicate.
  Staff scheduling.
  Cost of transportation.

4.3.3 Capital Replacement Schedules

As one agency indicated in the previous section, most of their vehicles have accumulated over 100,000 miles. This is not unusual for many of the providers. The following section and tables describe the overall transit fleet in the State of South Dakota.

Agencies were asked to provide information on the number of vehicles the agency operates, as well as vehicle description, mileage, and special equipment such as lifts or ramps and communication capabilities. A complete inventory as provided by survey respondents is detailed in Appendix F. Tables and narrative provided in Appendix F describe the status of South Dakota's transit fleet. The information is divided into eight replacement schedules and identifies the vehicles that need to be replaced in 1991 and subsequent years until 1997. Some vehicles are projected to be replaced beyond the study period. In this specific case, a list of the vehicles and agencies are provided. The rural and specialized vehicle inventory was developed from thirty surveys which excluded agencies that do not own vehicles or that did not provide inventory data. The total number of vehicles in the replacement inventory database is 162.

The South Dakota Department of Transportation vehicle replacement guidelines specify a minimum of 100,000 accumulated miles or seven years of age before a vehicle can be considered for replacement.[11] Vehicles in the inventory that currently exceed this standard are scheduled for replacement in the current year. Agencies were asked to estimate the expected year of replacement for their vehicles. This is reflected in the last column of the table. Not all did so, however, at least 73 of the vehicles were noted by agency managers as in need of replacement by 1993. For this reason, the criteria established by the replacement schedule is acceptably accurate. Based on this analysis, an estimated 36 percent of vehicles are eligible for replacement by FY 1993. Table 4-8 provides a summary of the vehicles eligible for replacement for agencies responding to the survey, based on the 100,000 mile criteria.

Table 4-8
Summary of Vehicle Replacement

Replacement Year	Total No. of Vehicles to be Replaced (a)	Number of Section 18 Vehicles (b)	% of Total (c)	Number of Section 16(b)(2) Vehicles (d)	% of Total (e)
FY 1992	62	22	35.48	40	64
FY 1993	10	4	40.0	6	60
Subtotal	72	26	36.0	46	64
FY 1994	12	6	50.0	6	90
FY 1995	7	2	28.0	5	72
FY 1996	5	1	20.0	4	80
FY 1997	10	3	30.0	7	70
TOTAL	106	38	36.0	68	64

(a) Replacement schedules for beginning year 1992 generated for a total of 200 vehicles identified by 41 agencies. Subsequent replacement schedules generated for the remaining vehicles less the number to be replaced in the previous year.

(b) Indicates the number of vehicles, funded by Section 18, to be replaced during the fiscal year.

(c) Indicated the percent of Section 18 vehicles of the total number of vehicles to be replaced in the fiscal year.

(d) Indicates the total number of vehicles funded by Section 16(b)(2) to be replaced during the fiscal year.

(e) Indicates the percent of Section 16(b)(2) vehicles of the total number of vehicles to be replaced in the fiscal year.

Most agencies use a van, minibus or mini-van to transport passengers. There is an average of 12 seats per vehicle and all but one vehicle are owned by the operating agency. Approximately 27 percent of the agencies provide a lift or ramp to passengers. Only 43 percent of the respondents indicated that they had communication capabilities through radio, citizens ban, or telephone access. Table 4-9 provides a summary of the vehicle inventory data.

Only 24.3 percent of the agencies indicated that they have been approved or have budget authority to purchase new vehicles this fiscal year. Nineteen vehicles are approved to be purchased in this fiscal year by at least ten agencies. Of the ten agencies that indicated the reason for vehicle purchase, seven indicated that the vehicle is being purchased as replacement for an existing vehicle. Three of the agencies indicated that they are purchasing a vehicle for expansion purposes. It can be concluded that agencies

are therefore just "holding their own" or falling behind. There is little service expansion based on new vehicle acquisition.

Table 4-9
Summary of Current Vehicle Inventory Data

Summary Characteristic	Total Number	% of Total
Total vehicles with over 100,000 miles (a)	72	38%
Total Number of Vehicles older than 1984	72	43%
Total number of vehicles with Lift or Ramp	45	26%
Total number of vehicles with communication capabilities	70	43%

(a) Included vehicles with mileage over 100,000 through FY93.

4.3.4 Transit System Budgeting

Transit managers were asked to list the organization's revenues for funding transportation operations only and to indicate the sources for revenue. Of the 31 agencies providing revenue sources on the survey, an average of $58,609 was received from federal sources; $53,474 from local sources; and $17,651 from fares and other income. Additionally, agencies receive $7,011 from other sources. The total average amount of revenues received is $139,882 and responses ranged from a low of $300 to a high of $1,807,049.

Agency managers were then asked to provide the total annual transportation budget, using actual data from FY 1991 and estimated budgets for FY 1992. Table 4-10 provides a summary of that information. Budget cost are categorized into two groups; total operating costs and total administrative costs.

While some agencies do anticipate an increase in the FY 1992 budget, most as shown in Table 4-10, anticipate a decrease in their budgets for FY 1992 by almost eight percent. Nearly 80 percent of the total budget, for all agencies that responded, is allocated to operating costs. The remaining 20 percent of the budget pays for the

administrative and overhead costs. This percentage ratio remains approximately consistent for the estimated 1992 budget with an 80/20 ratio between operational and administrative costs.

4.3.5 Perceived Gaps and Anticipated Expansion

Transit managers were asked in the written survey to identify the number of persons who need transportation but are presently unserved by the agency, and to estimate the number of unserved trips in their communities. Approximately 46 percent of the agencies responded to this question. Of those responding, a total of 25,023 persons were identified as in need of transportation but are currently unserved. Eighteen agencies estimated that 130,866 trips per year in their areas are unserved currently. Fifty-four percent of the agencies expect this current unmet need to persist into the future.

Table 4-10
Total Operating and Administrative Costs by Agency

	FY 1991			FY 1992			FY91 -FY92
AGENCY	OPER COST	ADMIN COST	FY 1991 TOTAL	OPER COST	ADMIN COST	FY 1992 TOTAL	% CHNG
ABERDEEN AREA SENIOR CENTER, INC.	74,964	14,115	89,079	85,617	30,050	115,667	29.9%
ADULT SERVICES AND AGING	0	0	0	0	0	0	
AREA IV SR CITIZENS PLNG COUNCIL	91,700	36,220	127,920	96,000	41,830	137,830	7.8%
BENNETT COUNTY SR CITIZEN CTR ASSOC	20,167	5,119	25,286	21,337	5,116	26,453	4.6%
BLACK HILLS CHILDREN'S HOME	12,872	3,800	16,672	18,792	0	18,792	12.7%
BLACK HILLS WORKSHOP/TRAINING CTR	458,000	27,300	485,300			na	
BOX ELDER PIONEER SR CITIZEN CTR	300	0	300	300	0	300	0%
BRIDGEWATER COMMUNITY VAN	5,705	3,952	9,657	9,500	4,865	14,365	48.8%
CANYON LAKE SENIOR CITIZENS CTR	2,263	0	2,263	2,338	0	2,338	3.3%
CHAMBERLAIN ADJ TRAINING CENTER	42,817	na	42,817			na	
COMMUNICATION SERVICE FOR THE DEAF	9,782	373,805	383,587	11,030	415,672	426,702	11.2%
CUSTER AREA SENIOR TRANSPORTATION	9,787	0	9,787	10,125	3,925	14,050	43.6%
DAKOTA MENTAL HEALTH CENTER	5,800	0	5,800	941	0	941	-83.8%
EASTERN PENNINGTON COUNTY TRANSIT	8,249	982	9,231	9,960	740	10,700	15.9%
EUREKA HEALTH CARE CENTER	3,480	0	3,480	3,528	0	3,528	1.4%
FALL RIVER COUNTY E&H SERVICES INC.	13,066	2,454	15,520	14,991	3,254	18,245	17.6%
HURON AREA ATC	67,737	0	67,737	72,780	0	72,780	7.4%
HURON AREA SENIOR CENTER	82,851	32,182	115,033	91,270	41,330	132,600	15.3%
INTER-LAKES COMMUNITY ACTION INC.	120,649	39,440	160,089	155,750	41,560	197,310	23.3%

Table 4-10 (cont.)	FY 1991			FY 1992			91-92
AGENCY	OPER COST	ADMIN COST	FY 1991 TOTAL	OPER COST	ADMIN COST	FY 1992 TOTAL	% CHNG
KEYSTONE SR CITIZEN CENTER	1,900	0	1,900	1,900	0	1,900	0%
LENNOX LIFE ENRICHMENT FOR ELDERLY	10,899	3,021	13,920	13,360	3,300	16,660	19.7%
LEWIS/CLARK MENTAL HEALTH CENTER	8,605	0	8,605	7,685	0	7,685	-10.7%
LIVE CENTER INC.	49,612	18,125	67,736	78,530	36,210	114,740	69.4%
MEADE COUNTY SR CITIZENS TRANSP.	16,331	0	16,331	17,300	0	17,300	5.9%
MITCHELL RSVP	82,254	4,899	87,153	89,850	11,280	101,130	16.0%
NORTHERN HILLS GENERAL HOSPITAL			na			na	
NORTHERN HILLS TRAINING CENTER	45,788	2,200	47,988	53,232	2,450	55,682	16.0%
RAPID TRANSIT	241,774	78,847	320,621	384,000	79,000	463,000	44.4%
ROSEBUD SIOUX TRIBE	120,760	28,600	149,360	132,020	32,150	164,170	9.9%
RURAL OFFICE OF COMMUNITY SERVICES	165,468	50,423	215,891	176,664	53,000	229,664	6.4%
SANBORN COUNTY RURAL BUS	16,923	6,466	23,389	20,550	7,600	28,150	20.4%
SCOTLAND GOOD SAMARITAN CENTER	6,600	240	6,840	7,171	240	7,411	8.4%
SIOUX FALLS CHILDREN'S HOME	10,887	0	10,887	10,812	0	10,812	-0.7%
SIOUX FALLS PARATRANSIT (a)	530,734	109,266	640,000	481,811	53,804	535,615	-16.3%
SIOUX FALLS TRANSIT	1,574,064	232,985	1,807,049	1,395,755	224,455	1,620,210	-10.3%
SIOUX VOCATIONAL SERVICES INC	141,074	0	141,074	158,000	0	158,000	12.0%
SPEARFISH SR TRANSPORTATION	0	0	0	11,624	3,744	15,368	
SPINK COUNTY SR CITIZENS COUNCIL	29,100	7,800	36,900	35,520	10,730	46,250	25.3%
SR CITIZEN SERVICES INC.	50,972	0	50,972	14,250	0	14,250	-72.0%
SR CITIZENS SERVICES OF VERMILLION	12,305	5,103	17,408	12,695	5,027	17,722	1.8%
YANKTON AREA SR CITIZENS CENTER	14,825	5,222	20,047	16,059	5,244	21,304	6.3%
GRAND TOTAL	$ 4,161,065	$ 1,092,565	$ 5,253,630	$ 3,723,047	$ 1,116,576	$ 4,839,624	-7.9%

NOTE

(a) The total of $640,000 in FY91 includes some paratransit start-up costs.

4.3.6 Immediate Operational Issues Facing South Dakota Agencies

Transportation providers in the state operating with federal funds were asked to identify issues and concerns relevant to improving or expanding transportation services in their respective service areas. Comments provided by the managers grouped around three major issues: funding, service design/service levels, and vehicle design and replacement. The following are selected comments from the provider survey.

4.3.6.1 Service Levels

- Only public transportation within whole city of Yankton is one taxi, which runs only very sporadically and is too expensive for most people. No public transportation in rural areas and surrounding small towns.

- We have offered transportation to our community one day a week, both contractually with Rural Office of Community Services and on our own at our expense. It has been aggressively promoted, yet no one uses it. It is a waste of time to administer a service that no one uses.

- Communication Service for the Deaf has 3 other offices, Rapid City, Aberdeen, and Pierre. Those areas don't have transportation services for the deaf and hard of hearing clients. There is a great need.

- Increasing numbers of children are receiving services at our agency. We need additional vehicles to serve these children.

- We have many areas and back roads where you wouldn't believe there was even a house. Many of these are a long way out of town. It's very hard on equipment and also hard to decide what to charge these people. Maybe you could help us with this problem with ideas that come from this survey.

- Our service very nicely serves the needs of our people.

4.3.6.2 Capital Design and Replacement Concerns

- The bus that is equipped with steps makes it hard for those who have arthritic hips and knees to climb the steps and they are embarrassed to use the lift.

- Difficulty for older individuals getting in and out of van. One van services only 7 clients at a time. No air conditioning in van, difficult for individuals on medication in summer.

- We need little vans with lifts to transport people in our city - not big gas users.

- Several of our vehicles are over 100,000 miles and in poor condition. We are desperately trying to replace them by purchasing from federal surplus property and the use of UMTA Section 16(b)(2) grant funds.

4.3.6.3 Funding Concerns

- We need to increase salary of transit staff. How do we convince boards and legislators of the tremendous responsibility that these people have?

- Transporting the elderly will never be cost efficient. Those that need it the most can't afford the cost.

- New vehicle cost is out of sight.

- Lack of state funding for elderly and handicapped (sic) riders.

- The project is very diversified. Money always is a problem and it shouldn't be for the service we provide. Our buses are old but look good and run rather well considering the age. Drivers are underpaid due to funding. Need more staff, especially to assist the elderly and handicap.

- The senior organizations cannot afford any more match. Our donations are very low - especially at Kyle, and I honestly don't believe they will increase unless the Tribe or some organization donates for the riders. Most of my elderly will stay home rather than donate more!

- Our greatest concerns have been for adequate funds for vehicle replacement and operation. Our operating and administrative budgets have been bare bones the past years. Any expansion or improvement would need to be funded entirely by local monies.

4.3.7 Future Operational Issues and Plans

Agency plans for future transportation services included new services, expansion of service area, new equipment, changes in operation strategy and possible reduction in services. Approximately 42 percent of the agencies indicated that plans for new equipment are in the works. Approximately 20 percent of the agencies responded that new services are anticipated and 20 percent indicated that expansion of the service area is planned for the future. Only 4.5 percent of the agencies indicated that they plan to reduce services in the future.

Several comments also were provided by the urban agencies. Sioux Falls Transit plans to replace vehicles. Additionally, they plan to change their operating strategy to accommodate (per ADA) "shorter mileage, longer time, and fewer stops." Sioux Falls Transit also plans to engage in an experimental five-month 85 percent bio-diesel fuel project. Sioux Falls Paratransit indicated that it is considering a new operating strategy of contracting with private operators. Rapid Transit will begin fixed route transit service in July, 1992. It will provide complementary paratransit service as required under the Americans with Disabilities Act.

4.4 Transit Demand Estimations for South Dakota

4.4.1 Demand Estimation Methodology

In the previous chapter the general preferences of South Dakota citizens for public transportation services and their current and anticipated usage were presented. Further, previous sections in this chapter provided a profile of South Dakota counties and grouped them according to common characteristics known to influence transit behavior, and provided a profile of South Dakota transit agencies to illustrate actual transit behavior in the state. The next step in the process of building a demand model is to determine the appropriate equation (or equations) which predict demand in areas of the state that are unserved or under-served.

Three methods will be utilized to determine an estimate of transit demand and calibrate it for conditions in South Dakota: (1) aggregated estimates based on expressed demand and current travel behavior, (2) demand simulation based on traditional transit regression models, and (3) site pairings based on current "demonstration" programs.

4.4.2 Aggregated Estimates of Demand

Based on the survey of South Dakota citizens, it was estimated that approximately six to fourteen percent of the population will use transit if it is available. These percentages represent a range of transit market of 42,000 to 98,000 individual riders.

Approximately one-half of these individuals are expected to use the service several times per year; the other half would use the service several times per month. One-third of the monthly riders would ride two to three times per week or more. If it were possible to assign a precise trip rate to each of these riders, transit demand could be generated more accurately. In the absence of this precision, however, it is possible to develop a range of predicted demand based on these indicators of anticipated ridership levels. This expressed demand can be illustrated in a matrix of high and low estimates, illustrated in Table 4-11, assuming a state population figure of 700,000.

Table 4-11
Matrix of Aggregated Demand Estimates

LOW RANGE TRANSIT MARKET	TRIPMAKING RANGE	
Transit Market (6 percent)= 42,000 riders	10 trips/year	20 trips/year
Riders using transit "several times per year." (21,000 riders)	210,000	420,000
	72 trips/year	144 trips/year
Riders using transit "several times per month." (21,000 riders)	1,512,000	3,024,000
TOTAL	1,722,000	3,444,00

HIGH RANGE TRANSIT MARKET	TRIPMAKING RANGE	
Transit Market (14 percent)= 98,000 riders	10 trips/year	20 trips/year
Riders using transit "several times per year." (49,000 riders)	490,000	980,000
	72 trips/year	144 trips/year
Riders using transit "several times per month." (49,000 riders)	3,528,000	7,056,000
TOTAL	4,018,000	8,036,000

The selection of ranges for potential trip rates was based on analysis of the trip choices used in the telephone survey, typical ridership rates of existing passengers in South Dakota, and previous research that supports these ranges for tripmaking. To calculate the transit demand ranges, it is necessary to add the two halves of the transit market: those who would ride several times a year added to the trips of those who would ride several times a month. Given an assumed transit market of six percent, the estimated transit demand range is 1,722,000 to 3,444,000 trips per year. To calculate transit demand given an assumed transit market of fourteen percent, the range increases to 4,018,000 to 8,036,000 trips per year. Overall, the estimated demand utilizing this aggregated demand method is 1,722,000 to 8,036,000 trips.

Even though the range is relatively extreme, the estimate provides a satisfactory basis from which to refine demand estimates. The aggregated estimates of demand present extremes between which actual demand exists. A second estimation, approach is developed around traditional transit demand regression equations which simulate demand based on a predicted ridership for specific segments of the transit market. The findings of this approach are provided in the following sub-section.

4.4.3 Demand Simulation Models

Three traditional models of demand estimation, based on regression analysis and trip generation rates, were applied to all counties in the state. These models were utilized to assist in calibrating demand estimates for South Dakota. Two mathematical models were used to estimate total transit demand; a third model was utilized to estimate transit demand by the elderly and disabled population. An explanation of each formula is provided in Appendix D of this report. Table 4-12 provides a county-by-county summary of transit demand based on the three demand prediction models.

4.4.3.1 Method 1: Total Transit Demand (Peterson & Smith Trip Generation Rate Model)[12]

Two target groups, the elderly age 65 and over and the non-elderly low income population, have been found to generate approximately 80 percent of the total transit demand based on observed experience with transit operation. While figures on actual non-elderly low income ridership are not available from South Dakota providers, market share is available for elderly and disabled passengers; both populations typically are positively correlated with lower-income households. In South Dakota, 47 percent of current rural and specialized ridership is elderly, and 47 percent of ridership is disabled. Therefore, the assumption of an eighty percent market share within the Peterson & Smith Model is acceptable for application in South Dakota.

Transit demand for South Dakota was calculated with the Peterson & Smith model, providing an estimate of transit demand of 3,752,037. This number compares with the 1,989,200 trips provided by Section 9, Section 18 and Section 16(b)(2) funded programs, approximately 53 percent of the estimated demand. In addition, the demand predicted with the Peterson & Smith model is within range of that predicted with the aggregated estimate approach.

4.4.3.2 Method 2: Transit Demand for All Trip Purposes (Hoel)[13]

A second model, developed for low density suburban and rural areas, calculates demand utilizing trip-making characteristics of several population groups: minorities,

elderly, zero-car families, and poverty-level families. Data are insufficient to determine the appropriateness of this model based on the factors selected in the model. Certainly, by far the greatest weighting is assigned to the transit market of persons 65 years of age and older, an appropriate assumption for South Dakota transit. However, transit demand calculated with this model predicted total transit demand in South Dakota at 7,275,224 annual trips, nearly identical to the upper range of the aggregated estimate approach.

4.4.3.3 Method 3: Elderly and Disabled Mode Split by Mobility Type (Peat, Marwick)[14]

This model was developed to predict total elderly and disabled transit demand by combining annual demand by individuals with limited mobility with demand by individuals who are homebound. The elderly and disabled mode, split for transit assumed in this model, is 35 percent of trips made with transit. This model assumes that 25 percent of the elderly and disabled population make an average of twenty trips per month, and that 35 percent of these trips will be satisfied by transit. In other words, transit trip rates per month for the elderly and disabled equals seven trips. As noted in the Transit Services Inventory in Section 4.3.3., the number of trips per unduplicated passenger varies widely among transit systems in the state. However, three of the multi-county Section 18 agencies that transport high percentages of elderly and disabled passengers, Area IV, Inter-Lakes, and ROCS, reported monthly trip rates of 7.5, 9.8 and 3.5, respectively. As an average, seven trips per month, per unduplicated passenger, is a reasonable assumption for South Dakota transit services.

Transit demand estimated by this model for South Dakota's elderly and disabled population is 2,985,467. This model is important as a consistency measure of the Peterson & Smith Regression Model. As noted, Model One assumes the transit disadvantaged (elderly and low-income) represent eighty percent of the total transit demand. The Elderly and Disabled Mode Split Model (Method 3) predicts transit demand of approximately three million trips, exactly eighty percent of the total demand predicted under Method 1 and thereby revealing excellent consistency.

The estimate of approximately three million trips demanded compares with 1,384,000 trips provided for elderly and disabled passengers by South Dakota Section 9, Section 18, and Section 16(b)(2) funded programs. These programs are meeting 46 percent of the predicted demand.

Table 4-12
Transit Demand for South Dakota Counties

Counties	Method 1 Total Transit Demand (Peterson & Smith)	Method 2 Total Demand/All Trips (Hoel, 1979)	Method 3 Tot Elderly & Disabled Demand (Peat, Marwick, 1975)
Aurora	24,458	42,680	18,816
Beadle	98,958	198,709	94,193
Bennett	28,798	47,421	11,565
Bon Homme	51,236	94,018	43,855
Brookings	128,689	238,623	90,954
Brown	154,183	333,784	156,300
Brule	40,374	69,001	26,112
Buffalo	18,411	29,229	4,508
Butte	43,776	84,033	36,539
Campbell	17,949	28,708	11,120
Charles Mix	76,685	130,444	45,697
Clark	36,397	62,060	26,391
Clay	65,849	121,742	42,853
Codington	98,933	214,678	104,580
Corson	43,981	67,581	14,167
Custer	30,448	60,664	27,018
Davison	90,309	183,942	86,715
Day	49,701	93,684	44,353
Deuel	34,401	59,887	26,045
Dewey	48,515	81,517	15,233
Douglas	32,896	53,869	21,740
Edmunds	35,585	61,902	27,396
Fall River	47,199	92,850	42,432
Faulk	26,190	41,635	15,887
Grant	42,622	87,198	42,759
Gregory	38,566	66,475	25,558
Haakon	16,018	27,220	9,412
Hamlin	40,445	69,948	30,954
Hand	38,154	61,814	24,213
Hanson	27,086	41,750	14,018
Harding	11,549	19,084	6,787

Table 4-12 (cont.) Counties	Method 1 Total Transit Demand	Method 2 Total Transit Demand	Method 3 Total E & D Transit Demand
Hughes	46,936	116,411	53,723
Hutchinson	68,688	122,369	57,817
Hyde	13,742	24,168	10,870
Jackson	26,987	43,098	10,665
Jerauld	18,239	33,412	16,035
Jones	8,177	14,954	6,481
Kingsbury	41,923	77,873	37,615
Lake	56,185	113,120	54,256
Lawrence	101,925	202,701	86,847
Lincoln	63,120	136,655	64,967
Lyman	29,248	49,081	14,476
Marshall	36,825	65,972	29,188
McCook	39,972	73,878	35,479
McPherson	29,441	51,387	23,916
Meade	77,531	170,073	68,462
Mellette	21,848	34,520	8,371
Miner	30,394	64,847	21,796
Minnehaha	424,160	961,390	440,720
Moody	37,908	73,841	32,851
Pennington	327,345	687,415	257,551
Perkins	27,804	50,395	22,943
Potter	23,328	41,759	18,954
Roberts	78,459	139,582	52,571
Sanborn	26,881	41,553	15,107
Shannon	106,150	169,313	20,129
Spink	51,888	95,010	41,668
Stanley	10,936	21,693	8,268
Sully	11,007	18,579	7,042
Todd	86,897	137,578	17,736
Tripp	50,876	88,382	33,985
Turner	50,509	102,189	53,046
Union	51,966	104,107	48,568
Walworth	35,756	72,696	35,342
Yankton	76,512	172,381	84,008
Ziebach	24,114	36,693	5,845
TOTAL	3,752,037	7,275,224	2,985,467

For a full description of the models and assumptions, see Appendix D.

4.4.4 Summary of Demand Simulation Models

Examining the demand simulation models within the context of the citizen survey and transit services inventory leads to several key conclusions:

- All three simulation models predict transit demand within the range developed through the aggregated estimates of demand.

- The assumptions underlying Method 1, that 80 percent of demand is represented by elderly and low income passengers, is consistent with actual experience in South Dakota.

- Because of the extremely high number of zero-car households on the reservations, the more appropriate demand model is Method 2, which recognizes 0-car households as a transit use determinant.

- Method 2 models additional general public demand (minorities, zero-car families, and persons with disabilities). Demand estimates under this model typically represent the higher range of demand because of greater "general public" representation. In this case, it is consistent with the higher range of demand expressed by South Dakotans in the citizens' survey and used in the aggregated estimates of demand. Method 2 was therefore used for Indian Reservations and urban areas.

- Method 3, a model of elderly and disabled transit demand, is consistent with South Dakota rural transit usage. Further, it exhibits reliable consistency with Method 1 as a percentage of total transit demand.

- Method 2 is the most appropriate model for the urbanized areas of South Dakota. This model satisfactorily addresses the typically more general public nature of urban fixed route services in the state. Therefore, Method 2 was used for calculation of demand estimations in Minnehaha and Pennington counties.

- As a moderate estimate of transit demand in South Dakota, Method 1, the Peterson & Smith regression model is valid. Method 1 was therefore used for all rural demand estimations except Indian Reservations.

4.4.5 Site Pairings: Classification

The final step in demand modeling in South Dakota requires that demand derived from aggregated estimates and demand simulations be calibrated within the site pairing model described in Chapter 2 and previously in this chapter. As discussed in Section 4.2.5, four classifications of South Dakota counties were developed on the basis of socio-economic factors and typical service characteristics. If the classification system is valid,

differentiation in demand estimates among the four classifications are expected since specific "mobility indicators" exhibited an identifiable pattern (see Table 4-4, Mobility Indicators for South Dakota Counties).

The county classifications established earlier included: (1) Dispersed Rural, (2) Small Rural, (3) Rural, and (4) Urban. The map of South Dakota provided in Figure 4-6 provides a graphic illustration of counties and their respective classification. In addition to the four county designations, a classification was developed to represent the nine tribal governments in South Dakota and their special transit characteristics.

4.4.5.1 Dispersed Rural Classification

Dispersed Rural counties are those with a population of less than 5,000 people. Further, these counties have the highest percentages of elderly population, generally lack a full service grocery store, a pharmacy, or health care services. These counties also have a higher than average ratio of zero-car households.

Thirty-two counties were included in this category of *Dispersed Rural.* The population in the 32 counties totals 103,203 (15 percent of total South Dakota population), 18.7 percent of whom are elderly. The average minority population is 11 percent. Zero-car households in dispersed rural counties averaged 13.5 percent compared with a statewide average of 6.6 percent of households.

4.4.5.2 Small Rural Classification

Small Rural counties are defined as those with a population between 5,000 and 10,000 individuals. The 21 "Small Rural" counties represent approximately 163,000 individuals (23 percent of South Dakota's population). 17.4 percent individuals living in Small Rural counties are elderly. Approximately 8.2 percent of the households in these counties are zero-car households.

4.4.5.3 Rural Classification

Rural counties are those with a population from 10,000 to 50,000 individuals. Eleven counties in this classification represent 224,456 of the total South Dakota population (32 percent). 14 percent of these individuals are elderly; 6.7 percent of the households have no car.

4.4.5.4 Urban Classifications

Urban counties are those with a population over 50,000, of which there are only two in South Dakota, Minnehaha and Pennington. Minnehaha's population is 123,809 and Pennington's is 81,343 for a total of 205,152 (29 percent of the total state). Elderly

population in these two counties represent 11 percent of the total. Zero-car households are represented by only 2.1 percent of the total urban population.

4.4.5.5 Indian Reservations and Tribal Governments Classification

Indian Reservations and Tribal Governments have been developed as a separate category for the purposes of examining special demand or service characteristics, even though the reservations may overlap one or more South Dakota counties. The population estimated on the Indian Reservations totals 53,656. According to the U.S. Census, elderly population on these nine reservations represent only three percent of the population, although as referenced in Section 3.1.5, the actual totals are estimated by the tribes to be much higher. Zero-car households are estimated at 40-50 percent of the total.

4.4.6 County Classifications: Demand Estimations

Table 4-13 provides an analysis of transit demand for each county in South Dakota and on South Dakota Indian Reservations according to the three demand estimation models utilized and are listed according to their county classification.

4.4.7 County Classification: Demonstration Sites

After it was determined that the county classification system was representative of specific mobility characteristics (N.B. Table 4-4), the next step required identification of demonstration sites; i.e., transit services within each of the county classifications that could be considered transferable to other similar locations in the classification area. Because of basic similarities within each area, such as population and economic indicators, a base level of service from which to estimate costs of service development throughout the state was developed. The demonstration sites selected provide the baseline for resource needs in developing the funding models described in Chapter 6.

The five transit systems identified as demonstration sites do not necessarily provide all transportation in their respective counties. Rather, they were selected for their ability to represent a specific *standard* of transit service. The sites were selected by reviewing transit operations data for South Dakota, and through site visits and or telephone interviews with each of the system managers which provided a more in-depth review of operations.

Table 4-13
Transit Demand for South Dakota Counties by County Classification

Category	County	Method 1	Method 2	Method 3
Dispersed Rural	Aurora	24,458	42,680	18,816
	Bennett	98,958	198,709	94,193
	Buffalo	28,798	47,421	11,565
	Campbell	51,236	94,018	43,855
	Clark	128,689	238,623	90,954
	Corson	154,183	333,784	156,300
	Deuel	40,374	69,001	26,112
	Douglas	18,411	29,229	4,508
	Edmunds	43,776	84,033	36,539
	Faulk	17,949	28,708	11,120
	Gregory	76,685	130,444	45,697
	Haakon	36,397	62,060	26,391
	Hamlin	65,849	121,742	42,853
	Hand	98,933	214,678	104,580
	Hanson	43,981	67,581	14,167
	Harding	30,448	60,664	27,018
	Hyde	90,309	183,942	86,715
	Jackson	49,701	93,684	44,353
	Jerauld	34,401	59,887	26,045
	Jones	48,515	81,517	15,233
	Lyman	32,896	53,869	21,740
	Marshall	35,585	61,902	27,396
	McCook	47,199	92,850	42,432
	McPherson	26,190	41,635	15,887
	Mellette	42,622	87,198	42,759
	Miner	38,566	66,475	25,558
	Perkins	16,018	27,220	9,412
	Potter	40,445	69,948	30,954
	Sanborn	38,154	61,814	24,213
	Stanley	27,086	41,750	14,018
	Sully	11,549	19,084	6,787
	Ziebach	646,936	116,411	53,723
	TOTAL	1,585,296	2,982,562	1,241,893

Table 4-13 (Continued) Small Rural	County	Method 1	Method 2	Method 3
	Bon Homme	51,236	94,018	43,855
	Brule	40,374	69,001	26,112
	Butte	43,776	84,033	36,539
	Charles Mix	76,685	130,444	45,697
	Custer	30,448	60,664	27,018
	Day	49,701	93,684	44,353
	Dewey	48,515	81,517	15,233
	Fall River	47,199	92,850	42,432
	Grant	42,622	87,198	42,759
	Hutchinson	68,688	122,369	57,817
	Kingsbury	41,923	77,873	37,615
	Lake	56,185	113,120	54,256
	Moody	37,908	73,841	32,851
	Roberts	78,459	139,582	52,571
	Shannon	106,150	169,313	20,129
	Spink	51,888	95,010	41,668
	Todd	86,897	137,578	17,736
	Tripp	50,876	88,382	33,985
	Turner	50,509	102,189	53,046
	Union	51,966	104,107	48,568
	Walworth	35,756	72,696	35,342
	Total	1,147,761	2,089,467	809,582
Rural	**County**	**Method 1**	**Method 2**	**Method 3**
	Beadle	98,958	198,709	94,193
	Brookings	126,689	238,623	90,954
	Brown	154,183	333,784	156,300
	Clay	65,849	121,742	42,853
	Codington	98,933	214,678	104,580
	Davison	90,309	183,942	86,715
	Hughes	46,936	116,411	53,723
	Lawrence	101,925	202,701	86,847
	Lincoln	63,120	136,655	64,967
	Meade	77,531	170,073	68,462
	Yankton	76,512	172,381	84,008
	Total	1,002,943	2,089,699	933,602

Urban	Table 4-13 (Continued) County	Method 1	Method 2	Method 3
	Minnehaha	424,160	961,390	440,720
	Pennington	327,345	687,415	257,551
	Total	751,506	1,648,805	698,271
STATE GRAND TOTAL		**3,752,037**	**7,275,224**	**2,985,467**
Native American		**Method 1**	**Method 2**	**Method 3**
	CHEYENNE RVR. RS.	23,073	70,603	30,482
	CROW CREEK RS.	14,835	16,586	16,416
	FLANDREAU RS.	1,065	2,746	1,302
	LOWER BRULE RS.	9,256	10,258	10,196
	PINE RIDGE RS.	136,895	116,181	148,750
	ROSEBUD RS.	67,488	92,506	76,401
	SISSETON RS.	34,241	89,965	42,356
	STANDING RK. RS.	51,046	36,309	54,221
	YANKTON RS.	3,949	54,964	5,529
	Total	341,848	490,117	385,653

The following narrative provides a review of each of the four counties and one Indian Reservation, selected as demonstration sites. In addition, a description is provided of the selected transit service in each demonstration site, and includes a description of level of ridership and resources required to maintain the current level of service.

4.4.7.1 South Dakota Dispersed Rural Counties Representative Site: Aurora County

Aurora County was selected as a county indicative of a "dispersed rural" county. This east-central South Dakota county has a population of 3,135 according to the 1990 U.S. Census. The population of individuals 65 years of age and older is 681 (22 percent). Minority population in Aurora County is 49.

Zero-car households in Aurora County are estimated at 67 (6 percent of total households). 1980 estimate of median income was $12,702; per capita income was $4,374.

Dispersed Rural Service Description: *One vehicle, operated as part of a regional transit system (ROCS), covers entire county with approximately 27 hours of service per week. Three days per week a circuit is operated where each of three principal small towns (Plankinton, White Lake, Aurora Center) receives service into Mitchell. No Saturday or Sunday service is provided.*

The system provides approximately 4,000 passenger trips per year in the county, an average of 1.29 trips per person per year. This annual total compares with a demand of 24,500 passenger trips estimated by Method 1 (Peterson & Smith) as a moderate estimate for Aurora County. The ROCS service in Aurora County is meeting approximately sixteen percent of estimated demand. Operating expenses total $17,583 per year; $5,358 is spent on administration for a total annual budget of $22,941 (excluding capital).

There is no active county transportation advisory board. The system has had trouble raising match for UMTA funding. The service benefits from being involved in a regional system because some counties that exceed the 15 percent farebox revenue help provide revenue to Aurora County by cross-subsidization.

Major needs indicated by the transit manager is a replacement vehicle with a wheelchair lift.

Key Dispersed Rural Service Elements:

- *One vehicle serving entire county (27 hours per week).*
- *Approximately 3 days a week service.*
- *No Saturday or Sunday service.*

4.4.7.2 South Dakota Small Rural Counties Representative Site: Brule County

Brule County, located in south-central South Dakota, was selected as representative of a "small rural" county. Brule has a 1990 population of 5,485; and an elderly population of 910, 16.6 percent of total population.

Small Rural Service Description: *Brule County Transportation operates three vehicles which provide approximately 58 hours of service per week. One vehicle is based in Kimball and serves the nutrition site, traveling to Chamberlain or Mitchell once per week. Two vehicles are based in Chamberlain. One vehicle serves only the Chamberlain Nursing Home (a service that will be discontinued in FY92 due to a lack of match monies). The second Chamberlain vehicle provides service eight hours a day Monday through Friday. No Saturday or Sunday service is provided.*

The total number of trips estimated annually in Brule County is 18,000 trips at a total cost of $42,440 for operations and administration.[15] *This annual total trip count compares with demand estimations for the county of approximately 40,400 trips each year. Brule County is meeting approximately 44 percent of its estimated demand for passenger transportation service.*

The system contracts with nutrition sites, the nursing home, and day care services which help to generate adequate farebox recovery.

Key Small Rural Service Elements:

- *County-wide service (58 hours per week)*
- *Three vehicles; one vehicle operates five days a week, 8:00 - 5:00.*
- *No Saturday or Sunday service.*

4.4.7.3 South Dakota Rural Counties Representative Site: Brookings County

Brookings County was selected as representative of a "rural" South Dakota county. Its total 1990 population is estimated at 25,207; population of persons 65 years and older is 2,981, 11.8 percent of the total population.

Rural Service Description: *Brookings County Transportation operates two vehicles, providing approximately 53 hours of service per week. One vehicle operates from 9:00 a.m. to 5:30 p.m. Monday through Saturday and 8:00 a.m. - 1:00 p.m. on Sunday. The second vehicle serves as a back-up vehicle and fills in when service demands exceed capacity of the first vehicle. Total trips provided in FY90 was 19,900, compared with an estimated demand of approximately 130,000 trips per year. This level of service meets an estimated fifteen percent of total transit demand for the county. The total cost for the service was $51,950 in FY 91 for administration and operations.*

The major trip generators for this area, which include the Adjustment Training Center, two nursing homes, and the nutrition site, receive regular transportation service. The service gives rides to disabled school-age children and coordinates its activities with other community needs such as the convention bureau in Brookings. All small towns in the county receive service one day per week for travel into Brookings.

The Brookings service has a well-organized, active advisory board, and has provided match for all capital purchases. In addition, recently they were able to raise local match for operations when the county commission would not provide it. Despite strong community support, the manager is surprised that some groups in the community are unaware of the service. No farebox recovery problems have been experienced.

Key Rural Service Elements:

- *County-wide service operating 53 hours per week.*
- *Extensive contracting with community agencies to support services.*
- *Saturday and Sunday service.*

4.4.7.4 South Dakota Urban Counties: Representative Site: Minnehaha County

Minnehaha County was selected as representative of the two "urban" South Dakota counties. Its total 1990 population is estimated at 123,809; population of persons 65 years and older is 22,526, 11 percent of the total population.

Urban Service Description: *Sioux Falls Transit provides fixed route service in Sioux Falls, while Sioux Falls Paratransit provides paratransit services for the area. The two entities provide an extensive mix of urban services Monday through Saturday for total 306 annual service days. No paratransit or fixed route service is available on Sunday from either entity. Average annual ridership is approximately 448,300. Total number of trips provided to passengers with disabilities is 73,800. 3,000 individuals are certified to ride on the paratransit service, three percent of the total population of Sioux Falls.*

Total estimated transit demand for Minnehaha County, utilizing Method 2, Total Transit Demand for All Trip Purposes, is approximately 961,400 trips per year. Based on this estimate, the two transit services are meeting approximately 54 percent of demand in the county.

The agency employs sixteen full-time drivers and ten part-time drivers. The paratransit service employs fourteen full-time drivers and six part-time drivers.

The agency originally budgeted approximately $400,000 for paratransit, as demand grew the ridership increased. The budget was increased to $640,000 in FY 1991. The increase was necessary because expected improvements in efficiency did not occur. Recently, $60,000 was cut from service for FY 1992 by limiting hours of evening service. Managers believe the fare is at a maximum (from a policy standpoint) that they believe is equitable.

Key Urban Service Elements:

- *Six-day a week service, both fixed route and paratransit.*
- *A fare of 60 cents per ride or $20 per month is collected, a level which local staff believe is maximum desirable and equitable.*
- *Funding sources include UMTA, HUD (soon to be discontinued), local funding, farebox, and advertising.*

4.4.7.5 South Dakota Indian Reservations Representative Site: Rosebud Reservation

The Rosebud Reservation is located in south-central South Dakota on the Nebraska Border. Rosebud has the third largest population of all reservations in the state with 9,606. Rosebud also has the second largest elderly population of 354. The total number of families living on the Rosebud Reservation is 1,585.

Indian Reservation Service Description: *The Rosebud Sioux Tribe operates a Section 18 funded program that includes both regularly scheduled routes and demand-response service. Service is operated Monday through Friday, 8:00 - 5:00 p.m. and on weekends when requested. The program employs five full-time drivers. The total number of trips provided per year is approximately 5,700, with approximately one percent ridership by individuals utilizing wheelchairs. This compares with an estimated demand for service of approximately 92,500 annual rides; the Rosebud system is meeting approximately six percent of total demand.*

The most frequent use of the service is for nutrition trips (35 percent of service). The total annual budget for FY91 is $163,740; $82,516 from Section 18, $56,374 from tribal match, and $24,850 from local fares and donations.

The Rosebud Tribe indicated several barriers to transportation in the Transportation Study Survey Form for Transit Provider Agencies in South Dakota. They indicated that additional funds are needed to purchase vehicles. The Tribe indicated that a needs assessment should also be conducted to properly address the unmet need, which also requires additional funding. Difficult barriers exist in providing service. The transit project experiences accountability, paperwork and billing problems due to the long wait for payment.

There are problems with clients who do not show up at the pick-up points. Passengers experience problems due to geographical location. Finally, many of the vehicles have over 100,000 miles and need to be replaced.

Key Reservation Service Elements:

- *Regular five-day a week service.*
- *Operates seven vehicles providing service for all trip purposes.*
- *Needs include expanded service area and replacement capital.*

4.4.7.6 Summary of Existing Services: Representative Sites

Based on written surveys and site visits to the five representative demonstration systems, several general statements concerning service by each system can be stated:

- Service delivery in representative systems selected, in each classification area provide service to the majority of the service area. All towns and clusters of housing receive periodic and regular service.

- Sponsoring organizations are focused on meeting community mobility needs. They design, and alter service to meet specific tripmaking patterns and have a core of paid staff.

- On-site observations of the representative systems revealed that managers have considerable experience in promoting their services as the central focal point for passenger transportation in their community. Review of their program literature (schedules and brochures) documents their role as the central point for all transit activities, especially in the rural counties.

- Assessment of fiscal and rolling stock assets in each representative system are within a reasonable range compared to national experience and are achievable by other paired counties as revealed by the transit service inventory.

4.4.8 Analysis of Unmet Demand for Transit Service in South Dakota

The following sections analyze unmet demand in three categories: urbanized counties, non-urbanized counties, and Indian Reservations.

4.4.8.1 Unmet Demand in Nonurbanized South Dakota Counties

There are eight counties in South Dakota that currently do not have any transit service: Buffalo, Campbell, Corson, Harding, Hyde, Jackson, Jones, and Sully. All eight of these counties are located in the dispersed rural counties.[16] The total estimated unmet demand for these counties is approximately 464,700 annual trips. Unmet demand in dispersed counties with some service is not as easy to measure as demand in counties with no service. The following describes how demand in counties with some service is determined.

4.4.8.1.1 Dispersed Rural County Unmet Demand.

Aurora County, as a representative service of dispersed rural counties, is part of a regional transit service (ROCS). ROCS provides service to eleven counties, four of which are classified as dispersed rural: Aurora, Douglas, Gregory, and Jerauld. The total trips provided in the four dispersed rural counties were totaled to provide an indicator of transit demand being satisfied. The total of 25,400 trips provided in the four counties compares with an estimated demand of 114,200 trips per year in the service area. Approximately twenty-two percent of demand is being satisfied (25,400 trips provided/114,200 trips demanded).

While the reviewed transit service in Aurora County satisfies approximately 16 percent of demand, the average satisfied demand figure for the counties within a single agency was a better indicator to be applied to counties in the dispersed rural classification. Where at least some service is available, the assumption has been made that approximately 22 percent of total demand is being met. Unmet demand for this area comprised both of counties with no service and counties with an average of 22 percent of demand met is calculated using the following equation:

Unmet Demand = (1.00 * Total Demand in Unserved Counties) +
(.78 * Total Demand in Under-Served Counties)

Utilizing this equation, unmet demand in dispersed rural counties with some service is estimated at approximately 246,500 trips. Total unmet demand (in counties with no service and in counties with some level of service) in the dispersed rural area is 711,200 trips.

4.4.8.1.2 Small Rural Counties Unmet Demand.

Small Rural counties represent a total transit demand of approximately 1,147,800 for the twenty-one counties utilizing Method 1. All counties in this classification area have some level of transportation service. The representative service selected for the Small Rural counties meets an estimated forty-four percent of estimated demand (18,000 trips provided in Brule County/40,400 trips demanded), this figure is higher than might be expected in Small Rural counties.

While Brule County individually is satisfying approximately forty-four percent, an averaged satisfied demand figure for Small Rural counties within a single agency, again, is a better indicator to apply to counties in the Small Rural classification. Six counties served by ROCS are included in the Small Rural classification: Bon Homme, Charles Mix, Brule, Hutchinson, Turner, and Union. Passenger trips provided in FY90 totaled approximately 44,900. Estimated demand for these six counties is 339,500. Thirteen percent of demand is estimated as met by the entire system in Small Rural

counties. Utilizing this assumption of satisfied demand, total unmet demand in Small Rural counties is estimated as 998,600 trips.

4.4.8.1.3 Rural Counties Unmet Demand.

Rural counties represent a total transit demand of approximately 1,003,000 passenger trips for the eleven counties. All counties in this classification have some level of transportation service. The representative county selected for the Rural counties, Brookings, meets an estimated fifteen percent of estimated demand (19,900 trips provided in Brookings County/130,000 trips demanded). Based on an assumption of similar unmet demands in the rest of the service area, total unmet demand in Rural counties is estimated at 852,500 passenger trips.

4.4.8.2 Unmet Demand in Urban South Dakota Counties

Service area gaps in the two urbanized counties of South Dakota were identified by the transit providers. In Sioux Falls, service gaps include areas identified as Hayward, Norton-Froelich, Tomar-Tuthill, O'Gorman, Western Heights (North Half), and Southeast Sioux Falls. Additional fixed routes to meet these needs are viewed as essential to meet additional demand. Possible additional gaps for general public service exist in rural Minnehaha County outside the city limits of Sioux Falls. In Rapid City, a survey conducted in conjunction with the 1991 Transit Development Plan indicated recommendations for provision of fixed-route service and expanded hours to meet predicted demand.

Total demand for the two urbanized areas of South Dakota is estimated at 1,648,800 trips per year, utilizing Method 2. A total of 595,200 trips are being provided by the Sioux Falls Transit and Paratransit, and Rapid Transit, approximately 36 percent of demand. As mentioned in the earlier section, Sioux Falls Transit is providing approximately 521,800 trips per year and Rapid Transit is providing 73,400 trips. Demand not met by these two agencies is approximately 1,053,600 unmet trips.

4.4.8.3 Unmet Demand on South Dakota Indian Reservations

During telephone interviews with each tribe, a Tribal representative was asked about the existence of any transportation plans. Representatives also were asked to provide a description of the current transportation services as well as the type of service available to residents of the reservation. A summary of the telephone survey findings is included as Appendix E.

Estimated demand on Indian Reservations is 490,100 trips. For the most part, only limited public transportation service is available on South Dakota Indian Reservations. Service is generally provided through specific programs for the elderly or for health and

nutrition programs. While in some cases general public riders are allowed, respondents believe it is not convenient for the public to use the service because of long elapsed travel time. If service on all nine reservations is provided at approximately the same rate as on the Rosebud Sioux Reservation (six percent), the estimated unmet demand for Reservations is 460,700 trips. It is important to remember, however, that this demand overlaps the transit demand estimated for counties in which the reservations overlap.

General public transportation for reservations is further complicated by the high rate of households without a vehicle available for getting to jobs and grocery stores. According to one tribal representative , the elderly and young married individuals suffer the most from lack of transportation.

While transportation issues on South Dakota Indian Reservations are similar in type to the general population of the state, they are more severe due to specific geographic and socio-economic factors.

- There generally is a lack of sufficient individual resources to provide for personal transportation (low income and extremely low household automobile ownership).
- Distances to necessary services generally are very long, over poor roads.
- Usually public transportation services are non-existent on the Indian Reservations. Most service is provided by Community Health Representatives (CHRs) for obtaining health care or for nutrition services.
- For the limited public transportation service that does exist, vehicles typically have high mileage and there are insufficient funds to replace vehicles.
- Limited attempts at coordination have been made, but generally have failed due to lack of funds and personnel to sustain the effort.

4.5 Chapter Summary

Three traditional models of demand estimation, based on regression analysis and trip generation rates, were applied to all counties in the state. These models were utilized to assist in calibrating demand estimates for South Dakota. Two mathematical models were used to estimate total transit demand (Method 1, Peterson & Smith Trip Generation Rate Model; and Method 2, Transit Demand for All Trip Purposes). A third model was utilized to estimate transit demand by the elderly and disabled population (Method 3, Elderly and Disbled Mode Split by Mobility Type). Table 4-14 provides a summary of estimated unmet transit demand for the state based on calculations derived from the three models.

Table 4-14
Summary of Unmet Transit Demand in the State

Service Areas	Unmet Transit Demand	Percent of Total	Demand Estimation Method
Dispersed Rural	711,200	19%	Method 1 (Peterson & Smith)
Small Rural	998,600	27%	Method 1 (Peterson & Smith)
Rural	852,500	23%	Method 1 (Peterson & Smith)
Urban	1,127,100	31%	Method 2 (Hoel)
TOTAL	3,689,400	100%	
Indian Reservations (a)	460,700		Method 2 (Hoel)

(a) Indian Reservation estimates duplicate figures calculated for unmet demand of corresponding counties.

Total unmet transit demand in South Dakota is estimated at 3,689,400 trips per year. Based on estimates of unmet demand, Dispersed Rural counties represent 19 percent of the total unmet demand; Small Rural counties represent 27 percent; and Rural counties represent 23 percent. Urban counties represent approximately 31 percent of total unmet demand in the state.

It was found that the more rural the county in South Dakota, the greater the representation of elderly, the lower the income, and the greater the likelihood of no vehicle in the household exists, contributing to an higher per capita demand in the more rural counties. Eight counties in the state, all in the dispersed rural portion of the state, have no transit service. The demand estimates derived for South Dakota lend support to the belief that transit demand exists in all areas of the state, not just in more transit-traditional urban counties.

While there are other providers in the state it is not possible to accurately estimate the number of trips they deliver, nor is it necessarily desirable for the objectives of this study. First, managers of systems receiving Section 18 funds, and therefore more likely to be knowledgeable about counting trips, routinely have problems. In one interview for this report it was discovered that the driver was being counted as a passenger. In

another case, "errand running" such as prescription delivery was being tallied as passenger trips. Some systems have counted meals delivered on contract for nutrition sites as passengers.

Counting passengers is a perennial problem for many transit systems. Therefore, while attempts were made to gather data through the mail survey and from urban area mandated plans, no satisfactory data could be secured. This is not considered a deleterious void in the data because of the nature of the models used to predict demand.

Methods utilized in this study do not take into account services that are highly client-restricted and program-specific and therefore should not be included in the count of satisfied demand. For example, the aggregated estimate of demand relied on stated preference for use of transit by a random cross section of the South Dakota population. To project transit demand for this group, and then to indicate satisfied demand on the basis of trip-making by a single, significantly transit dependent population or captive market would grossly misrepresent unmet demand in South Dakota.

A good example of this phenomenon is the case of an adjustment training center for the developmentally disabled which provides a high level of service of individuals that may have no other access to transportation. Method Three used in this report projected transit demand for elderly and disabled persons under the assumption that 35 percent of trip-making by this population would be satisfied by transit. To offset demand estimates with passenger trip counts by individuals who are making 100 percent of their trips on transit would seriously misrepresent satisfied demand in the area.

To include these trips in calculations of satisfied demand requires first that the demand model used be calibrated to that specific community and its transportation services: public, private, non-profit, private for-profit, and even church buses; a task appropriate to a Transit Development Plan, but inappropriate in a study of statewide funding needs. The methodology in this study has been to present representative systems and the typical service they are able to provide given a specific resource level. Even as representative systems, they may provide only 15 to 30 percent of estimated demand in the county.

Based on the site pairing model developed in this chapter, and the substantiation of unmet transit demand in the state, the next step requires examination of models used by other states to fund needed services equitably. The next chapter, Chapter 5, analyzes state funding mechanisms for transit in neighboring states. Chapter 6 then applies cost principles to the estimates of demand to determine funding requirements for desired services.

Chapter Endnotes

1. U.S. Bureau of the Census, 1980 and 1990; and Population Projects, South Dakota counties 1985-2010. State Data Center, University of South Dakota, Vermillion.

2. South Dakota Management Plan for the Section 16(b)(2) Program. South Dakota Department of Transportation, January, 1990. pp 9-10. The three percent estimate includes the number of non-elderly disabled. Average trip demand per person estimated for this passenger group in the management plan is set at 12 trips per month.

3. 1990 Quantitative Assessment of Estimated Number of Homeless Adults, Children and Youth in South Dakota. South Dakota Department of Education and Cultural Affairs, January 31, 1991.

4. U.S. Bureau of the Census, 1980 and 1990; and Population Projections, South Dakota Counties 1985-2010. State Data Center, University of South Dakota, Vermillion.

5. South Dakota Labor Bulletin, May 1991. Labor Market Information Center, Aberdeen, South Dakota.

6. Public and Specialized Transportation in South Dakota. Statistical Report for FY90, p 16.

7. Public and Specialized Transportation in South Dakota. Statistical Report for FY90, p. 5.

8. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal Year 1990

9. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal year 1990.

10. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal Year 1990.

11. South Dakota Department of Transportation, South Dakota Management Plan For The Section 16(b)(2) Program, Pierre, South Dakota, January 1990, page 15.

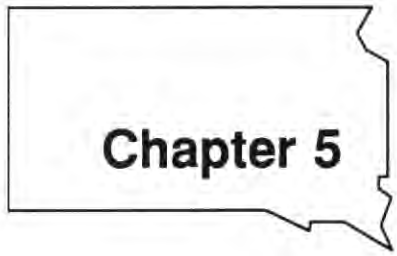
12. Peterson, Ernest J. and Smith Robert L. Jr., "Estimating Demand for Rural Transportation," Proceedings of the First National Conference on Rural Public Transportation, U.S. Department of Transportation Office of University Research and Technology Sharing Program, October, 1976, DOT-TST-77-11, p 94; and as described in Rural and Small Urban Transit Manager's Workbook, Volume I. U.S. Department of Transportation, Federal Highway Administration, March, 1981, pp II-A-11-12.

13. Hoel, L.A., M.J. Demetsky, D. Morris, B.T. Hargroves, J.R. Stone, B.H. Cottrell & A. Goldberg. "Transit Service and Organizational Alternatives for a Low Density Suburban - Rural Areas." University of Virginia, Charlottesville. Prepared for USDOT, Urban Mass Transportation Administration, Washington, D.C., February, 1979. pp 26-37.

14. Peat, Marwick, Mitchell & Co., "Description of the Transportation Handicapped Population," 1975, and "Trip Generation for Nursing Homes," Institute of Transportation Engineers, 1974.

15. Examination of published Brule County ridership revealed an anomaly with other small rural counties. Since service pattern of Brule County is representative of this group of counties, a closer analysis by the manager of trip-making revealed some possible miscounting and overcounting of trips. Therefore, the total was reduced to 18,067 passengers per year.

16. While no service availability was documented on SDDOT inventories or on the written provider surveys, information received late in the study indicated that very limited specialized service is available at Wamblee in Jackson County. For the purposes of estimating demand, this very limited service does not influence demand estimates. See the discussion on highly client-restricted and program-specific services described in Section 4.5, Chapter Summary.



Chapter 5

State Funding Mechanisms for Transit

5.1 Introduction

Stewardship and equity are of paramount importance when allocating public resources. South Dakota is distinguished from its neighboring states by the deliberate approach that is currently being taken to assess funding needs for transit. South Dakota citizens could be characterized as having strong attitudes of self-reliance and independence. State DOT transit staff have reflected these attitudes by requiring a local farebox revenue recovery ratio (Table 5-1) for Section 18 transit systems. South Dakota is the only state in the region with this requirement for reliance on local farebox revenue. However, an examination of the contiguous states reveals that South Dakota is also distinguished by being the only state not supplying any state funds for transit.

South Dakota is also the only state in the area to conduct a detailed assessment and plan to fill gaps in service and improve services before an allocation was sought from state sources (Table 5-1). The remainder of this chapter presents the allocation and funding schemes of South Dakota and neighboring states. The chapter then presents a discussion of allocation approaches for South Dakota and concludes with specific allocation recommendations.

5.2 Current South Dakota Transit Funding[1]

Both the South Dakota Department of Social Services and South Dakota Department of Transportation receive Federal funds for transportation services. These funds are provided to organizations who offer transportation services. This section of the report addresses programs within these two state government departments.

Table 5-1 State Transit Management Characteristics

	Revenue Recovery Requirement	Developed State Plan for Services Before State Aid Program
Iowa	No	No[a]
Minnesota	No	No[b]
Montana	No	No
Nebraska	No	No[c]
North Dakota	No	No
Wyoming	No	No
South Dakota	Yes (15%)	To be determined

a) Iowa did conduct a Governor's blue ribbon panel investigation of transit needs in 1974. The panel recommended a funding level of $4 million 1974; the legislature allocated approximately $2 million. In 1975 an operating plan was completed which set out the parameters and characteristics of the existing regional systems.

b) Minnesota staff recognize the need for a plan particularly on how to address new starts. Initial program was "first come first served."

c) Currently a Nebraska Legislative Committee is examining allocation procedures with emphasis on equity of rural-urban allocation.

Most major cities as well as many communities in rural areas provide transportation services, especially to elderly persons. Usually the vehicles are owned by a senior center although contract arrangements can be made with other organizations and private individuals. Volunteers may use their own cars and be reimbursed for their mileage. To ensure the safety and comfort of the passengers, drivers are trained in first aid, CPR, defensive driving, and passenger assistance techniques. Contributions are accepted although no one is denied service if they cannot or do not contribute.

The Department of Social Services receives Federal funding from the U.S. Department of Health and Human Services, Administration on Aging from Title III-B grant money. Title III-B funds can be used for both capital purchases and operating expenses. However, in the past four years, it has been used only for operating expenses. The amount allocated to passenger transportation is shown in Table 5-2. Title III-B grant money is provided to the South Dakota Department of Transportation to be used for project administration and operating costs, as agreed upon by the two departments.

Public Transportation staff have developed a mutually supportive relationship with South Dakota Office of Aging personnel in the South Dakota Department of Social

Services (SDDSS). An annual mutual coordination agreement with SDDSS has existed since FY 1989. SDDOT has administered both Section 18 and Title III-B funds for joint sub-grantees (Title III-B of the Older Americans Act can be used for transportation to elderly, which helps maximize funds available for local direct services.

Table 5-2 Title III-B Federal Funding 1988-1991

GRANT	FY88	FY89	FY90	FY91
Title III-B Transportation Allocation	$157,519	$158,529	$155,415	$163,100
Section 18 (Title III-B Match)	83,758	94,443	99,937	105,000
Total	$ 241,277	$ 252,972	$ 255,352	$ 268,100

The South Dakota Department of Transportation receives federal funds from the Urban Mass Transportation Administration (UMTA) of the U.S. Department of Transportation from three grant programs: UMTA Section 18, Section 18(h) and Section 16(b)(2) funds. Table 5-3 presents the funding levels for these grant programs.

Table 5-3 South Dakota Department of Transportation Grant Programs

Grant	FY 88	FY 89	FY 90	FY 91
Section 16(b)(2)				
Direct Purchases	$212,739	$218,555	$218,000	$218,524
State Admin	6,826	800	1,362	1,000
	$219,565	$219,355	$219,362	$219,524
Section 18				
Direct Service	$403,487	$351,617	$348,490	$364,513
State Admin	0	60,000	60,000	60,000
	$403,487	$411,617	$408,490	$424,513
Section 18(h)				
Direct Assistance	$58,573	$60,290	$60,280	$60,359
State Admin	0	0	0	0
	$58,573	$60,290	$60,280	$60,359
TOTAL	$681,625	$691,262	$688,132	$704,396

UMTA Section 16(b)(2) provides capital grants to non-profit agencies to provide transportation services to elderly and disabled citizens. Vehicles requested and purchased through this grant program during the past four years are as shown in Table 5-4.

Table 5-4
Vehicles Requested and Purchased Through the UMTA Section 16(b)(2) Program

FY	Requested (R)	Purchased (P)	P/R (%)
87	43	22	51
88	33	13	39
89	31	18	58
90	28	14	50
Total	135	67	49

Section 16(b)(2) funds can only be used for capital assets with 80 percent federal funding and 20 percent local funding allowed. However, SDDOT has imposed a match ratio of 75 percent federal funding and 25 percent local funding. Applications are evaluated and ranked by the South Dakota Transportation Planning and Coordination Task Force. Only the top rated applications are funded, up to the amount of funds available. The difference in costs and the number of mini-buses, vans, or cars approved affects the number of units purchased in any one year. As shown in Table 5-4, vehicles requested have exceeded those actually purchased due to a lack of funding.

UMTA Section 18 provides funding for capital assets, administration and operation of rural public transportation systems. Allowed matching ratios are as follows: State Administration 100 percent Federal; Sub-Grantee Project Administration 80 percent Federal/20 percent Local; Net Operating Deficit (total operating cost minus rider revenues) 50 percent Federal/50 percent Local; Capital Purchases 80 percent Federal/20 percent Local. State administration is funded through this grant at approximately $60,000 per year. Section 18 funds may be used, at the Governor's discretion, as Section 9 funds which can be used only by Sioux Falls, Rapid City, and North Sioux City. (Section 9 funds are discussed separately in later sub-sections.)

UMTA Section 18(h) provides funds for training and technical assistance to local agencies. These funds are commonly known as the Rural Transportation Assistance Program (RTAP). Administrative costs cannot be used by the DOT from this grant. In FY 89, there were 85 grants for training funded under this program. When the Rural Transportation Assistance Program (RTAP), Section 18(h) began in FY 1987, SDDOT Public Transportation staff made a deliberate effort to utilize RTAP training funds to substitute for regular Section 18 sub-grantee travel budgets by incorporating training programs at all the regular and special sub-grantee meetings called by SDDOT, the Dakota Transit Association (DTA), or UMTA. This has removed pressure for travel funds from the Section 18 operating funds.

Table 5-5 presents the total federal and state passenger transportation funds administered through the Department of Social Services and the Department of Transportation.

Table 5-5
Total Federal and State Passenger Transportation Funds Department of Social Services and Department of Transportation

DEPARTMENT	FY 88	FY 89	FY 90	FY 91
Social Services (a)	$241,277	$252,972	$255,352	$268,100
Transportation (b)	681,625	691,262	688,132	704,396
TOTAL	$922,902	$944,234	$943,484	$972,496

(a) AoA Title III-B funds matched with UMTA Section 18 funds (see Table 5-2).

(b) UMTA Section 16(b)(2), Section 18, Section 18 (h) funds (see Table 5-3).

UMTA Section 9 funds go only to cities with a population of 50,000 or more. In South Dakota, only Sioux Falls, Rapid City, and North Sioux City are eligible for Section 9 funds. These cities make direct application to the Federal Government. North Sioux City, South Dakota, is included in Sioux City, Iowa's application. These funds revert back to UMTA if the cities do not expend them within three years. Section 9 funds have no restrictions on use, i.e., they can be used for capital, operating, or planning expenditures. Match is as follows: 50 percent Federal/50 percent Local on operating and administration expenses; 80 percent Federal/20 percent Local on capital and planning expenditures. The grant award is established by an UMTA formula which is based on urban population. SDDOT does not participate in the grant award process or administration of Section 9.

Section 9 funding authorization received from UMTA during the past fiscal years is shown in Table 5-6.

Table 5-6
UMTA Section 9 Funds

	FY 88	FY 89	FY 90	FY 91
Rapid City	$300,000	$273,892	$278,418	$310,386
Sioux Falls	$538,145	$493,543	$501,172	$534,741
North Sioux City	0	0	$8,017	0
Total	$838,145	$767,435	$787,607	$845,127

SDDOT staff aggressively sought to transfer unutilized UMTA Section 9 (Urban System) funds (due for national re-allocation after three fiscal years), from Sioux Falls and Rapid City, to the Section 18 program. This source of funds will no longer be available because both Rapid City and Sioux Falls are scheduled to spend all available Section 9 funds. Sioux Falls has not transferred funds since 1988. Table 5-7 shows the Section 9 transfers through FY 1990.

Table 5-7
Section 9 Transfers

Fiscal Year	Sioux Falls(a)	Rapid City (b)	Total
1986	$234,000	0	$234,000
1987	0	$193,800	$193,800
1988	$124,538	$205,415	$329,953
1989	0	$206,630	$206,630
1990	0	$107,755	$107,755
TOTAL	$358,538	$713,600	$1,072,138

a) Sioux Falls has not transferred funds since FY88.
b) Rapid City will no longer transfer funds beginning in FY92.

5.3 Sources of State Funds and Allocations in Contiguous States

From FY 87 and FY 89, federal financial aid for public transportation decreased to the point where states felt they had to provide more direct and indirect aid. The

federal government contributed $3.2 billion in FY 89 compared to $4.2 billion in FY 84.[2] Conversely, state governments contributed $2.75 billion in direct and indirect aid in FY 84 compared to $4.2 billion in FY 89. It must be kept in mind that the vast amount of these funds were for urbanized, metropolitan public transportation systems (98%). In 10 of the largest states, indirect financial assistance was also provided, with a value of $1.042 billion.[3] This trend in increasing state participation in transit funding is evident in the states contiguous to South Dakota.

5.3.1 Iowa State Funding, Allocation Scheme and History

The Public Transit Assistance Fund was initiated by the Iowa General Assembly in 1977. The original source of monies for this Assistance Fund, from 1977 to 1985, was state general fund appropriations. In 1986 monies from the Motor Vehicle Use Tax were added to the general fund appropriations. In 1987, general fund appropriations were discontinued; instead, petroleum overcharge funds combined with the Motor Vehicle Use Tax monies were the funding sources. The funding sources in 1988 again were the Motor Vehicle Use Tax and petroleum overcharge funds. The Use Tax was the sole funding source in 1989 and 1990. State assistance to transit rose from $1,338,927 in 1977 to $5,661,091 in 1990.

These funds were distributed through discretionary allocations from 1977 to 1987. This approach required transit systems to petition the governor and the legislature each year. Partly in response to opposition by the Iowa Public Transit Association, a distribution formula was established in 1987. This formula allocated monies on the basis of regional or urban systems and included an additional regional set-aside. Operating expenses, locally determined income, revenue miles, number of passengers per operating expense dollar, and revenue miles per operating dollar were other criteria. Beginning fiscal year 1990, a new formula was adopted that eliminated the regional set-aside, which made for a more equitable distribution between urban and regional systems (Table 5-8).

In 1991, legislative action transferred the transit use tax funds from a separate trust fund to the general state fund. This action was taken in response to the state's fiscal and budgetary problems. Transit systems, through their legislators, opposed transit funds going into the general fund with the necessity of annual appropriations. A compromise between the legislators and the governor's budget office established a standing appropriation equal to 1/20th of the vehicle use tax that would go to public transit systems. As part of the general fund, transit appropriations are subject to any across-the-board cuts the governor might make. In addition, the legislature might review in the next legislative session any and all standing appropriations as a means of reforming the budgeting process. Despite a slowing of the state's economy, no change is anticipated in the level of state support for public transit.

Balancing the needs of both rural and urban systems creates a pressing issue which involves both funding mechanisms and public transit. Iowa has attempted to reconcile the different needs of rural and urban transit systems through formulas for funding allocation. As mentioned previously, beginning in FY 1990, a new formula was introduced (Table 5-8), which replaced the original formula. The regional set-aside, included in the original formula as a means of stimulating growth and supporting development of rural systems, was eliminated. FY 1990 was considered a good transition year because, as a result of an increase in total fund revenues from FY 1989 to FY 1990, all systems received an absolute increase in funding. If implementation had been delayed to FY 1991, twelve systems would have had an absolute decrease due to slower general fund growth.

Basically, the funding ratio between rural and urban systems is 50/50. The funding distribution does not follow population densities and is weighted toward rural areas. Provision of rural transportation with a dispersed population and longer trips, is more expensive than urban transportation. Also, strong support exists for rural causes in the legislature. The new formula attempts to provide parity between rural and urban, with funding levels of 51 percent rural and 49 percent urban. The funding formula requires locally determined income, defined in legislation to mean all transit system revenue, minus federal and state operations assistance.

In order to receive state funds, rural systems must coordinate within regions. Systems are designated either regional or urban. Eight of the sixteen regional public systems are private, non-profit and eight are public agencies. Systems, whether rural or urban, must be open to the public.

Table 5-8
Transit Funding Formula Selected by the Iowa Public Transit Assistance Distribution Study Steering Committee[4]

Regional System Program Eligibility

$$50\% \times D \times \frac{\text{System's LDI}}{\text{Sum of LDI All Regions}} +$$

$$25\% \times D \times \frac{\text{System Pass/OpExp}}{\text{Sum of Pass/OpExp All Regions}} +$$

$$25\% \times D \times \frac{\text{System RevMi/OpExp}}{\text{Sum of RevMi/OpExp All Regions}} = \text{Regional System's PE}$$

Urban System Program Eligibility

$$50\% \times E \times \frac{\text{System's LDI}}{\text{Sum of LDI All Urban Systems}} +$$

$$25\% \times E \times \frac{\text{System Pass/OpExp}}{\text{Sum of Pass/OpExp All Urban Systems}} +$$

$$25\% \times E \times \frac{\text{System RevMi/OpExp}}{\text{Sum of RevMi/OpExp All Urban Systems}} = \text{Urban System's PE}$$

D — $\frac{\text{Regional RevMi}}{\text{Total RevMi}}$

E — $\frac{\text{Urban RevMi}}{\text{Total RevMi}}$

FY — Fiscal year. The twelve-month period beginning July 1 of one year and ending June 30 of the following year.

LDI — Locally determined income. All transit system revenue dedicated for operations expense during a fiscal year, minus U.S. Department of Transportation and Iowa Department of Transportation operations assistance

OpExp — Operations expense. All eligible transit system expenses related to operating maintaining, and administering transit operations.

Pass — Passenger. A person boarding a transit vehicle for the purpose of making a trip. a passenger is counted each time a person boards a vehicle, even though the person may be on the same journey from origin to destination.

Table 5-8 (cont)

PE	Programmed eligibility. The percentage of any state transit assistance appropriation that a public transit system is eligible to receive from the non-discretionary portion of the appropriation. Determination of a public transit system's "programmed eligibility" shall be made. System programmed eligibility is reduced by 25 percent for each quarter of any fiscal year in which no joint participation agreement with the department has been executed. The director of the air and transit division may waive this reduction.
RevMI	Revenue Miles. Total vehicle miles traveled by revenue vehicles of public transit systems while in revenue service. Excludes miles traveled to and from storage facilities and other deadhead travel.

During the 1991 legislative session, action was taken to allow an increase in the city transit levy limit from $.54 per $1000 of assessed value to a limit of $.95 per $1000 of assessed value. The individual city councils must now vote for implementation, although many of the larger cities are already at the higher limit. A decrease in federal aid and increased requirements occasioned by the Americans with Disabilities Act forced the increased tax levy ceiling.

If state aid to public transit were to be discontinued, the hardship would be felt most heavily by the rural, regional systems, which receive 26 percent of their total funds from the state. Small urban systems, with 16 percent of their budget from state funds, would be next effected, while large urban systems with 8 percent of their budget from state funds would feel the impact the least. While urban systems seek parity with rural systems, the rural, regional systems are much more dependent on state funds.

5.3.2 Minnesota State Funding and Allocation Scheme

Of South Dakota's neighbors, Minnesota devotes the greatest amount of state funding to public transit.

Until recently, motor vehicle excise taxes were the main source of state funding for public transit in Minnesota. Seven and a half percent (7.5%) of Motor Vehicle Excise Taxes were directed to the Public Transit Assistance Fund. In 1984, the phased transfer of motor vehicle excise taxes to the highway and transit funds was delayed and then canceled due to state revenue shortfalls. Now that funds raised by motor vehicle excise taxes are returned to the general fund, the 7.5 percent previously diverted to the Transit Assistance Fund goes directly to the general fund. The general fund then supplies the Transit Assistance Fund to the state's transit providers. Minnesota also appears to be joining the trend toward moving away from designated funds within the state budget and funds all transit activities out of general revenue.

During the last biennium budgeting process, transit was scheduled to receive a $5,000,000 cut. Nevertheless, strong legislative support secured a $3,000,000 increase instead. The 1988-1989 biennium appropriation for the Public Transit Assistance Program was $70.2 million. The 1990-1991 biennium appropriation was $72.9 million. However, the 1991 portion of the apportionment had to be reduced by $1.6 million due to revenue shortfalls.

The Department of Transportation reviews applicants for state funding and, prior to distribution, assigns each applicant to one of the five fund-sharing levels: large urban, urbanized, small urban, rural, and elderly and disabled. The purpose of public transit assistance in Minnesota is to provide access to transit, improve systems' efficiency, alleviate automobile congestion, maintain a state commitment to public transit, and meet the needs of individual transit systems. In addition, the Department of Transportation is interested in coordination of services, information sharing, cost-effectiveness, and the establishment of transit services in areas of unmet needs and all these factors are considered when making an allocation.

Transit administration in Minnesota is divided among three groups, Greater Minnesota, the Twin Cities Metropolitan Area, and Light Rail Transit. In Greater Minnesota, all areas of the state outside the Minneapolis/St. Paul Metropolitan Area funding is provided through a combination of federal, state, regional, and local governments. This combination is a fixed share funding formula which sets the maximum local share of the total operating cost. The fixed local shares of cost and numbers of systems are shown in Table 5-9.

Table 5-9
Minnesota Transit Cost Allocation

Local/System Category	Number of Systems in 1991	Fixed Local Share of Cost
elderly and disabled	4 systems	35%
rural	28 systems	35%
small urban	24 systems	40%
urbanized	4 systems	40%
large urban	1 system	55%

Local share can be derived from any number of revenue sources, farebox receipts, auxiliary revenues, advertising income, and local tax levies. The balance of the operating cost, minus federal operating assistance, is provided by the state with appropriations from the general fund and the Transit Assistance Fund. This fixed local cost formula is

simple to use and explain. There are instances where there is no local donation or tax beyond farebox receipts and the local percentage is not met. Priority is given to existing services; then new services are funded on a first come first served basis.

In the Metropolitan Area, the Regional Transit Board (RTB) provides funding for a diverse group of providers, from regular, fixed-route bus systems to ride-sharing programs. Regular route operators, including the largest, Metropolitan Transit Commission, receive property tax and state funds. Those communities who did not wish to join MTC's service area (and thereby opt-out) receive property tax funds. RTB's share is 100 percent of the operating deficit, which is total operating and capital expenses minus revenues.

For purposes of taxation, the metropolitan area is divided into taxing districts, the Metropolitan Transit Taxing District and the Exurban Area. Prior to the 1988 tax levy, the RTB was authorized to annually levy an amount up to two mils times the assessed value of all property within the metropolitan transit taxing district. Effective in 1989, the levy limit is subject to annual percentage change adjustments based on year-to-year market value changes in the taxing district.

The RTB also levies a tax in the Exurban Area which is equal to 10 percent of the tax levy assessed in the taxing district. The proceeds from this tax are used to fund transit programs servicing residents of the exurban area. These include rideshare programs and rural paratransit programs. The transit tax, levied within the RTB, receives reimbursement from the General Fund of the State Treasury in the amounts of the levy reduction.

RTB contributes 60 percent of operating expenses for small urban or urbanized areas and 65 percent of operating expenses for rural (less than 2,500 population) or county special transportation services. RTB has set farebox recovery standards: regular route, system-wide, 35 percent; community-based, 15 percent; and Metro Mobility, 10 percent. Metro Mobility is a demand-responsive door to door transit service provided to eligible persons with disabilities, and is available throughout the seven county Metropolitan Transit Taxing District. A 1983 Legislative Study Commission recommended that the funding mix for regular route metropolitan transit should be 35 percent fares, 35 percent property taxes, 20 percent state funds, and 10 percent federal aid. As of 1990, farebox only accounted for 30 percent of regular route costs; a fare increase to raise farebox contributions to 35 percent is being considered this year.

Minnesota Statute authorizes RTB to levy property taxes for recovery of transit operating expenses and a debt service levy for payment of debt service on bonds issued by the Metropolitan Council. At current levy limits, RTB property tax is expected to grow 5.4 percent annually. Through 1995, property tax revenues should fund 50 percent of regular route operating costs. Through 2000, property tax is projected to account for 42 percent of all funding.

State assistance to RTB originates in the general fund and the Transit Assistance Fund. State funding may be used for transit operating costs, RTB administration, transit planning, Light Rail Transit planning, and preliminary engineering. Light Rail Transit is projected to involve not only the construction of a light rail system in the Metropolitan Area, but also serve as a focal point in the total transit coordination and integration program of the entire state.

Without state funding, only those services receiving Section 9 and the larger Section 18 providers could survive. Options which have been explored for increased funding for transportation include:

increase in fuel taxes
increase in vehicle registration fees
indexing fuel taxes, registration fees and license fees to inflation rates
sales taxes
sales taxes on motor vehicle or fuel sales
weight/distance tax.

5.3.3 Montana State Funding and Allocation Scheme

Montana supplies a much smaller level of state assistance than Minnesota. Montana's source of state funding for public transit comes from the State Fuel Tax. This tax has raised $71,250 for direct aid to transit in 1989, 1990, and 1991. There are no plans to change or increase this funding level.

The 1991 Montana Legislature authorized a reorganization of the State Transit Office. A Montana Department of Transportation has been created and state transit administration program was moved from the Department of Commerce to the new DOT. Other than this reorganization, no changes are planned for the State Transit Program.

As legislated, a portion of the State Fuel Tax revenues, approximately $142,500 per year, are allocated to public transit. $71,250 is allocated to the cities and urban transportation districts of the state which operate or contract for the operation of general public transportation, and the remainder allocated to the counties for use on highways, bridges, or transit. The counties may receive funds which range from $200-300 to $4,000. Practically no funds support rural public transit; most counties spend the money on highway repair and bridges.

Of the amount designated for urban transit, three cities, Missoula, Great Falls and Billings receive $61,987. The remaining $9,263 goes to Helena and Butte, which meet UMTA standards for non-urbanized areas. These funds are distributed in the form of block grants that can be used either for capital or operating expenses.

The cities or urban transportation districts are eligible for funds based on a ratio of their own local financial support to the total financial support for all general public transportation systems in the state. Local financial support is determined by dividing the city's or district's expenditure of local revenues for public transportation operations for the fiscal year by the mil value of the city or urban transportation district. Applicants figure their expenditures at the end of the fiscal year and apply for allocations against that deficit figure. Cities or urban districts cannot receive more than 50 percent of any year's local revenue expenditure.

Rural transit providers have not successfully gained significant funds through this program. One theory is that most rural providers are not even aware of the Fuel Tax fund. Finally, of those transit systems in Montana that receive state funds, it is predicted that they probably still could function without state assistance because the amount from the state fund is not great.

5.3.4 Nebraska State Funding and Allocation Scheme

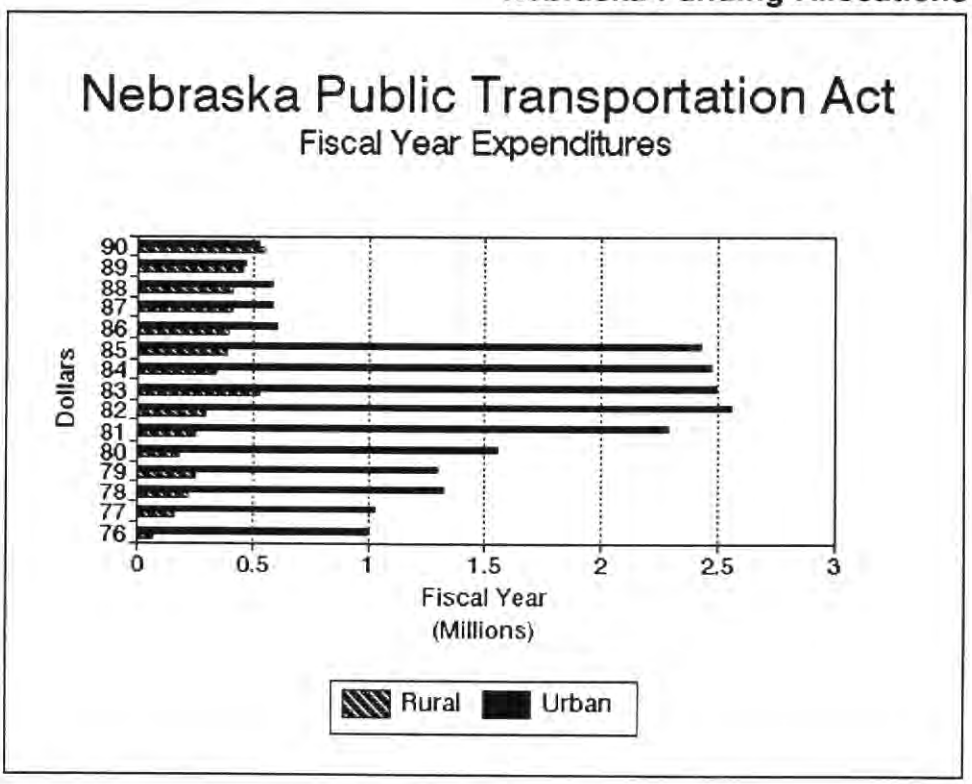
Nebraska has provided state operating assistance since 1975. The Nebraska Public Transportation Act of 1975 authorized subsidies from state general funds to assist public transit, with an emphasis on meeting the needs of the elderly and disabled, particularly in the rural and small urban areas of the state. The Department of Roads was charged with administrative duties and today continues to administer the Nebraska Public Transportation Assistance Program (NPTA). Nebraska also has provided financial assistance to Omaha and certain private operators. This assistance was not part of the NPTA. In each of FY 1987 and FY 1988, $400,000 was provided to Omaha to assist with capital purchases. To assist certain private operators, Nebraska provided $50,000 to match a federal grant. Over a period of two years, the Governor's Oil Overcharge Fund provided $500,000 for operating assistance for Black Hills Stage Lines and Star Bus Lines.

State subsidies from the NPTA are not to exceed 50 percent of the eligible operating deficit. Priority criteria to determine allocations include: proposed projects best suited to serve the elderly and disabled, projects with federal funding, projects which supply a service not otherwise available to the elderly and disabled, and local agency commitment to the transit project. Urban Bus systems providing fixed route service must offer a reduced fare, not to exceed one-half of the regular fare for a one-way, peak hour trip, for the elderly and disabled. Projects must also adequately meet the transportation needs of the area and coordinate with other services. Local match must equal the amount of state monies.

Nebraska decided to provide state assistance for public transit with priority given first to rural transit, then to urban transit. The original legislative action contained a 50

percent reserve for rural transit, a reserve that has been eliminated. During the period 1986-1991 the state transit funds have remained constant, at the $1,000,000 level.

Table 5-10
Nebraska Funding Allocations



A recent legislative study on the policy of "rural first" and "urban second" funding resulted in a reaffirmation of this policy. However, the study did recommend that an incentive payment or mandate be developed to encourage local revenue generation.

The initial funding for the NPTA was provided from the general fund. In FY 1980, $1 million per year was authorized from the Highway Trust Fund. In FY 1982, an all-time high authorization was made at $2.8 million and authorizations were above the $1 million level until 1985 when the legislature eliminated the general fund allocation. Allocations were authorized to be made at the $1 million level from the Highway Trust Fund from FY 1986 to FY 1991. The 1991 Legislature authorized an additional $500,000 per year from the general fund; the FY 1992 and the FY 1993 authorization is set at $1.5 million.

With this expanded amount, the rural systems receive all of their requested funds, ($700,000), with the remainder left for urban systems in Omaha and Lincoln. There is no specific allocation formula nor are there specific guidelines for funding distribution. State staff preference for funding sources is 50 percent local, 25 percent state, and 25 percent federal; but some systems' budgets have federal participation as high as 45 percent and others have a low of 20 percent federal participation.

State agencies, local public bodies, Indian tribes, public transportation services, and private nonprofit organizations are eligible recipients. Private-for-profit operators may participate through contracts with eligible applicants. Public transit services must be open to the public but special emphasis may be given to the elderly and disabled.

Nebraska's experience with a rural/urban allocation suggests that the conflicting interests of rural and urban systems be should dealt with early in the funding process. Guidelines must be established to prevent animosity and confusion from building during the early years of the state funding procedures. Another suggestion, from Nebraska's experience, is to clearly define who is eligible and who is not. For example, a mental retardation unit is the only rural system receiving state aid that does not serve the general public. (There are five urban area systems that exclusively serve the elderly and disabled.) This lone rural exception to the general public rural standard has received a small amount of state aid for fifteen years because of a lack of specific eligibility standards.

Without state aid most public transit systems in Nebraska would have to cease operation. There are limits on local tax increases which will not allow more than a 4 percent increase in all local taxes, including transit taxes. These limits would therefore hinder systems' ability to generate revenues locally.

5.3.5 North Dakota State Funding and Allocation Scheme

North Dakota has just recently begun state assistance to public transit. In 1989, the North Dakota State Legislature established a state Public Transportation Fund (PTF). The funding source is a $1.00 increase in the motor vehicle registration fee. Collection began January 1, 1990, and is set aside in a fund for public transit. The anticipated revenue as a result of the state legislation is $700,000 annually.

Each county receives a base amount of $6,100 (an arbitrary figure) plus 50 cents per capita in the county. In counties with multiple operators, the base of $6,100 is divided equally among the existing providers. The population funding (50 cents per capita) is divided among the systems based on their percentage of the total elderly and disabled ridership in the county. The intent of the original legislation is to improve transit for elderly and disabled riders.

The public transportation fund is tied to a fairly stable funding source, vehicle registration instead of sales tax, which is more reflective of variations in the state's economic health. North Dakota has lost population, but motor vehicle registrations have risen by 10,000, during 1980-1990, due to increased vehicle ownership. Therefore, revenue collections for the PTF are expected to be stable.

State transit funds can be used for all costs, including capital, and operating, as well as match for federal transit grants. Only political subdivisions and private

nonprofit organizations are eligible to receive state funds. Private operators can also participate but only by contract through an eligible project sponsor. Local projects are also allowed to pool their state funds to operate regional public transit systems. By legislative action, ridership is defined as a one-way trip for one person in a motorized vehicle designed to carry eight or more persons, making it difficult for taxi operators to participate.

Transit services must be open to the public and available for all travel. Projects can target specific groups, such as the elderly and disabled, but their service must be open to all elderly and disabled in their area. Local systems can define elderly (not to be less than age 55) and disabled (meant to include both physical and mental) for their own service area. No special provisions have been made for Indian Reservations; existing or newly proposed projects on reservations will be funded using the same methods as other counties.

Projects are reimbursed quarterly. Payment is based on net costs minus fare income, Section 18 funds, and any other government transit funding. No local match is required, and the new state aid is designed to supplement and improve services rather than to reduce fares. Land purchases and acquisitions of bicycle facilities are not allowed. Any other expenditures allowed under Section 18 are permissible. Priority is given to existing transit services in the county, then to new projects.

The PTF has allowed existing services in many cases to expand services and allowed expansion to unserved areas. Section 18 funding was not replaced, but supplemented by the new funding. If the state aid were to be discontinued, the state's public transit systems would probably survive as they did before the new program was implemented; however, new services would have to be discontinued.

5.3.6 Wyoming State Funding and Allocation Scheme

Wyoming is just now beginning state aid to public transit systems. For some years the state had a large amount of Section 18 carryover funds and Section 9 transfer funds and was able to establish a series of projects which cost considerably more to operate than their $270,000 annual Section 18 allocation. State projects experienced a $1,000,000 shortfall during the spring of 1991. Rather than allow the projects to wither away, state assistance for public transit has been initiated.

The source of the state assistance is Mineral Royalties with an expected revenue of $1.3 million per year. An initial start-up allocation of $400,000 was provided, and $600,000 more has been requested. Total estimated project assistance needs are $1.3 million and are projected to be funded with $270,000 in Section 18 funds, $400,000 in state start-up funds and the $600,000 in additional state funds. Projects had requested $1.8 million; the state reduced these applications to $1.3 million.

No allocation procedures have been established and available background data explaining the state fund or allocation procedures are minimal. State officials are examining how to creatively supply state funds to Wyoming's two urbanized areas, Cheyenne and Casper, to facilitate use of Section 9 in the urban areas and transfer of Section 9 unused carryover to other areas of the state. Wyoming's anticipated allocation procedure is simple: "keep what they have going."

The state's cities and counties are in economic distress. A possible increase in the base sales tax of 3 cents to 5 cents is being considered, but recent elections have defeated other sales tax increases. Without the new state funds, public transit systems in Wyoming can not survive so therefore the state officials intend to pursue allocation of funds to existing systems.

5.3.7 Summary of State Funding Levels and Approaches

While each of the neighboring states has addressed their passenger transportation needs, in their own unique way, none first determined the minimum level of service desired and then proceeded to seek an amount of funding to establish that minimum level of service. Table 5-11 provides a summary of direct state financial assistance for neighboring states. State funding ranged from no direct state dollars in FY91 (South Dakota) to more than $32 million (Minnesota).

Table 5-11
Annual Direct State Financial Assistance for Public Transportation

Direct state financial assistance means revenues generated by a state level tax and returned to sub-state entities in the form of grants from the State.

STATE	FISCAL YR.	FY 86-87	FY 88	FY 89	FY 90	FY 91
Iowa	July to June	2,728,000	3,273,000	4,677,000	5,661,000	5,500,000
Minnesota	July to June	27,198,000	29,928,000	40,912,000	33,066,000	32,116,000
Montana	July to June	70,000	71,000	71,000	71,000	71,000
Nebraska	July to June	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
N. Dakota	July to June	0	0	0	700,000	700,000
Wyoming	July to June	0	0	0	0	400,000
S. Dakota	July to June	0	0	0	0	0
TOTAL (states)		30,996,000	34,272,000	46,660,000	40,498,000	39,787,000

(All figures shown are dollars rounded to the nearest thousand).

Each of the neighboring states seem to have approached the transit funding problem in either the Wyoming manner, "How much funding will be required to support what we have in place?" or the North Dakota manner, "What is a reasonable source of funding; how much will it generate; and how do we rationally allocate (between rural and urban) the available funds?" Table 5-12 provides a summary of sources of state assistance for public transportation. As the table denotes, at least twenty sources have been utilized in various states to fund transit. Implementation of each source of funding can be found throughout the country. What is not common is the systematic approach being taken in South Dakota: an exploration of what is needed and desired by the residents and what the costs will be to fund that minimum standard of service and then a search for a reasonable amount and source of funds.

5.4. Analysis of Alternative Funding Strategies and Allocation for South Dakota: Allocation Methodology

A desirable allocation methodology would maximize the effectiveness of funds expended and provide the funding agency with the flexibility to evaluate the service quality and efficiency. To be equitable to all agencies concerned, the methodology should allow the dispersing agency to plan disbursements throughout the fiscal year and should provide recipients with sufficient information about probable funds so they can effectively develop workable operating plans.

There are several specific allocation methodologies. The first and most straight forward is called Purchase of Service Agreements. Purchase of Service Agreements are negotiated contracts between the state and local transit operators which describe the services to be provided and set forth the payment for such services.

New Jersey perhaps has the most extensive experience with contract agreements since they have used service contracts since 1961 for rail service, and since 1969 for bus service. The total amount available for distribution is determined by legislative appropriation, based on the deficits of individual operations during the previous year. The purchase of service agreement allows the state to direct operations into areas that are in need of services and fit the overall priorities of state mobility.

Formula allocations are often based on population, service characteristics, revenue miles, and other factors in an attempt to assure equity among all of the agencies concerned. The allocation procedures often become somewhat complex, for example Iowa, as they attempt to equalize various factors through formulas. However, if formulas are not used, a raw across-the-board allocation such as the procedure for disbursing $6,100 to each North Dakota county has disadvantages.

> "An across-the-board allocation, however, does not guarantee that an equitable distribution has been attained. In general, costs per revenue mile

are larger in the larger urban areas, thus suggesting that an allocation based on revenue miles of travel should provide greater per mile subsidies to larger cities. On the other hand, the larger urban areas tend to generate greater ridership and revenues per revenue mile and therefore may require a lower overall subsidy per passenger."[5]

As complex factors are intertwined, the formula may appear to be equitable but may ignore essential variables. The inclusion of all relevant variables would result in an extremely complex formula. Often formulas are used as an excuse for avoidance of decision making and policy making.

Another common allocation method is the "first come, first served method." This has been used extensively in Minnesota, Wisconsin and many other states. In Minnesota, state transit staff are grappling with the issue of how to handle new starts with no available funding. Initially the first come, first served allocation procedure has surface appeal. For states with limited staff, the local operating groups can mobilize the available funding and develop their own technical expertise to tap into available allocations. However, as funds become completely expended, the pressures from new starts cause managers to either reduce funding to existing operations or seek additional funds.

The allocation of funds between the rural areas and the urban areas is a problem with which neighboring states, who have already funded public transportation, have had some difficulty. For South Dakota any allocation procedures which require system data for assessment is not possible, since vast areas do not have any service and considerable areas have little service. Therefore procedures involving such measures as revenue miles per capita are not helpful in the analysis. Further as noted in the summary of Chapter 4, many systems, especially social service type systems have difficulty maintaining even elementary data such as annual ridership statistics. Allocations based on raw populations are not helpful because certain population groups, such as the elderly and disabled, have greater transit trip making habits. A percentage allocation based on transit demand estimations could be selected as the most equitable for situations where areas with no transit are being compared with highly organized transit systems. However the intent of this report is to conduct objective research and no policy recommendations is made with regard to allocation schemes. (Chapter 7 presents a discussion of areas requiring policy decisions for funding and allocations.)

5.5 Possible Sources of Funds

Table 5-12 indicates types of state funding for transportation programs. General funds are the most common funding mechanism followed by transportation funds, fuel taxes, bonding, and sales tax.

Several states, notably Florida and Pennsylvania, have established specific unique sources of funds for public and special transportation. The Florida Transportation Disadvantaged Trust Fund is funded by a combination of sources including a percentage of a temporary disabled parking permit fee and an additional $2.00 fee attached to vehicle license plates. Pennsylvania, which had already established a funding mechanism to fund elderly and disabled transportation with state lottery receipts, has recently established a "Public Transportation Assistance Fund" to assist urban common carrier mass transportation. The fund will accumulate revenues from a $1.00 new tire fee, a 6 percent periodical (magazine) tax, a 3 percent motor vehicle lease tax, and a $2.00 per day fee on motor vehicle rentals. The key to these innovative taxes and fees is the selection of taxes and fees that give a relatively constant supply of funds and that, as much as possible, are not affected by fluctuations in the economy.

Table 5-12
Sources of Direct Financial Assistance for Public Transportation[a]

STATE	GENERAL FUND	TRANSP. FUND	SALES TAX	FUEL TAX	LOTTERY PROCEEDS	TNPK. REVENUES	BOND	OTHER
Arizona								(a) x
Arkansas							(b) x	
California			x	x				(c) x
Connecticut		x						
Delaware						x		
D.C.	x							
Florida		x						(d) x
Georgia	x							
Hawaii		x						(e) x
Illinois	(f) x						x	x
Indiana			(g) x					
Iowa (h)								
Kentucky	x							
Main	x							
Maryland		x						
Massachusetts	x						x	(i) x
Michigan			x	x			x	
Minnesota	x							(j) x
Mississippi	x							
Missouri	(k) x							
Montana								(l) x
Nebraska	x			x				
Nevada		x						
New York	(m) x							
North Carolina								(n) x
North Dakota								(o) x
Ohio	x							
Oklahoma	x							(p) x
Oregon	x							(q) x
Puerto Rico	x							
Pennsylvania	x				x		x	
Rhode Island	(s) x			x				
Tennessee		x						
Texas	x							
Utah	x							(p) x
Vermont		x						
Virginia								(t) x
Washington				x				(s) x
West Virginia	x							(u) x
Wisconsin		x						
Wyoming								(p) x
Ontario, Canada	x							

See note key on following page.

SOURCES OF DIRECT FINANCIAL ASSISTANCE FOR PUBLIC TRANSPORTATION NOTE KEY

a. Auto registration, air quality surcharge.

b. Arkansas Act 682.

c. Petroleum Violation Escrow Account (PVEA).

d. Variety of sources including license tag fee of $2 and fee from temporary disabled parking permit.

e. Highway special funds.

f. General funds are made up of 33 percent income taxes; 30 percent sales taxes; 23 percent public utility taxes, personal property replacement taxes, and lottery and income fund receipts; and 14 percent is made up of federal aid.

g. .76 percent of a percent of the 5 percent State's general sales/use tax is designated for the Indiana public mass Transit Fund (PMTF).

h. State transit assistance comes from a dedicated allocation of 1/20 of the State use-tax on motor vehicles and accessory equipment.

i. Highway fund.

j. Drivers license fees and motor vehicle excise tax fund.

k. 50 percent of operating loss.

l. State Special revenue.

m. Source of operating assistance funds are as follows: 5 percent gross receipts tax (3/4 percent on petroleum products); 7.3 percent long lines receipts (3/4 percent on telecommunications and transportation businesses); 35.9 percent corporate franchise surcharge tax (New York City metropolitan region only); 24 percent sales tax (1/4 percent in New York City metropolitan region only); 27.8 percent state general fund. State capital funds are from state general fund.

n. Highway fund. 50 cents per annual motor vehicle registration is dedicated to public transportation.

o. $1.00/ auto license fee.

p. Oil overcharge.

q. Payroll tax; oil overcharge; cigarette tax; State Department of Energy.

r. State's only transit authority provides limited service in some portions of the non urbanized area. There is no state match for the Section 18 program. Unique sources of funds for urbanized areas: $1/ new tire tax, 6% periodical tax, $2 tax/day for motor vehicle rentals.

s. Highway Maintenance and Operations Fund (HMOF); Mass Transit Trust Fund (MTF).

t. State Senior Citizens Service Act.

u. T.R.I.P. revenue; WV Dept. of Health; WV Commission on Aging.

5.6 Summary

This chapter presented a discussion of the efforts made by South Dakota's neighboring states in support of public transit. The allocation procedures range from simple to elaborate. State funds are derived from a variety of sources from Mineral Royalties to vehicle license fees. Each state has designed a unique process that best suits their own particular circumstances. However, the most notable allocation problem faced by all the states, is the rural/urban ratio of aid.

Chapter 3 has presented the desired system characteristics and potential market for services. Chapter 4 interpreted those factors and quantified the unmet demand using mathematical models and paired sites. This chapter concludes that the most reasonable funding allocation procedure is to allocate funds that will both support the minimum level of service desired by the residents of South Dakota and meet at least some selected percent of the unmet demand, based on informed policy. The next chapter discusses the costs of levels of service comparable to the existing representative sites and presents required funding levels.

Chapter Endnotes

1. Section 5.2 is adapted from South Dakota Department of Commerce and Regulations, Transportation Study, January 1991.

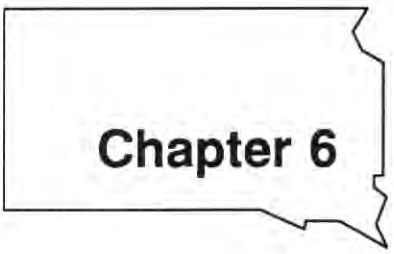
2. ibid. p. 11.

3. ibid. p. 18.

4. Transit Funding Distribution Formula Study. State of Iowa Legislative Services Bureau, Final Report, Ernst & Whinney, January, 1989.

5. Carstens, R.L., C.R. Mercier, E.J. Kannel, S.L. Ring, and D.L. Butler. Final Report, Transit Assistance Program for Iowa. Iowa Department of Transportation, Project 1166. June, 1975. p. 133.

6. Adapted from op. cit., South Dakota Department of Commerce and Regulations, p. 22. This table was developed originally by the American Association of State Highway and Transportation Officials, Washington, D.C., in 1989 Survey of State Involvement in Public Transportation.



Chapter 6

Cost Estimates for Future Public Transportation in South Dakota

6.1. Introduction

The current systems in South Dakota will not stay as they are. Some, such as Rapid City, have new expanded service plans. Others, such as Aberdeen, have pressures from various community groups for additional service. All the systems are facing some funding limitations either brought about by pressures for additional service, reductions in available funds, or flat levels of funding and the accompanying cumulative inflationary effects of the overall economy. As noted in Chapter 5, federal funding supporting rural and specialized transportation in South Dakota has increased only three percent in the period from FY88 to FY91; federal allocations to urbanized areas have increased less than one percent during that same period.

New federal funds will relieve some of the funding pressures; but even if additional funds from the new Surface Transportation Act become available, many systems could not generate significant additional match to capture the new funds. Interviewed providers consistently indicated that local matching funds are at a maximum level. Some action is required if demands for service are to be met or continued at least partially in the face of increasing costs. Either new sources of funds must be found or providers will be forced to reduce service.

Depending on one's point of view, this chapter may appear overly simplistic or unnecessarily complicated. It is neither. The methodology used in this chapter is simply a budgetary forecast procedure used to assess somewhat complicated, specific alternatives. The budgetary assessment is based on all of the findings of previous chapters. Previous chapters identified the desired service level, the cost for that service level and where the desired service level was absent. The following sections tabulate

the previous findings and aggregate the costs to determine the total expenditures required for the alternatives.

Section 6.2 assesses the impact of the Americans with Disabilities Act (ADA) on transit costs. Subsequent sections present an analysis of how much funding is needed to sustain existing services and the costs to expand services into adjacent and nonadjacent unserved areas. Finally, a summary of the estimated costs for all alternatives concludes the chapter.

6.2 The Impact of the Americans with Disabilities Act (ADA) on South Dakota Public Transportation Funding

6.2.1 Background and Major Provisions of the ADA

On July 26, 1990, new civil rights legislation was signed into law. The Americans with Disabilities Act of 1990 (ADA) mandates equal opportunity in employment, transportation, telecommunications, and places of public accommodation for individuals with disabilities. The ADA will have a significant impact on transportation services, although agencies receiving federal funds were already required to provide equivalent services and meet requirements for reasonable accommodation under Section 504 of the Rehabilitation Act of 1973.

The purpose of the Americans with Disabilities Act (ADA) is to extend to people with disabilities civil rights similar to those now available on the basis of race, color, national origin, sex, and religion through the Civil Rights Act of 1964. It prohibits discrimination on the basis of disability in private sector employment, services rendered by state and local governments, private businesses open to the public, transportation, and telecommunications relay services.

The ADA defines an "individual with a disability" as a person who has a physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or who is regarded as having such an impairment.

The major transportation provisions of the ADA are:

- All demand-response service which is provided to the general public, and privately-funded fixed-route service, must purchase only accessible vehicles unless it can be demonstrated that the service is accessible when viewed in its entirety. The exception is privately-funded fixed-route service which uses vehicles carrying fewer than 16 people (e.g., airport shuttle service.)

- Demand-response services must provide service to disabled individuals that is equivalent to that provided to other individuals on the basis of response time, fares, geographic area of service, hours and days of service, restrictions or

priorities based on trip purpose, availability of information, and constraints on capacity or service availability. (This is the provision which will cause lifts to be placed on rural demand-response vehicles.)

- Public Section 18 operators must file a certification that it provides equivalent service under the law.

- Newly purchased and leased bus vehicles used for fixed route service must be accessible. For publicly-funded systems, this requirement went into effect August 16, 1990.

- Public transit authorities providing fixed route service must provide "complementary paratransit" service to individuals who cannot use fixed route systems unless it would pose an undue financial burden. The complementary paratransit provision applies to urban transit systems, as well as to rural fixed route transit systems operating under a public agency. It does not apply to private non-profit agencies that operate fixed routes with Section 18 funding, typical of Section 18 operators in South Dakota.

- New bus facilities must be accessible. In altered facilities, the altered area must be accessible to the maximum extent feasible. In major structural alterations, a path of travel to altered areas and restrooms serving altered areas must be accessible. Existing facilities must be accessible when viewed in their entirety.

6.2.2 ADA Service Implications for Transportation Services in South Dakota

All public transportation providers operating fixed route services are required to develop complementary paratransit service to individuals who cannot use fixed route systems. In South Dakota, this requirement applies to Rapid Transit System in Rapid City and to Sioux Falls Transit. An estimated 1.48 percent of the total Sioux Falls and Rapid City population are estimated as eligible for ADA-required complementary service.[1] The 1.48 percent of the population is comprised of .07 percent of persons physically unable to board, ride, or disembark from an accessible bus, .99 percent of the population of individuals unable to use the system due to visual or mental impairments, and .42 percent of persons unable to reach boarding locations or destinations due to specific impairment-related conditions.

Both Sioux Falls and Rapid City will be required to comply with ADA regulations concerning public, fixed-route services which includes the purchase of lift-equipped vehicles when vehicles are replaced, the provision of complementary paratransit service that does not present an undue financial burden, and a variety of service requirements related to equivalent service.

When Sioux Falls purchased 15 TMC buses in 1981, they were each equipped with wheelchair lifts. However, operational problems associated with the lifts led to the discontinuance of their operation and the lifts are not usable. Consequently none of Sioux Falls Transit's vehicles are currently accessible to the disabled. Sioux Falls Transit has estimated a cost of implementation at a total of $3,119,500 for the period from 1992 to 1996. The 1997 operating costs for the Sioux Falls Paratransit system are estimated at $650,000.[2]

Most Section 18 operators will not be required to develop a Complementary Paratransit Plan unless the agency is a public agency (city or county) operating fixed route service. However, local agencies are well-advised to develop a local advisory committee for each agency to assist in reviewing operations for responsiveness to the needs of disabled persons and to make recommendations for service improvements or modifications. A good relationship with representative groups will promote goodwill in the community and avoid unnecessary challenges to agency operations.

An assumption has been made in the budget projections of later sections of this chapter that all capital replacement for Section 18 operations over the next five years will be lift-equipped. Vehicle costs for each lift-equipped vehicle were estimated at $32,000 each. This price includes lifts and wheelchair securement positions.

6.2.3 Summary of ADA Impact

Many of the employee-related requirements of the Americans with Disabilities Act for reasonable accommodation have been required of recipients of federal funds under Section 504 of the Rehabilitation act of 1973. The fiscal impact of ADA for South Dakota rural agencies is not anticipated to be significant for employee accommodations or other requirements. The principal impact for South Dakota transit services will center on the additional cost of lifts on replacement vehicles. As noted above the capital plans presented in this chapter account for the additional cost of lifts in the total estimated cost of the vehicles ($32,000 for body on chassis rural or 16(b)(2) service vehicles and $100,000 - $200,000 transit type vehicles for urban services).

6.3 Operating and Funding Alternatives

South Dakota counties can be assigned to one of three major classifications: (1) an existing transit service area, (2) an unserved area adjacent to an existing transit service area, or (3) an unserved area nonadjacent to an existing transit service area. Based on these three classifications, five major alternatives are analyzed for implementation in South Dakota: (a) Sustain Existing Service; (b) Sustain and Improve Existing Service ; (c) Sustain Existing Service and Expand into *Adjacent* Unserved or Under-served Areas; (d) Sustain and Improve Existing Service, and Expand into *Adjacent* Unserved or Under-served Areas; and (e) Sustain, Improve, and Expand into All Areas

of the State. Two additional alternatives are considered: (1) expanding into unserved adjacent areas and (2) expanding into nonadjacent areas, designated as Alternative 3 and Alternative 5, respectively, in the cost analyses. While costs are calculated independently for these two alternatives, the cost estimates cannot be used independently. These alternatives are interim calculations which do not include the cost of at least sustaining existing transit services, likely a minimum requirement of any policy decision. The following provides a list of the seven alternatives considered in the cost analysis and a description of their component elements:

Alternative 1: Sustain Existing Services
Alternative 2: Sustain and Improve Existing Services
Alternative 3: Expand into Adjacent Unserved Areas
Alternative 4: Sustain and Expand Existing Services (Alt 1+Alt3)
Alternative 5: Sustain, Improve and Expand in Adjacent Areas (Alt 2+ Alt 3)
Alternative 6: Expand into Unserved Areas
Alternative 7: Sustain, Improve, and Expand to All Areas (Alt 2+Alt 3+ Alt 6)

An analysis of the budgets of the representative systems using the provider surveys and site visits to these systems provided minimum funding standards under which a similar paired site might operate. Minimum funding levels with operating characteristics described for a Dispersed Rural county were set at $26,000 for FY93, with an annual five percent increase each year thereafter. Minimum funding levels for Small Rural systems were set at $47,000, and $58,000 for Rural systems.

Cost estimates for Urban counties were calculated independently, utilizing existing transit development plans and system surveys. Costs for Pennington County were secured from the most recently adopted plan and projected costs were subjected to a five percent consumer price index (CPI) factor. Costs for Minnehaha County were secured from survey data, a draft ADA plan, and communications with planning and management staff of Sioux Falls Transit. Projected costs also were subjected to a five percent CPI factor.

The following tables present information about various alternatives for direct provision of service expenditure and capital expenditures. Table 6-1 presents costs to sustain and improve and to expand into adjacent unserved areas. Table 6-2 presents the five-year cost estimates for these alternatives. Several important recommendations are presented as a result of the analysis presented in this table. Those counties, such as Brown, that are currently receiving more than their paired site allocation do not have their funding reduced; instead those systems are increased by the five percent CPI factor percentage. Further, under the "Sustain" alternative, those regional systems serving multiple rural counties also are increased by a five-percent CPI factor. Under the

"Sustain and Improve" alternative, each county in the regional system is recommended for funding at the paired site funding allocation level.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was passed by Congress and signed into law by the President of the United States in December, 1991. While too late for comprehensive analysis as part of this research, preliminary revenue estimates have been developed by the South Dakota Department of Transportation Office of Research. SDDOT projections indicate that additional federal funds will be available for expenditure on South Dakota transit, provided that adequate local match is available.

At the direction of the Project Advisory Committee, the estimates of federal funding available under ISTEA developed by SDDOT were assumed in the cost analysis model to offset anticipated total program costs. Of course, if the federal funds do not become available, other funding sources are necessary to implement the suggested alternatives.

6.3.1 Operating and Administrative Costs to Sustain Existing Rural Section 18 Services and Expand to Adjacent Counties in Rural Areas

The existing services and costs to sustain existing public (not specialized) services are shown in Table 6-1. The administrative and operating cost to sustain existing services is estimated to be $1,253,000 in FY93. Applying the paired site funding approach ($26,000 for dispersed rural counties, $47,000 for small rural counties, and $58,000 for rural counties) resulted in additional expenditures because it increased funding in those counties which are currently funded below the paired site amount. This increased expenditure is labeled Alternative 2, "Sustain and Improve."

Alternative 2, total estimated cost of administration and operations is $1,774,200. Table 6-2 totals and summarizes the costs to sustain, improve and expand to adjacent unserved areas. Alternative 5 is the most comprehensive alternative; the total estimated administrative and operating costs to sustain, improve and expand services to adjacent unserved areas as forecasted in Alternative 5 is approximately $2,009,000 for FY93.

Table 6-1

Costs to Sustain Existing Rural Section 18 Operators and Alternatives: Administration and Operations, 1993 ($)(a)

Existing Rural Public Operators	FY90 Total Actl Expend	FY91 Tot Actl Expend	ALT 1 FY93 Sustain Existing	ALT 2 FY93 Sustain & Improve Under Paired Site (b)	ALT 3 FY93 Expand Adjacent Unserved (c)	ALT 4 FY93 Total Expend Sustain & Expand Adjacent Areas	ALT 5 FY93 Total Expend Sustain, Improve, Expand Adjacent Areas	Notes
Aberdeen Area Senior Center	$ 87,131	$ 89,000	$ 97, 900	$ 97,900	0	$ 97,900	$ 97,900	d
Area IV Sr Citizens Plng Council	126,298	128,000	140,800	198,000	99,000	239,800	297,000	e
Bridgewater Senior Center	9,754	9,700	-	-	0	-	-	f
Grant County Senior Citizens (t)	25,466	25,000	27,500	47,000	0	27,500	47,000	g
Huron Area Senior Citizens	128,835	125,000	137,500	135,000	26,000	163,500	161,000	h
Inter-Lakes Community Action	161,524	160,000	176,000	361,000	-	176,000	361,000	i
Lennox Life Enrichment for Elderly (r)	10,583	13,900	15,290	-	-	-	-	j
LIVE Center	68,197	67,700	74,470	74,470	26,000	100,470	100,470	k
Lower Brule Sioux Tribe (t)	17,519	18,000	19,800	26,000	-	19,800	26,000	l
Mitchell (City of)	65,349	87,200	95,920	95,920	26,000	121,920	121,920	m
Rosebud Sioux Tribe	154,040	149,000	163,900	163,900	-	163,900	163,900	n
Rural Office of Community Service	194,652	216,000	237,600	502,000	58,000	295,600	560,000	o
Salem Senior Citizens	4,294	-	-	-	-	-	-	s
Sanborn County	21,354	23,400	25,740	26,000	0	25,740	26,000	p
Spink County Sr Citizens	33,194	36,900	40,590	47,000	0	40,590	47,000	q
TOTAL	1,108,200	1,148,800	1,253,010	1,774,190	235,000	1,472,720	2,009,190	

NOTES

(a) Assumes base year of operations FY90 and increases in total expenditures by 7-year average CPI of 5 percent. Revenue need projections assume a beginning funding date of FY93, continuing through FY97.

(b) Applies paired site concept to existing service areas to expand and improve services at the following amounts per county: Dispersed Rural $26,000 (established by increasing paired county (Aurora) costs of approximately $25,000 by CPI 5 percent. Small Rural $47,000 (established by increasing paired county (Brule) costs of approximately $45,000 by CPI of 5 percent. Rural $58,000 (established by increasing paired county (Brookings) costs of approximately $55,000 by CPI of 5 percent.

(c) Costs of expansion into unserved or undeserved areas were developed using paired site approach.

NOTES (continued from Table 6-1)

(d) Aberdeen- no adjacent expansion.
(e) IV- adjacent counties Walworth ($47,000), Campbell ($26,000), Potter ($26,000); no additional vehicle needed.
(f) Combined with Mitchell
(g) Grant (combined with Inter-Lakes); no additional vehicle needed.
(h) Huron- adjacent county Hand ($26,000); no additional vehicle needed.
(i) Inter-Lakes- combined with Grant County; no additional vehicle needed.
(j) Lennox Life- combined with Turner County (ROCS); no additional vehicles needed.
(k) LIVE- adjacent county Harding ($26,000)
(l) Lower Brule Sioux- Reservation; no additional vehicle needed.
(m) Mitchell- adjacent county Hanson ($26,000); no additional vehicle needed.
(n) Rosebud Sioux- no expansion beyond current Reservation and current operating areas of Todd, Tripp and Mellette Counties
(o) ROCS- adjacent county Yankton ($58,000); no additional vehicle needed.
(p) Sanborn County- no adjacent expansion; no additional vehicle needed.
(q) Spink County- no adjacent expansions; no additional vehicle needed.
(r) Turner County in ROCS
(s) Merged with Inter-Lakes Community Action
(t) 1991 Total Actual Expenditures Estimated. Survey not provided.

Table 6-2

Five-Year Total Operating and Administrative Expense Projections Five Alternatives

Operating and Administrative Expenses	FY93	FY94	FY95	FY96	FY97
Alternative 1 Sustain Existing Systems	$ 1,253,010	$ 1,315,661	$ 1,381,444	$ 1,450,516	$ 1,523,041
Alternative 2 Sustain and Improve Existing Under Paired Site Funding	1,774,190	1,862,900	1,956,044	2,053,847	2,156,539
Alternative 3 Expand into Adjacent Unserved or Undeserved Areas	235,000	246,750	259,088	272,042	285,644
Alternative 4 Sustain Existing Services; Expand into Adjacent Areas	1,472,720	1,546,356	1,623,674	1,704,857	1,790,100
Alternative 5 Sustain & Improve Existing Systems; Expand into Adjacent Areas	2,009,190	2,109,650	2,215,132	2,325,889	2,442,183

6.3.2 Operating and Administrative Costs to Expand Services to Nonadjacent Unserved Rural Areas

It is not logical to expand to nonadjacent unserved areas unless existing services are maintained and adjacent areas are served. Therefore, the costs to sustain and expand to adjacent areas (Alternatives 1-5) are the starting amounts for determining further expansion costs.

Table 6-3 shows the cost to expand to all unserved areas (Alternative 6), and assumes that all recognized American Indian Tribes receive funds to allow them to establish services. Except for Shannon County and Dewey County which would receive the paired site allocation of $47,000, each of the other Tribal groups not currently being served would receive the dispersed rural paired site allocation of $26,000. The total administration and operations cost for service expansion to nonadjacent unserved areas is $773,000 in FY93.

Table 6-3

Service Expansion to Nonadjacent Unserved Areas: Administration and Operations, FY93-FY97

	FY93	FY94	FY95	FY96	FY97
Central Pierre (a)	$214,000	$224,700	$235,935	$247,732	$260,118
Bennett County (b)	26,000	27,300	28,665	30,098	31,603
Belle/Spear/Sturgis (c)	163,000	171,150	179,708	188,693	198,128
Cus/River (d)	94,000	98,700	103,635	108,817	114,258
Pine Ridge (e)	73,000	76,650	80,483	84,507	88,732
Standing Rock (f)	26,000	27,300	28,665	30,098	31,603
Cheyenne River (g)	73,000	76,650	80,483	84,507	88,732
Crow Creek (h)	26,000	27,300	28,665	30,098	31,603
Flandreau (i)	26,000	27,300	28,665	30,098	31,603
Sisseton (j)	26,000	27,300	28,665	30,098	31,603
Yankton Sioux (k)	26,000	27,300	28,665	30,098	31,603
TOTAL	$773,000	$811,650	$852,233	$894,844	$939,586

Notes for Table 6-3 provided on the following page.

Table 6-3 NOTES
Service Expansion to Non-Adjacent Areas

System	County	Cost	Vehicle Need
(a) Central Pierre	Hughes	$ 58,000	0
	Haakon	26,000	0
	Hyde	26,000	0
	Jones	26,000	1
	Lyman	26,000	1
	Stanley	26,000	0
	Sully	26,000	1
(b) Bennett	Bennett	26,000	0
(c) Belle/Spear/Sturgis	Butte	47,000	0
	Lawrence	58,000	0
	Meade	58,000	0
(d)Cus/River	Custer	47,000	0
	Fall River	47,000	0
(e) Pine Ridge	Shannon	47,000	1
	Jackson	26,000	1
(f) Standing Rock	Corson	26,000	1
(g) Cheyenne River	Dewey	47,000	0
	Ziebach	26,000	1
(h) Crow Creek	Buffalo	26,000	1
(i) Flandreau		26,000	1
(j) Sisseton		26,000	1
(k) Yankton	Charles Mix	26,000	1
(l) Each year after FY93 increased by 5 percent CPI.			

6.3.3 Capital Needs for Rural Areas

Tables 6-4 through 6-8 presents the capital costs for non-urbanized systems, both public and specialized, for the seven alternatives. FY93 through FY95 represent higher capital costs due to the advanced age and mileage of the existing fleet, with a high percentage of vehicles eligible for replacement. The capital cost in FY93 based on estimated eligible replacement is between $1,216,000 and $1,536,000 depending on the alternative selected. This level of capital resource over a three-year period would bring the existing fleet up-to-date, and support a fleet replacement schedule of ten percent per year in subsequent years. The ten percent fleet replacement rate is based on a calculated

fleet average of 10,000 miles per year per vehicle in non-urbanized areas.[3] FY96 and FY97 have total estimated annual capital costs of $555,660 and $583,400 per year, respectively.

The capital cost data were used to help determine the total cost of rural services presented in the next section.

Table 6-4

Capital Replacement Schedule 1993: Non-Urbanized Public and Specialized Fleet

Assumptions:

Cost/Vehicle:	$32,000
%Rur Pub Vehicles to be replaced: (a)	20%
%RurSpec Vehicles to be replaced: (b)	28%
#Rur Pub Vehicles to be replaced:	15
#Spec Vehicles to be replaced:	23

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
RurPub Fleet Size (c)	76	76	76	76	76	76	76
RurSpec Fleet Size (c)	83	83	83	83	83	83	83
Expansion Fleet	0	0	2	2	2	10	10
Replacement Capital Cost ($)	1,216,000	1,216,000	1,216,000	1,216,000	1,216,000	1,216,000	1,216,000
Expansion Capital Cost ($)	0	0	64,000	64,000	64,000	320,000	320,000
Total Capital Cost ($)	1,216,000	1,216,000	1,280,000	1,280,000	1,280,000	1,536,000	1,536,000

NOTES

(a) Percentage replacement for first year derived from Section 18 replacement inventory in Chapter 4. Percentage of fleet eligible for replacement in FY93 is estimated at 36 percent. However, the Project Advisory Committee requested a three-year replacement schedule.

(b) Percentage replacement for first year derived from Section 16(b)(2) replacement inventory in Chapter 4. Percentage of fleet eligible for replacement in FY93 is estimated at 64 percent. However, the Project Advisory Committee requested a three-year replacement schedule.

(c) Public and Special Transportation in South Dakota, Statistical Report for FY90. 139 in total fleet, with estimated 64 percent of fleet in rural areas eligible for replacement in FY93. Replacement schedule for eligible vehicles was spread across three years (FY93-FY95). Ten percent annual fleet replacement after third year will maintain fleet based on average annual mileage. Average mileage per year per vehicle statewide is 10,600 based on statewide 18/16(b)(2) survey.

Additional Capital Replacement Assumptions:

Assumes all existing vehicles will participate in coordination efforts.
Assumes 5 percent inflation on vehicle cost each year.
Assumes all vehicle replacements in the five-year period will be lift-equipped to meet ADA requirements.
Assumes that after 1993, all replacement vehicles will be provided for the purpose of rural public, coordinated transportation.
Allocation of 16(b)(2) vehicles in rural areas estimated from provider surveys completed and submitted (100 of 168 vehicles).

Table 6-5

Capital Replacement Schedule 1994: Non-Urbanized Public and Specialized Fleet

Assumptions:

Cost/Vehicle:	$33,600
%Rur Pub Vehicles to be replaced: (a)	20%
%RurSpec Vehicles to be replaced: (b)	28%
#Rur Pub Vehicles to be replaced:	19
#Spec Vehicles to be replaced:	16

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
RurPub Fleet Size	99	99	101	101	101	109	109
RurSpec Fleet Size	60	60	60	60	60	60	60
Expansion Fleet	0	0	0	0	0	0	0
Replacement Capital Cost ($)	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000
Expansion Capital Cost ($)	0	0	0	0	0	0	0
Total Capital Cost ($)	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000

Table 6-6

Capital Replacement Schedule 1995: Non-Urbanized Public and Specialized Fleet

Assumptions:

Cost/Vehicle:	$35,280
%Rur Pub Vehicles to be replaced: (a)	20%
%RurSpec Vehicles to be replaced: (b)	28%
#Rur Pub Vehicles to be replaced:	23
#Spec Vehicles to be replaced:	12

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
RurPub Fleet Size	115	115	115	115	115	115	115
RurSpec Fleet Size	44	44	44	44	44	44	44
Expansion Fleet	0	0	0	0	0	0	0
Replacement Capital Cost ($)	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800
Expansion Capital Cost ($)	0	0	0	0	0	0	0
Total Capital Cost ($)	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800

Table 6-7

Capital Replacement Schedule 1996: Non-Urbanized Public and Specialized Fleet

Assumptions:

Cost/Vehicle:	$37,044
%Rur Pub Vehicles to be replaced: (a)	10%
%RurSpec Vehicles to be replaced: (b)	10%
#Rur Pub Vehicles to be replaced:	12
#Spec Vehicles to be replaced:	3

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
RurPub Fleet Size	127	127	127	127	127	127	127
RurSpec Fleet Size	32	32	32	32	32	32	32
Expansion Fleet	0	0	0	0	0	0	0
Replacement Capital Cost ($)	555,660	555,660	555,660	555,660	555,660	555,660	555,660
Expansion Capital Cost ($)	0	0	0	0	0	0	0
Total Capital Cost ($)	555,660	555,660	555,660	555,660	555,660	555,660	555,660

Table 6-8

Capital Replacement Schedule 1997: Non-Urbanized Public and Specialized Fleet

Assumptions:

Cost/Vehicle:	$38,896
%Rur Pub Vehicles to be replaced: (a)	10%
%RurSpec Vehicles to be replaced: (b)	10%
#Rur Pub Vehicles to be replaced:	13
#Spec Vehicles to be replaced:	2

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
RurPub Fleet Size	130	130	130	130	130	130	130
RurSpec Fleet Size	29	29	29	29	29	29	29
Expansion Fleet	0	0	0	0	0	0	0
Replacement Capital Cost ($)	583,443	583,443	583,443	583,443	583,443	583,443	583,443
Expansion Capital Cost ($)	0	0	0	0	0	0	0
Total Capital Cost ($)	583,443	583,443	583,443	583,443	583,443	583,443	583,443

6.3.4 Total Cost for Non-Urbanized Transit in South Dakota

Table 6-9 illustrates the total cost to administer, operate and purchase capital equipment for each of the seven alternatives for rural public and specialized transit in South Dakota. The projected total costs for the first year (FY93) range from $2,762,500 to $4,616,000. These total costs are reduced beginning in FY 1996 when a three-year replacement plan for existing vehicles is completed. Total program costs in FY 1996 range from $2,300,500 to $4,076,700; and increase to between $2,400,900 and $4,266,000 in FY 1997.

Total revenues offsetting projected costs of the rural program include 15 percent farebox recovery, the Section 18 allocation, an estimated local match of Section 18 (33 percent of total rural public expenditures in FY90), the Section 16(b)(2) local share, and three Section 3 grants with 20 percent local match contributions for FY93 through FY95. The potential effects of the new federal funding under the Intermodal Surface Transportation Efficiency Act of 1991 on additional needed revenues for non-urbanized South Dakota transit are reflected in the cost estimates, and are discussed in Section 6.3.8.

Once estimated revenues are subtracted from these costs, the balance of total other needed revenues ranges from approximately $525,500 to $1,800,200 in FY 1993, depending on the alternative selected. These total revenue needs include an allocation for state administration based on state administrative resource needs calculated as a function of population and total operating budgets (see Note d, Table 6-9). Of the total revenue needs, operating and administration needs in FY 1993 range from $0 (to sustain existing services) to $1,179,300 (to sustain and expand the program into all nonurbanized areas of South Dakota).

The first three years of capital cost estimates reflect programming for receipt of a multi-year Section 3 Discretionary Capital Grant from UMTA/FTA (3-year). In addition, even though seventy-nine vehicles were estimated as eligible for replacement in FY93, replacement of these vehicles were distributed over the period of FY 1993 to FY 1996 at the direction of the Project Advisory Committee, under the assumption that local agencies would be unable to raise sufficient local match for necessary replacements in one year. The multi-year Section 3 Discretionary Grant request would total between $1,227,200 and $1,585,700. Without receipt of these discretionary funds, other revenue sources would need to be secured.

Total anticipated capital costs in FY 1993 range from $1,216,000 to $1,536,000, depending on the alternative selected. Additional capital revenue needs, based on the above-described assumptions related to federal revenue expectations, range from $292,000 to $382,200. With the assumption of a significant increase in Section 18 funds in FY 1997, excess funds for operation, administration, and capital are anticipated under Alternative 1.

Table 6-9
Total Cost Analysis for Seven Alternatives 1993-1997; Non-Urban South Dakota ($)

FY93 NET REVENUE NEEDS FOR SOUTH DAKOTA NON-URBAN							
	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
Project Admin and Operations	1,253,000	1,774,200	235,000	1,472,700	2,009,200	773,000	2,782,200
Capital	1,216,000	1,216,000	1,280,000	1,280,000	1,280,000	1,536,000	1,536,000
State Administration (a)	293,500	295,300		294,200	296,100		298,700
# state staff:	5	5		5	5		5
TOTAL EXPENDITURE	2,762,500	3,285,500	1,515,000	3,046,900	3,585,300	2,309,000	4,616,900
15% Farebox Recovery	188,000	266,100		220,900	301,400		417,300
Section 18 Allocation	882,700	882,700		882,700	882,700		882,700
Section 18 Local Share (b)	362,900	362,900		362,900	362,900		362,900
Section 16(b)(2) Alloc (c)	209,500	209,500		209,500	209,500		209,500
Section 16(b)(2) Local Share (d)	52,400	52,400		52,400	52,400		52,400
Section 3 Capital (e)	386,800	477,100		509,100	509,100		637,100
Section 3 Local Match (f)	154,700	190,800		203,600	203,600		254,800
OTHER NEEDED REVENUES							
Oper & Admin	0	322,500		66,200	522,200		1,179,300
Capital	292,000	286,200		305,400	305,400		382,200
State Admin (g)	233,500	235,300		234,200	236,100		238,700
Total Other Needed Revenues	525,500	844,000		605,800	1,063,700		1,800,200

Table 6-9 (continued)
FY94 NET REVENUE NEEDS FOR SOUTH DAKOTA NON-URBAN

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
Project Admin and Operations	1,315,700	1,862,900	246,800	1,546,300	2,109,700	811,700	2,921,300
Capital	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000	1,176,000
State Admin (b)	293,700	295,600		294,500	296,400		299,200
# state staff:	5	5		5	5		5
TOTAL EXPENDITURE	2,785,400	3,334,500	1,422,800	3,016,800	3,582,100	1,987,700	4,396,500
15% Farebox Recovery	197,400	279,400		231,900	316,500		438,200
Section 18 Allocation	891,600	891,600		891,600	891,600		891,600
Section 18 Local Share (b)	362,900	362,900		362,900	362,900		362,900
Section 16(b)(2) Alloc (c)	205,400	205,400		205,400	205,400		205,400
Section 16(b)(2) Local Share (d)	51,400	51,400		51,400	51,400		51,400
Section 3 Capital (e)	391,500	459,600		459,600	459,600		459,600
Section 3 Local Match (f)	156,600	183,800		183,800	183,800		183,800
OTHER NEEDED REVENUES							
Oper & Admin	0	389,000		119,900	598,700		1,288,600
Capital	294,900	275,800		275,800	275,800		275,800
State Admin (g)	233,700	235,600		234,500	236,400		239,200
Total Other Needed Revenues	528,600	900,400		630,200	1,110,900		1,803,600

Table 6-9 (continued)
FY95 NET REVENUE NEEDS FOR SOUTH DAKOTA NON-URBAN

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
Project Admin and Operations	1,381,500	1,956,000	259,100	1,623,600	2,215,200	852,300	3,067,400
Capital	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800	1,234,800
State Admin (b)	293,900	295,900		294,800	296,800		299,700
# state staff:	5	5		5	5		5
TOTAL EXPENDITURE	2,910,200	3,486,700	1,493,900	3,153,200	3,746,800	2,087,100	4,601,900
15% Farebox Recovery	207,200	293,400		243,500	332,300		460,100
Section 18 Allocation	891,600	891,600		891,600	891,600		891,600
Section 18 Local Share (b)	362,900	362,900		362,900	362,900		362,900
Section 16(b)(2) Alloc (c)	205,400	205,400		205,400	205,400		205,400
Section 16(b)(2) Local Share (d)	51,400	51,400		51,400	51,400		51,400
Section 3 Capital (e)	448,900	489,000		489,000	489,000		489,000
Section 3 Local Match (f)	179,600	195,600		195,600	195,600		195,600
OTHER NEEDED REVENUES							
Oper & Admin	0	468,100		185,600	688,400		1,412,800
Capital	329,300	293,400		293,400	293,400		293,400
State Admin (g)	233,900	235,900		234,800	236,800		239,700
Total Other Needed Revenues	563,200	997,400		713,800	1,218,600		1,945,900

Table 6-9 (continued)
FY96 NET REVENUE NEEDS FOR SOUTH DAKOTA NON-URBAN

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
Project Admin and Operations	1,450,600	2,053,800	272,100	1,704,800	2,326,000	894,900	3,220,800
Capital	555,700	555,700	555,700	555,700	555,700	555,700	555,700
State Admin (b)	294,200	296,200		295,000	297,200		300,200
# state staff:	5	5		5	5		5
TOTAL EXPENDITURE	2,300,500	2,905,700	827,800	2,555,500	3,178,900	1,450,600	4,076,700
15% Farebox Recovery	217,600	308,100		255,700	348,900		483,100
Section 18 Allocation	891,600	891,600		891,600	891,600		891,600
Section 18 Local Share (b)	362,900	362,900		362,900	362,900		362,900
Section 16(b)(2) Alloc (c)	205,400	205,400		205,400	205,400		205,400
Section 16(b)(2) Local Share (d)	51,400	51,400		51,400	51,400		51,400
OTHER NEEDED REVENUES							
Oper & Admin	38,500	551,200		254,600	782,600		1,543,200
Capital	298,900	298,900		298,900	298,900		298,900
State Admin (g)	234,200	236,200		235,000	237,200		240,200
Total Other Needed Revenues	571,600	1,086,300		788,500	1,318,700		2,082,300

Table 6-9 (continued)
FY97 NET REVENUE NEEDS FOR SOUTH DAKOTA NON-URBAN

	ALTERN 1	ALTERN 2	ALTERN 3	ALTERN 4	ALTERN 5	ALTERN 6	ALTERN 7
Project Admin and Operations	1,523,100	2,156,500	285,700	1,790,000	2,442,300	939,600	3,381,800
Capital	583,400	583,400	583,400	583,400	583,400	583,400	583,400
State Admin (b)	294,400	296,600		295,300	297,600		300,800
# state staff:	5	5		5	5		5
TOTAL EXPENDITURE	2,400,900	3,036,500	869,100	2,668,700	3,323,300	1,523,000	4,266,000
15% Farebox Recovery	228,500	323,500		268,500	366,300		507,300
Section 18 Allocation	1,266,000	1,266,000		1,266,000	1,266,000		1,266,000
Section 18 Local Share (b)	362,900	362,900		362,900	362,900		362,900
Section 16(b)(2) Alloc (c)	291,600	291,600		291,600	291,600		291,600
Section 16(b)(2) Local Share (d)	72,900	72,900		72,900	72,900		72,900
OTHER NEEDED REVENUES							
Oper & Admin	0	264,100		0	507,100		1,305,600
Capital	(55,400)	218,900		171,500	218,900		218,900
State Admin (g)	234,400	236,600		235,300	237,600		240,800
Total Other Needed Revenues	179,000	719,600		406,800	963,600		1,765,300

(a) State administrative resource needs calculated as a function of state population and total operating budget per equation in Carsten, R.L., et. al., Transit Assistance Program for Iowa, June, 1975, p. 153. A complete discussion of administrative staffing issues as a policy decision in provided in Chapter 7.

(b) Based on FY90 local match levels for Section 18 in South Dakota. *Public and Special Transportation in South Dakota, Statistical Report for FY 1990*, pp 17, 22.

(c) Based on current estimated 60 percent allocation of 16(b)(2) funds to non-urban areas.

(d) Based on 80 federal share match ratio for capital purchases.

(e) At the direction of the Project Advisory Committee, a three-year capital replacement schedule was developed to bring existing fleet up-to-date. Model assumes a multi-year Section 3 grant funded from FY93 through FY95, utilizing 50/50 federal/local match (3-year).

(f) Local match for all Section 3 grants is set at 20 percent. The remaining 30 percent funding needs is reflected in "Other Needed Revenues."

(g) $60,000 of total Section 18 allocation is applied to state administrative costs, per telecommunication from SDDOT, February 3, 1992.

6.3.5 Cost Estimates for Rapid City

Table 6-10 presents cost estimates for Rapid City transit services. Total project costs for Rapid City are estimated in each of the five years FY93 through FY97. As noted in Table 6-10, total project costs (less farebox revenue) for Rapid City range from $615,000 in FY93 to $1,072,000 in FY97. If anticipated levels of Section 9 funding under the new federal legislation and local match are subtracted from the cost of operating the program, no additional needed revenues are estimated for Rapid City during the period from FY93 through FY97. In fact, a carryover of federal funds is estimated in each of the study years, with a carryover balance estimated at $473,000 in FY 1997.

The potential effects of the new federal funding under the Intermodal Surface Transportation Efficiency Act of 1991 on additional needed revenues are reflected in the Rapid City estimates of needed revenues, and discussed further in Section 6.3.8.

Table 6-10

FIVE-YEAR REVENUE NEEDS FOR RAPID CITY (Thousands $)					
	FY93	FY94	FY95	FY96	FY97
EXPENSES					
Project Admin and Operations (a)	485	509	535	562	590
Farebox Recovery (20%) (b)	97	102	107	112	118
Net Operating Expense	388	407	428	450	472
Total Capital Expenses (c)	227	200	440	500	600
TOTAL EXPENSES (less farebox)	615	607	868	950	1,072
REVENUES					
UMTA Sec 9 (Operations)	194	203	214	225	236
UMTA Sec 9 (Capital)	182	160	231	220	480
UMTA Sec 9 (Capital Carryover) (d)	0	0	121	180	0
Local Match (e)					
Operations Local Match	194	204	214	225	236
Capital Local Match	45	40	88	100	120
Total Local Match	239	244	302	325	356
TOTAL OTHER NEEDED REVENUES (f)					
Operations Other Needed Revenues	0	0	0	0	0
Capital Other Needed Revenues	0	0	0	0	0
Total Other Needed Revenues	0	0	0	0	0
Total Section 9 Allocation	455	445	445	445	811
Section 9 Buildup (Drawdown)	79	82	(121)	(180)	95
Section 9 Brought Forward	518	597	679	558	378
Section 9 Carryover Balance	597	679	558	378	473

NOTES

(a) Rapid City expenditures are for services operated directly by Rapid Transit. Estimates are from September 25, 1991 TDP, Rapid Transit survey, telephone interview with RT Transit Manager, and cost figures provided by SDDOT in correspondence dated January 29, 1992. Estimates adjusted 5 percent per year for CPI.

(b) Farebox recovery ratio of 20 percent was projected using October 3, 1991 Rapid Transit Survey, 1991 Rapid Transit TDP estimate of 30 percent farebox recovery, and telephone interview with Transit Manager, December 9, 1991.

Table 6-10 NOTES (continued)

(c) Capital projects were projected from October 3, 1991 survey materials supplied by City of Rapid City and City of Rapid City Transit Development Plan study dated September 25, 1991. Additional cost figures were provided in SDDOT letter dated January 28, 1992.

(d) Capital carryover provided in SDDOT correspondence dated January 29, 1992.

(e) 20 percent local match based on current and estimated future local match levels provided by the program.

(f) While the industry-standard terminology is "Net Deficit," the project advisory panel was quite concerned about the use of the term "deficit." The panel felt that the term "Other Needed Revenues" should be used instead of deficit to minimize the possibility that readers might conclude transit projects are presently operating at huge losses. No assumption is made here regarding the source of "Other Needed Revenues. "

6.3.6 Cost Estimates for Sioux Falls Transit and Paratransit

Table 6-11 projects the cost estimates for Sioux Falls Transit and Paratransit. A deficit for services and capital is projected in each of the five studied years. The total expenses less farebox revenue range from $2,962,000 in FY93 to $2,931,000 in FY97.

Total revenues for Sioux Falls include UMTA/FTA funding and local match for a total of $2,423,000 in FY93 to $3,378,000 projected for FY97. Included in these revenue estimates is a multi-year UMTA/FTA Section 3 Discretionary Capital Grant for each of FY93, FY94, and FY95; the projected Section 3 capital request over the three-year period total $1,013,000. The additional revenues needed to sustain Sioux Falls Transit and Paratransit are estimated at $539,000 in FY93 to $685,000 in FY96. A surplus of operations funds are projected for FY97.

The potential effects of the new federal funding under the Intermodal Surface Transportation Efficiency Act of 1991 on additional needed revenues for Sioux Falls are reflected in estimates of additional needed revenues and discussed further in Section 6.3.8.

Table 6-11

FIVE-YEAR REVENUE NEEDS FOR SIOUX FALLS (Thousands $)					
	FY93	FY94	FY95	FY96	FY97
EXPENSES					
Transit Operations					
Transit (a)	1,625	1,707	1,792	1,882	1,978
Paratransit	555	583	612	642	673
Total Operations Expenses	2,180	2,290	2,404	2,524	2,651
15% Farebox Recovery					
Transit (c)	244	256	269	282	297
Paratransit	83	87	92	96	101
Net Operating Expense	1,853	1,947	2,044	2,145	2,253
Capital					
Transit (b)	500	500	800	0	0
Paratransit	87	90	48	0	0
Total Capital Expenses	587	590	848	0	0
Total Associated Capital Expenses	386	264	264	264	489
Total Planning Expenses	136	134	134	134	189
TOTAL EXPENSES (less farebox)	2,962	2,935	3,290	2,543	2,931
REVENUES					
UMTA Sec 9/9B (Operations) (d)	745	730	730	730	1,350
UMTA Sec 9/9B (Assoc. Capital)	216	211	211	211	391
UMTA Sec 9/9B (Assoc. Capital Carryover) (e)	93	0	0	0	0
UMTA Sec 3 (Capital)	294	295	424	0	0
UMTA Sec 8 (Planning)	109	107	107	107	151
Local Match (f)					
Section 9/9B Local Match (Operation)	745	730	730	730	1,350
Section 9/9B Local Match (Assoc Cap)	77	53	53	53	98
Section 8 Local Match (Planning)	27	27	27	27	38
Section 3 Local Match (Capital)	117	118	170	0	0
Total Local Match	966	928	980	810	1,486
TOTAL REVENUES	2,423	2,271	2,452	1,858	3,378

Table 6-11 (continued) TOTAL OTHER NEEDED REVENUES IN SIOUX FALLS (g)					
Operations Needed Revenue	363	487	584	685	(447)
Capital Needed Revenue	176	177	254	0	0
Associated Capital Needed Revenue	0	0	0	0	0
Planning Needed Revenue	0	0	0	0	0
Total Other Needed Revenues	539	664	838	685	(447)

NOTES

(a) Assumes transit expenditures increase at 5% per year according to 7-year CPI average index. Data for table supplied by survey completed October 13, 1991 by Sioux Falls Planning. Additional data provided by SDDOT in letter dated January 28, 1992.

(b) Capital replacement cost figures provided by Sioux Falls Planning.

(c) Farebox recovery ratio developed from October 13, 1991 survey materials. Assumes transit farebox recovery at 15 percent of operating and administrative budget and paratransit farebox recovery at 14 percent beginning in FY93.

(d) Section 9 funds require a minimum of 50 percent match for operating expenses and 20 percent match for capital expenses. Funds must be non-federal. Allocation ratio between operations and associated capital provided by Sioux Falls Planning.

(e) Section 9 associated capital for FY93 is carried over from FY92.

(f) Assumes projected FY92 match level as provided on written survey as only committed local source of funds. Includes local match, advertising revenue, and other from survey.

(g) While the industry-standard terminology is "Net Deficit," the project advisory panel was quite concerned about the use of the term "deficit." The panel felt that the term "Other Needed Revenues" should be used instead of deficit to minimize the possibility that readers might conclude transit projects are presently operating at huge losses. Other needed revenues include any source of funds required to match capital expenses and remaining operational needs.

6.3.7 Cost Estimates for UMTA 16(b)(2) for Pennington and Minnehaha Counties.

Capital replacement costs for private not for profit transit services to the elderly and disabled in Pennington and Minnehaha counties are shown in Table 6-12. The cost to replace the vehicles using the replacement eligibility guideline of 100,000 accumulated miles per vehicle or seven years of age showed a range of costs from $512,000 in FY93 to $233,400 in FY97. After applying current levels of anticipated UMTA/FTA funding and local match to estimated capital needs, the calculated net urban specialized capital needs were estimated at approximately $101,200 in FY93, increasing to $118,000 in FY95, based on the three-year replacement schedule recommended by the Project Advisory Committee. FY93-FY95 revenue estimates include UMTA/FTA Section 3 Discretionary funds totaling $548,600. The estimated additional revenue needed to support urban specialized capital in FY96 is $51,100. Because of the projected increase in UMTA/FTA Section 16(b)(2) funds in FY97, a surplus of capital resources of approximately $10,000 is calculated.

The potential effects of the new federal funding under the Intermodal Surface Transportation Efficiency Act of 1991 on additional needed revenues for the urban Section 16(b)(2) program are reflected in revenue needs estimates and are discussed further in Section 6.3.8.

Table 6-12

FIVE-YEAR URBAN SPECIALIZED TRANSPORTATION PROGRAM PROJECTIONS ($)
(Minnehaha and Pennington Counties)

Est # of vehicles in urban fleet (a): 56
Vehicles eligible for replace FY93 (b): 64%
Annual Fleet Replacement Rate FY93-FY95: (c) 29%
Annual Fleet Replacement Rate after FY95 (d): 10%

	FY93	FY94	FY95	FY96	FY97
Estimated Cost/Veh:	$32,000	33,600	35,280	37,044	38,896
#veh:	16	16	16	6	6
URBAN SPECIALIZED CAPITAL NEEDS ($)	512,000	537,600	564,480	222,264	233,377
Section 16(b)(2) Allocation (e)	139,680	136,920	136,920	136,920	194,400
Section 16(b)(2) Local Match (f)	34,920	34,230	34,230	34,230	48,600
Section 3 (g)	168,700	183,225	196,665	0	0
Section 3 Local Match (h)	67,480	73,290	78,666	0	0
OTHER NEEDED URBAN SPECIALIZED CAPITAL	101,220	109,935	117,999	51,114	(9,623)

NOTES

(a) Capital projects were projected from survey materials using following assumptions. Urban 16(b)(2) fleet is estimated at 40% (56 veh) based on provider surveys.
(b) Replacement based on provider surveys of vehicles meeting 100,000+ miles criteria. 64 percent of the total fleet is estimated as eligible for replacement in FY93.
(c) Vehicles to be replaced spread over three year replacement schedule based on vehicles eligible for replacement in FY93.
(d) Annual replacement rate after FY95 based on 10,000 average miles/vehicle.
(e) Total Section 16(b)(2) state allocation under ISTEA ranges from $275,000 to $486,000 over study period. Allocation to urban areas is estimated at 40 percent of total based on surveys returned.
(f) Assumes current local match of 20 percent on existing Section 16(b)(2) funds.
(g) Multi-year Section 3 grant required for FY93, FY94, and FY95, matched at rate of 50 percent.
(h) Section 3 local match is set at 20 percent of total capital need. This represents a local match commitment not currently provided.

6.3.8 The Intermodal Surface Transportation Efficiency Act (ISTEA) and Its Implications for South Dakota Transit

Table 6-13 provides a calculation of the expected revenue anticipated in each program under ISTEA. The Section 18 program is estimated to increase to $882,700 in FY93, approximately twice the funds available from Section 18 in FY91. By FY97, the Section 18 program is estimated to increase to $1,266,000, a significant increase over current levels. The Section 9 program is expected to increase to $1,427,900 in FY93, a 40 percent increase from FY91. Finally, specialized transportation under the Section 16(b)(2) program is expected to increase to $349,200 in FY93, a 59 percent increase.

Table 6-13

Projected Five-Year Federal Allocations under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) for South Dakota
(rounded to nearest $100)

UMTA/FTA Program	FY93	FY94	FY95	FY96	FY97
Section 9/9B	$1,427,900	$1,399,300	$1,399,300	$1,399,300	$2,588,700
Section 18	882,700	891,600	891,600	891,600	1,266,000
Section 18(h) (a)	85,800	83,200	83,200	83,200	118,200
Section 16(b)(2)	349,200	342,300	342,300	342,300	486,000
Section 8 (b)	251,600	246,700	246,700	246,700	350,200
Section 26(a)(2) (c)	64,500	63,200	63,200	63,200	89,800
TOTAL	$3,061,700	$3,026,300	$3,026,300	$3,026,300	$4,898,900

Source: Estimates provided by the South Dakota Department of Transportation, Office of Research.
(a) Rural Transit Assistance Program. RTAP activities were not included in budget projections, nor in revenues.
(b) Funding to metropolitan planning organizations for planning and provisions of Clean Air Act and ADA.
(c) Planning and technical assistance with Department of Transportation.

Additional information and further analysis is necessary to determine (1) whether these levels of increased funding are accurate, and (2) how the increase in funds would be allocated among the programs. Estimates of additional revenues needed to support the program alternatives described in this report were based on the assumption that these anticipated increases in federal funding are accurate and that the additional funding could be applied directly to other revenue needs for South Dakota transit programs. These assumptions were developed at the direction of the Project Advisory Committee.

6.4 Summary

This chapter has estimated the total cost to provide public and specialized services in South Dakota for the period FY93 through FY97. The estimated total cost for rural public and rural specialized transportation services in South Dakota for FY93 ranges from $2,762,500 to $4,616,900 depending on the selected alternative. These total costs decline to approximately $2,400,900 to $4,266,000 in FY97 after the current fleet is brought up-to-date through a three-year replacement schedule.

When projected revenues are subtracted from the total estimates cost, additional needed revenues to support the program range from $525,500 to $1,800,200 in FY93. Some of this additional needed revenue consists of funding needed to bring the vehicle fleet up-to-date, and a replacement schedule which will do so over a three-year period has been developed. Based on projected funding levels under ISTEA and an award of a multi-year UMTA/FTA Section 3 Discretionary Capital grant, no additional revenues would be needed to sustain the current rural public and specialized transportation program in FY93. To expand the program to all parts of the state in FY93, approximately $1,179,300 in additional revenues for operating and administration funds are estimated.

Once the fleet is brought up to date, the projected additional revenues needed for administration, operations, and routine vehicle replacement ranges from $571,600 to $2,082,300 in FY96. Due to another projected increase in UMTA/FTA funds in FY97, total additional revenue needs in FY97 decline to between $179,000 and $1,765,300, depending on the alternative selected.

Additional revenue needs for Sioux Falls Transit and Paratransit ranges from $539,000 in FY93 to $685,000 in FY97. No additional revenue needs are projected for Rapid Transit. Additional urban specialized transportation capital needs estimates range from $512,000 in FY93 to $233,377 in FY97.

If the funding projected for South Dakota under the new Intermodal Surface Transportation Efficiency Act becomes a reality, significant new resources will be available to support public transit. Additional revenues are still needed, however, to support the identified alternatives. The Section 18 program is estimated to increase to $882,700 in FY93, approximately twice the funds available from Section 18 in FY91. By FY97, the Section 18 program is estimated to increase to $1,266,000, a significant increase over current levels. The Section 9 program is expected to increase to $1,427,900 in FY93, a 40 percent increase from FY91. Specialized transportation under the Section 16(b)(2) program is expected to increase to $349,200 in FY93, a 59 percent increase over current South Dakota allocations. Because information about this program is still extremely preliminary, additional analysis is required to determine program eligibility and match availability.

This chapter has analyzed seven alternatives for the non-urbanized portions of the state, the 16(b)(2) capital needs for the entire state and the capital and operating needs for the urbanized areas. The analysis, while enlightening to the studied observer, still does not answer the policy question of what *should* be done in South Dakota and how much *should* be spent.

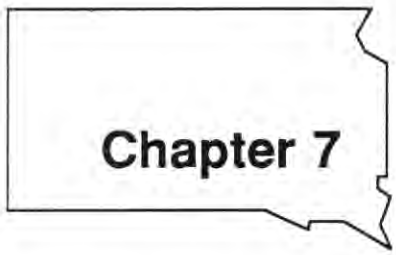
The next chapter "Policy Recommendations: Developing Transit in South Dakota" presents a framework consisting of ten interrogatories to determine that policy and sets out particular areas of concern for those charged with the responsibility to establish policy.

Chapter Endnotes

1. James F. Hickling Management Consultants. Data compiled from Canadian Health and Disability Survey and applied to the U.S. population.

2. Sioux Falls Department of Planning and Building Services and Sioux Falls Transit/Paratransit, Sioux Falls Paratransit Program Plan, Draft, November 8, 1991, p. 18.

3. Annual average vehicle mileage was calculated from fleet schedules provided by systems in the provider surveys, 1991.



Chapter 7

Policy Recommendations: Developing Transit in South Dakota

7.1 Introduction

This chapter presents areas for policy analysis and notes particular concerns to facilitate that analysis. Planning for services, coordinating the services, funding for services, and administering the funds are all broad areas for policy investigation.

Fourteen years ago, Lawrence Schulman, Director of the Office of Policy Development of the Urban Mass Transportation Administration, listed ten interrogatories for policy investigations related to transit service planning, administration, and funding:

"1) Should equity be assured between small cities and rural communities? If so, how?

2) Should priorities be established between preserving existing systems and creating new ones?

3) What criteria, if any, such as productivity or ridership, should be used to assess whether services merit initiation or continuation?

4) What minimum program development requirements are necessary to ensure long-term operating subsidies and capital matching funds?

5) What mechanisms are appropriate for involving citizens and public officials in the formulation of community transportation objectives and in the development and management of the services?

6) How should local private transportation operators and inter-city carriers be involved in program planning and the provision of service? How do we guarantee that their rights are protected under federally supported programs?

7) What actions can be taken to assure that current resources provided through federal, state or local programs are used in coordination with new funds?

8) How can we encourage local agencies to re-examine and revise legislation and regulations which impair the providing of efficient services or which require excessive insurance rates, inequitable taxes, etc.?

9) What policies and programs are necessary to train skilled personnel to plan, manage and operate small town transit?

10) What are the alternative roles for federal, state, county, and regional services in the development and implementation of these complex services?"[1]

This list is topical and its relevance to this report is clear. It is an apposite basis on which to formulate transit policy for South Dakota. This chapter reformulates the ten questions into general areas of concern and concludes by noting the contribution potential of Schulman's list to contribute to policy creation in South Dakota. The general areas of concern follow.

7.2 Program Planning

During one on-site interview, a manager observed the need for better planning and said that specific goals and objectives should be established for each project. It was repeatedly observed that most projects are obsessed with transitory issues and they rarely thought about what they were doing, why they were doing it or any implications for the future. Admittedly, this has been difficult due to various financial and other pressing problems, but planning can help prevent many future problems.

7.2.1 Detailed Financial Plans and Operating Plans

Before any project is funded, a detailed financial plan and operating plan should be made and the state should receive assurances that the project will continue over the useful life of the capital equipment.

7.2.2 Local Involvement and Board Development

Each local system is normally advised by a volunteer board of directors or some local government. However, a repeated comment from managers in the field is that the boards would benefit from training on business plans and financial issues concerning management of a transportation system.

Local involvement is helpful to identify specific needs and to generate fiscal support for operating programs. The appropriate level of local involvement in the planning process should be established and assistance in training and planning should be offered to interested local groups.

7.2.3 Technical Assistance

Positive and active measures have been taken by South Dakota Department of Transportation public transportation staff to increase efficiency and effectiveness and thereby extend available federal dollars by providing technical assistance to local projects. The following paragraphs discuss activities that have been conducted despite the fact that South Dakota ranks with Wyoming for the least number of state staff (Table 7-1).

Table 7-1
Staffing and State Funding

Number of staff within the assigned unit performing transit-related administrative functions:

State	State Functions as Grantee for UMTA Section 9	Staff (FTE)	FY 1991 State Funding (Thousands)
Iowa	No[a]	8.5	5,500,000
Minnesota	No	17.00	32,116,000
Montana	No	4.00	71,000
Nebraska	No	5.20	1,000,000
North Dakota	No	1.75	700,000
Wyoming	No	1.50	400,000
South Dakota	No	1.50	0

a) Iowa allocates Section 9 based on need, not federal formula. Systems apply to IDOT for allocation and then to UMTA.

In FY 1986 SDDOT staff set a goal for sub-grantees that local revenues would meet or exceed 15 percent of total project expenditures. In FY 1987, 15 percent was made mandatory, or reductions in Section 18 reimbursements would be made in an amount to achieve the desired 15 percent. As shown in Table 5-1, South Dakota is the only state in this region that has implemented a mandatory farebox recovery (revenue) requirement. Table 7-2 shows the percent of local revenue of Section 18 projects. (While

not subject to the same state mandate Rapid City Transit has a 17 percent (FY91) farebox recovery, Sioux Falls Transit has a 15 percent (FY91) farebox recovery and Sioux Falls Paratransit has a 14 percent (FY91) farebox recovery.)

Table 7-2
Percent of Revenue of Total Expenditures

Fiscal Year	Revenue as a Percent of Total Expenditures, All Section 18 Sub-Grantees
1986	11%
1987	18%
1988	18%
1989	17%
1990	16%

Public Transportation Staff have been engaged in a three year, and still continuing effort to urge Section 18 properties to increase their passenger fares and to try to more closely recover full operating costs under their transportation agreements with other programs or agencies. In addition in 1989 and again in 1991 SDDOT hired a management consulting firm to help improve local systems through full cost allocation and other techniques. Some systems have shown modest reductions in expenses yet the federal share of Section 18 project costs has remained at about 50 percent of the total costs (Table 7-3).

Table 7-3
Federal Share of Section 18 Project Costs

Fiscal Year	Federal Share of Total Project Costs
1986	54%
1987	50%
1988	51%
1989	50%
1990	51%

Another cost saving effort was attempted in 1985. SDDOT supported legislation, to remove the 3 percent road user tax on the purchase of new UMTA funded vehicles.

In the second legislative session, this legislation was passed and signed by the Governor, in 1988. It is estimated this saves UMTA sub-grantees about $5,000 each year.

In order to extend the useful life of mini-buses, public transportation staff worked with the SDDOT Division of Operations to utilize the vehicle rehabilitation shop, located in the Springfield Correctional Facility, to do complete body and mechanical rehabilitation of selected high mileage mini-buses (the Springfield Shop is currently operated by the Mitchell Vocational Education School District). This program adds approximately 50,000 miles or 3 year's life to mini-buses at a reasonable cost as shown in Table 7-4.

Table 7-4
Vehicle Rehabilitation

Fiscal Year	Number of Vehicles Rehabilitated	Total Costs	Average Cost/ Vehicle
1989	1	$3,759	$3,759
1990	7	$25,627	$3,661

Public Transportation Staff assiduously seek out existing UMTA funded vehicles, in South Dakota or surrounding states, which become available for transfer to other UMTA sub-grantees (the new owners pay twenty percent local share of vehicle's assessed value). A number of UMTA funded vehicles have been relocated through these efforts and this helps to meet immediate needs of some of the sub-grantees. (The acquisition process for new vehicles may run up to 1.5 years. By identifying serviceable vehicles that can be transferred time and money are saved.)

What is characteristic of all of the above activities is their tactical nature and the emphasis on meeting the immediate needs of transit projects. Strategic issues such as 3-5 year or longer plans have not been developed by SDDOT staff and none of the rural project managers themselves have developed them (the urbanized areas of South Dakota are required by UMTA to have five year plans in place and both Sioux Falls and Rapid City have done so). Long range plans have not been developed despite the fact that the current, January 1990, *South Dakota Management Plan for the Section 16(B)(2) Program* states they prepare pertinent information.

"For each transit service area, the SDDOT has prepared the following:

a. Using compiled data on elderly populations, total population and trip rate factors originally developed for the State of Iowa, the transportation needs for the mobility-limited elderly and non-elderly handicapped (sic) in South Dakota have been determined.

   Based on the number of trips, by trip purpose, and the locations of shopping areas, medical facilities, nutrition sites, social services locations, and recreation areas, the estimated number of vehicles and sizes needed to provide the transportation are determined. An estimate on the total mileage per month is also determined.

b. Compiled data on existing transportation services available in the area are used and an analysis is made as to whether or not the existing services are insufficient, inadequate or inappropriate to meet the need.

c. The SDDOT evaluates several hypothetical alternative transit operations to meet these identified needs."[2]

Definitive statements on the availability of plans are tempered somewhat in the current Section 18 State management plan yet it also states that SDDOT "assistance includes an inventory of existing public and private transportation services, the total estimated demand for transportation and the estimated number of vehicles of a given capacity to satisfy unmet demand."[3]

It is true that SDDOT has compiled some data on inventories, trip making characteristics, and the other referenced data. However, the most current sample plan supplied for analysis in this report was eight years old and was completed in 1983.[4] SDDOT has not rigorously maintained the referenced data and if the data were available, this report would in most respects be obviated.

The lack of a state capital replacement plan and the lack of systematic planning efforts resulted in an investigation into whether or not there are sufficient numbers of staff at the state level to conduct those activities. The following discussion presents a methodology for determining the number of state staff required to manage a state program.

Previous research developed a regression formula to determine the number of staff that a state would need to manage a given transportation program.[5] The variables examined were the total population, the total urban population of the state, the total metropolitan area of the state and the amount of funding. The analysis indicated that the strongest correlation is afforded by the use of a state's urban population. The following expression was subsequently developed.

$$Y = 3.7 + 1.6 X_1 + 0.057 X_2$$

Y = the number of professional level personnel in public transit division
X_1 = urban population of the state in millions
X_2 = size of financial assistance program in FY expressed in millions of dollars.

The authors of the regression formula noted that the effect of the size of the financial program is relatively insignificant unless the annual program substantially exceeds of $10 million. The coefficient of determination (R^2) is 0.57 indicating that about 50 percent of the variation and division size may be accounted for by the use of the above equation for the available data sample. This is not a particularly strong correlation but nonetheless a starting point for further analysis. For South Dakota, with a 1990 urban population of 205,000, the formula indicates a need for 4.40 FTE.

About 1.5 FTE's currently are allocated to the SDDOT transit program. Observation indicates that the staffing is probably above the 1.5 FTE because some additional administrative supervisory time is not included and the aging personnel from the III(B) program are not included. When a value for this time is included, at least another .5 FTE is included and there is a shortfall of approximately 2 FTE. The shortfall of staff means that some tasks which would be valuable to the state, such as seeking additional funds through UMTA Section 3 discretionary funds, or attacking new sources of funds for operations such as Medicaid are not able to be accomplished. Nor is a wide and thorough technical assistance program possible with the current level of staff.

With sufficient staff, SDDOT should serve as a centralized source of data and expertise for urban and rural transit. The current staff has maintained continuous and regular consultation to local transit managers, which are keys to developing a good working relationship with any local constituency. However, given the amount of administrative activities which must be accomplished simply to allocate existing funds, the amount of technical assistance and advance planning that can be done by the current staff is limited. Additional staff would be helpful, not only in immediate program administrative benefits, but primarily for long range planning and additional technical assistance.

Part of the additional technical assistance could focus on issues such as coordination and geographic boundaries of service districts. In examining the current service district scheme one manager stated during an on-site interview, that "the wagon got before the horse and nobody had the guts to do anything about it." That is, some of the county service configurations are not entirely logical. SDDOT personnel have attempted to assist local agencies in their coordination efforts and have attempted to consolidate small Section 18 systems (such as Bridgewater Senior Center consolidation with Mitchell RSVP) into larger existing operations. But as has been noted previously these efforts are somewhat tactical in nature and are not part of any systematic long-range strategic plan for services.

Therefore, the state could aggressively pursue coordination efforts through the development and maintenance of a comprehensive state transit plan and help bring a reasonable level of services to each county in the most cost effective coordinated manner possible. Initial possibilities for coordination efforts for revised service districts were developed based on site visits with twenty current providers and analysis of surveys, and are contained in Appendix G. Final service district boundaries should be recommended only after additional study. The suggested boundaries contained in this report should be used as the basis for that study.

Linkages and coordination between rural and urban areas are also needed, especially for health care. It is unrealistic to think that urban health care services will be duplicated in rural areas. Therefore, a fully coordinated transportation system operating throughout the state will enhance the health care of the state's residents, as well as make better use of available resources through coordination.

Another area in need of technical assistance is public education about available transit services. It is evident from the lack of knowledge of telephone survey respondents, that there is a lack of awareness of public transportation on the part of many residents. In addition, managers have requested assistance in marketing and making their services more available to the general public. The telephone survey conducted as part of this study could be repeated every two or three years to determine if technical assistance in this area increases the awareness of transit by South Dakota residents.

One of the more complex but potentially most beneficial areas of technical assistance would be to establish a statewide management information system focusing on maintenance and preventive maintenance. Computer programs to manage a fleet the size of South Dakota's are available. A database of the fleet could be maintained so that the state could more accurately know the ongoing capital needs of the projects and help ensure a safe and well maintained fleet.

Finally, a more systematic program of technical assistance and training of grant recipients could also be established. Grant recipients should be required to have certain basic skills in a variety of areas such as; vehicle inspection, trip counting and others. The state could prepare a comprehensive training curriculum that grant recipients could take as a self-study course with classroom follow-up instruction. A competency test could be administered to all managers and those who do not pass should be offered instruction and on site assistance until they can pass the test satisfactorily.

To adequately conduct the myriad of technical assistance, additional staff would be needed. Additional analysis should be conducted to determine the best level of staffing for the South Dakota Department of Transportation. This analysis could also verify the current administrative structural arrangements of the group currently

administering public transit, determine whether or not the group is properly named, and focus on qualitative aspects of the current technical assistance and administrative group.

7.3. Funding of Public Transportation in South Dakota

The ability of local governments and agencies to generate match for federal or state programs is problematic. Even if additional federal funds would become available, rural areas and some specialized services in urban areas would have difficulty finding match monies. In the investigations for this study, several extremely creative and ambitious matching efforts were identified. In Bennett County, an individual gathers the cemetery wreaths after Memorial Day, stores them, and recycles them by freshening them the next year. This individual generates approximately $500 per year in donations for the Bennett County Senior Citizens Program. Several areas have on-going rummage sales, such as Brown County; the RSVP in Mitchell has an extensive thrift store to generate match and local funds. Some of the efforts take an great amount of energy and physical stamina, such as the program in Beadle County in which homemade noodles were sold to generate bus match. In Woonsocket, the program director collects aluminum cans from restaurants and other establishments and recycles them for match. Managers are spending so much time raising match that project management and delivery of services are secondary.

7.3.1 Matching Funds and Farebox Considerations

Matching funds and required farebox revenues are critical policy issues which revolve around rural-urban equity questions and ability to pay. That is, should all areas of the state be treated exactly the same regardless of their unique socioeconomic characteristics? The telephone survey provided guidance by revealing that respondents felt that services should be available at a reasonable/sliding scale cost. Yet, what are those reasonable costs? Matching fund ratios and fares are also related to local discretion to set fares and raise funds. Should they be interchangeable? These policy questions will be inescapably intertwined with funding made available from any new state or other locally controlled source.

7.3.2 Transit Funding Allocation Considerations

The allocation procedure that could be most easily adopted by any new state or other locally controlled funding source is based on the procedure that has been tacitly in place in South Dakota in recent years of the Section 18 program. That is, the state staff determines how much each area can apply for from available funding, then projects apply for that amount of funds. This procedure is called allocating by contract.

The allocating by contract model is used extensively in New Jersey and Pennsylvania. For this contracting arrangement to be successful, the state must establish

service guidelines and minimum performance standards. This report outlines a minimum level of service throughout the state based on three model project descriptions for small rural areas and dispersed areas. However, while this process could be somewhat easily adopted for the rural areas, the two urbanized areas will require additional analysis to determine equitable allocations by contract. Further, successful allocation by contract requires a strong planning effort which as previously noted is not currently in place in South Dakota.

7.3.3 General Funding Levels

While this report has identified funding levels to sustain and expand services, the procedures by which any possible additional funds might be made available are entirely a policy issue and therefore outside the scope of this research. However, the existing network of services is larger and the funding needs greater than the current federal allocations will maintain and there is a quest to find additional funds. The reasons for the funding needs being greater than the available funding are not complex. First, federal funding levels for rural transit have been unchanged for the past several years; urban funding has declined while the consumer price index has increased. Second, and most importantly, there have been carryover funds from the past Section 18 allocations that were not spent and unexpended Section 9 funds transferred to the Section 18 program. Due to the unexpended carryover of Section 18 funds and transfers from unexpended Section 9 funds to the Section 18 program, annual expenditures have been above the federal regular allocation of $424,500. For example, the FY91 Section 18 project needs exceeded the regular allocation by $211,500. (FY91 Section 18 expenditures of $636,000 minus $424,500 annual federal obligation to South Dakota).

Table 6-9 presents the range of local, state, or other funds required to fund the various alternatives for rural public and specialized transit in South Dakota. After subtracting anticipated federal funds (FTA Section 16(b)(2) and 18), speculative federal funds (FTA Section 3), farebox revenues, and current local match levels for the first year (FY 93), as a result of the great capital needs, the range is $525,500 to $1,800,200.[6] Without capital assistance, no additional revenues are needed to sustain existing services in FY93. For future years, for example FY 94, the range of additional revenue needed is $528,600 to $1,803,600. In FY96, when the three-year capital replacement schedule to bring the existing fleet up-to-date, annual additional revenues range from $179,000 (to sustain existing services) to $1,765,300 (to expand services into all parts of the state).

In the urban areas of the state, additional needed revenues in FY93 for Sioux Falls totals $539,000 in FY93, increasing to $685,000 in FY97. The operating and administration additional funding needs total $363,000 in FY93 to $685,000 in FY97. No additional revenues are needed for Rapid City, assuming availability of projected levels of funding from FTA.

7.3.4 Funding For Existing Services Considerations

There is inherent value in the continuance of existing on-going projects: the match and local funding arrangements are established, the operations and management personnel are known, and the ridership patterns and farebox revenues are predictable. It is prudent to take advantage of these characteristics as long as high need areas are not being excluded from funding allocations. From a policy standpoint, the question could be asked whether any areas that have a high need (yet perhaps a low demand) are being excluded from funding.

7.3.5 Capital Assistance Considerations

Since the capital needs are so great for the first year, additional sources of funds such as UMTA Section 3 could be sought.

UMTA 16(b)(2) exclusive use vehicles in rural and urban areas could be more aggressively phased into coordinated systems to further ensure that the most benefit is being received from all capital expenditures. It is wise stewardship to ensure that all vehicles are open for as many people as possible and any rider who needs service. To fully coordinate all rural vehicles, any additional funds could be made available only to agencies that agree to serve as many people as possible through a coordinated service plan. New 16(b)(2) vehicles should only be provided in urban areas if the provider operates as part of a coordination plan supplied by the Metropolitan Planning Organization. As part of the policy investigations implied as a result of this study, the state should determine acceptable use regulations for capital assistance, sources for capital assistance and phasing of capital purchases.

7.4 Summary and Conclusion

This chapter has presented areas of concern for those charged with the responsibility to determine policy. This study has, through the analysis of paired sites and demand modeling, identified a base level of service, determined the cost of that service, and verified that the base level of service corresponds with what the general public believes should exist, as discovered through a telephone survey. The telephone survey revealed that the vast majority of the states' residents believe that a public transportation system should exist in South Dakota, one which is available to all persons at a reasonable or sliding scale cost. However, what is reasonable, what is equitable and what actually *should* be put in place are policy questions that are beyond the scope of this study. Guidance in developing requisite policy can be obtained by systematically investigating the ten fundamental policy questions presented at the beginning of this chapter. This is a daunting task, yet one that has at least to some degree been addressed by all the states contiguous to South Dakota.

Chapter Endnotes

1. Schulman, L.L., "UMTA Perspective on Small Town and Rural Transit," in Tardiff, T., Saltzman, A., Lundegard, K., eds., Proceedings of the Conference on Rural and Small City Transit Policy, Institute of Transportation Studies, University of California, Berkeley and Irvine, The Secretary, California State Business and Transportation Agency, June 1978, p. 5-6

2. South Dakota Department of Transportation, South Dakota management Plan for the Section 16(b)(2) Program, Pierre, South Dakota, January 1990, pages 8-10.

3. South Dakota Department of Transportation, South Dakota Management Plan for the Section 18 Program, Pierre, South Dakota, January 1990, pages 8-10.

4. South Dakota Department of Transportation, Local Government Assistance Programs, Transit Development Program Service Area 17, Pierre, South Dakota, October, 1983.

5. Carsten, R.L., et al, Transit Assistance Program for Iowa, Engineering Research Institute, Iowa State University, Ames,Iowa, June, 1975, P. 153.

6. Anticipated federal funds refer to those monies distributed to South Dakota by formula: FTA Section 9, Section 16(b)(2), and Section 18.

   Speculative federal funds refers to Section 3 Discretionary Capital Grant Funds under the Intermodal Surface Transportation Efficiency Act of 1991. Given the old age and high mileage of much of the fleet, it was found that an estimated 79 vehicles are eligible for replacement in FY93 in South Dakota rural and specialized programs. To replace that number of vehicles, a discretionary capital assistance grant under Section 3 of the FTA will need to be secured, or other sources must be found. The project advisory committee directed the study team to assume that the vehicles could be replaced over a three-year period with the receipt of a multi-year discretionary capital grant (UMTA/FTA Section 3). Receipt of these funds is speculative and the reader is advised that additional capital revenue needs could increase considerably if the Section 3 Discretionary Grant funds are not received.

   The cost for capital assistance is included in the alternatives because expansion to all areas of the state would require additional vehicles. Even sustaining existing services is problematic without additional capital assistance given the age of the existing fleet.

Appendix A

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*South Dakota Department of Transportation, Project Coordinator

Appendix B

Site Visits to South Dakota

Project team visited the following transportation agencies:

PROJECT NAME	TYPE	CONTACT(a)	DATE VISITED(b)
ABERDEEN AREA SENIOR CENTER, INC. 1303 7th AV. S.E. ABERDEEN, SD 57401	GP, 18, 16	DONNA SEATON, Director	10/24/91
AREA IV SR CITIZENS PLNG COUNCIL BOX 27 SISSETON, SD 57262	GP, 18, 16	CAROL SEURER, Director 605-698-7511	10/24/91 (Aberdeen)
BENNETT COUNTY SR CITIZEN CTR ASSOC PO BOX 636 MARTIN, SD 57551	SPEC, 16	DONNA NOEL, Director 605-685-6642	10/02/91
BLACK HILLS WORKSHOP AND TRAINING CETNER P.O. BOX 2104 RAPID CITY, SD 57709	SPEC, 9, 16	CONNIE KEYSER, V.P. OF FINANCE 605-343-4550	10/04/91
CANYON LAKE SENIOR CENTER 2900 CANYON LAKE DRIVE RAPID CITY, SD 57702	SPEC (VOL)	HOMER MERFELD, DIRECTOR 605-394-1798	10/04/91 (RAPID CITY)

PROJECT NAME	TYPE	CONTACT(a)	DATE VISITED(b)
CUSTER AREA SENIOR TRANSPORTATION 536 MT. RUSHMORE RD. CUSTER, SD, 57730	SPEC, 16	JANET GLENN, DIRECTOR 605-673-3687	10/03/91
EASTERN PENNINGTON COUNTY TRANSIT PO BOX 314 WALL, SD 57790	SPEC, 16	JOAN RENNER, DIRECTOR 605-279-2663	10/04/91 (RAPID CITY)
HURON AREA ATC RR 2, BOX 146 HURON, SD 57350	SPEC	PATTY WENDELGASS, MANAGER 605-352-5698	10/23/91
HURON AREA SENIOR CENTER 290 7th SW HURON, SD 57350	GP, 18, 16	SANDY MACK, MANAGER 605-352-3477	10/23/91
KEYSTONE SENIOR CITIZENS CENTER HCR 33, BOX 95 KEYSTONE, SD 57751	SPEC, (VOL)	JAMES HALLEY, CHAIRMAN 650-666-4661	10/04/91
LIVE CENTER INC. PO BOX 59 407 W. 2nd AV. LEMMON, SD 57638	GP, 18, 16	MARLYS J. SITTNER, MANAGER 605-374-3742	9/20/91

SIOUX FALLS, SD 57102		PLANNER AND DON WILSON, MANAGER 605-339-7130	
SIOUX FALLS TRANSIT 224 W. 9th STREET SIOUX FALLS, SD 57102	GP, 9	JOHN ROBERTS, SR., PLANNER AND DON WILSON, MANAGER 605-339-7130	10/25/91
PROJECT NAME	TYPE	CONTACT(a)	DATE VISITED(b)
SIOUX FALLS VOCATIONAL SERVICES, INC. 4100 S. WESTERN AVE. SIOUX FALLS, SD 57105	SPEC, 16	ANNE RIECK MOSENA, DIRECTOR, ADMINSTRATIVE SERVICES 605-336-7100	10/25/91
SPINK COUNTY SR CITIZENS COUNCIL 728 SOUTH MAIN REDFIELD, SD 57469	GP, 18	PEGGY L. MORRIS, COORDINATOR 605-472-1552	10/23/91
YANKTON AREA SR CITIZENS CENTER INC BOX 417 YANKTON, SD 57078	SPEC, 16	KATIE BALDWIN, DIRECTOR 605-665-4685	9/30/91

Key:

(a) Project Type

Spec = specialized Transit for elderly and/or disabled
Gp = General Public Service
9 = Unta Section 9 funds
18 = UMTA Section 18 funds
16 = UMTA Section 16(b)(2) funds
Vol = Service using primarily volunteer drivers
Tribal = Service focused on native American Tribe

(b) Date Visited

Cities shown in parenthesis indicated interview conducted at location away from project headquarters.

PROJECT NAME	TYPE	CONTACT(a)	DATE VISITED(b)
SIOUX FALLS VOCATIONAL SERVICES, INC. 4100 S. WESTERN AVE. SIOUX FALLS, SD 57105	SPEC, 16	ANNE RIECK MOSENA, DIRECTOR, ADMINSTRATIVE SERVICES 605-336-7100	10/25/91
SPINK COUNTY SR CITIZENS COUNCIL 728 SOUTH MAIN REDFIELD, SD 57469	GP, 18	PEGGY L. MORRIS, COORDINATOR 605-472-1552	10/23/91
YANKTON AREA SR CITIZENS CENTER INC BOX 417 YANKTON, SD 57078	SPEC, 16	KATIE BALDWIN, DIRECTOR 605-665-4685	9/30/91

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(b) Date Visited

Cities shown in parenthesis indicated interview conducted at location away form project headquarters.

Appendix C

Public Transportation Service and Needs on South Dakota Indian Reservations

Data Collection Methodology

Transportation service and need data for South Dakota Indian Reservations were collected utilizing several methods: (1) review of available literature on transit demand for Native American Tribes (2) a mail-out survey to existing transportation programs, (3) a site visit to one tribal service, and (4) follow-up telephone interviews with the tribes in South Dakota.

A significant problem in conducting transportation studies on Indian Reservations is the inconsistency of data, both demographic and transit operations. The U.S. Census, the Bureau of Indian Affairs, and the tribes themselves all collect and maintain data for the area; but rarely do these figures agree. Further, the data that was verified was generally based on the impressions of those individuals interviewed. Most of the tribes contacted did not have basic statistical data prepared and available to the public.

Follow-up telephone interviews were conducted with six of the nine tribes. Telephone interviews were not conducted for the Lower Brule, Standing Rock, or Rosebud Reservations. The estimate for the percentage of households with no car available was based on interviews from the six reservations that were able to provide the information.

Socioeconomic and Demographic Information

The extremes of demographic factors on South Dakota seem to be underrepresented in official U.S. Census data. The numbers of elderly tend to be higher than reported, household size appears to be understated while household income appears to be overstated, and household automobile ownership is much lower than reported. Tribal representatives generally indicated that zero-car households represent approximately 40-60 percent of total households on the Reservation.

There are nine reservations in South Dakota representing a total population of 53,656. The following is a summary of findings concerning each Reservation:

Cheyenne River Indian Reservation, the Cheyenne Reservation is located in north-central South Dakota and overlaps Dewey and Zieback counties. The Cheyenne Reservation Enrollment Tribal Office was interviewed by telephone to verify the statistics provided by the Bureau of Indian Affairs and the U.S. Bureau of the Census. According

to the Enrollment office, the total population for 1990 of the U.S. Census is considered accurate. However, according to the enrollment office there are 632 individuals who are 65 years of age or older, compared with a Census count of only 224. Additionally, the total number of families was estimated by the Tribal Office to be 1,793 and the number of elderly households was estimated to be 201. According to the Census, the total number of families was estimated at 1,040 and the number of elderly households is 70; again a significant under-count.

Crow Creek Indian Reservation. The Crow Creek Reservation is located in central South Dakota, adjacent to the Lower Brule Indian Reservation and overlapping Buffalo, Hughes, and Hyde counties. An interview with the director of the Tribal Health Department indicated that a recent report had been completed for the Crow Creek Tribal Health Department, identifying a discrepancy between the report and Census data in the total population figures for the reservation. Population ranges from 1,740 (according to the U.S. Census) to 3,200 according to the report. Of the 3,200 individuals identified, 500 were identified as being either non-members of the Tribe or Non-Indians, but are identified as living on the Reservation or in the adjacent area. A population figure of 1,756 was used and supplied from a 1990 report from the Census. The discrepancy of the population figure for the Crow Creek Reservation is likely due to the additionally individuals living on or in the vicinity of the reservation who are not members of the tribe.

A discrepancy in reports of the number of households or family units was also cited between the report and the Census figures. The number of housing units exceeds the number of households by 178 units. A need of an additional 200 units was also identified in the Health Department report. However the report does acknowledge the problem of counting multiple families living in the same housing unit and may therefore be the cause for the undercount of "Total Number of Families" as well as other family-related variables.

The per capita income for the Reservation is estimated to be between $3,000 and $4,000. According to the Tribal Health Department the national per capita income for Indian Reservations is approximately $12,000.

Flandreau Indian Reservation. The Flandreau Reservation has no land base, but is officed in eastern South Dakota in Moody County. The Flandreau Reservation has the lowest population of the nine reservations in South Dakota. According to the Tribal Enrollment office the total population figure of 279 was estimated to be low.

The Flandreau Reservation is estimated to account for such a low proportion of households with no car available. This phenomenon is in direct contrast to other larger reservations where the percentage of households with limited transportation has been estimated to be as much as 50 percent or more.

Lower Brule Indian Reservation. The Lower Brule Indian Reservation is located in central South Dakota and overlaps Lyman and Stanley counties. A follow-up telephone survey was not obtained for this Reservation. According to the U.S. Census, Lower Brule has a total population of 1,123, of which 36 are elderly. The Census counts indicate that there are 194 families living on the reservation. It is likely that the Lower Brule Indian Reservation experiences similar problems of under-counting both individuals and families as do the larger Indian Reservations in South Dakota.

Pine Ridge Indian Reservation. The Pine Ridge Indian Reservation is located in southwestern South Dakota and overlaps Jackson and Shannon Counties. Pine Ridge has the largest population of reservations in South Dakota, with a population of 12,189. According the Community Health Representative's Office (CHR), all variables provided by the U.S. Census are reasonably accurate.

The CHR office indicated that 40 percent or more of the households have no car available. Additionally the CHR indicated that accurately counting individual families when as many as 3 to 4 share the same housing unit, accounts for some undercounting that may have been done by the Census. The median income for households on the Reservation is estimated to be approximately $3,000.

Rosebud Indian Reservation. The Rosebud Reservation is located in south-central South Dakota on the Nebraska Border and overlaps Todd County. Rosebud has the third largest population of reservations in the state with 9,606. Rosebud also has the second largest elderly population of 354. The total number of families living on the Rosebud Reservation is 1,585.

Sisseton Indian Reservation. Sisseton Indian Reservation is located on the North Dakota and South Dakota border, on the northeastern quadrant of the state. The total population of 10,496. According to the Tribal Planning Office the total population is approximately 9,894, which is an undercount of approximately 602 individuals. The Tribal Planning office also indicated that approximately 50 percent of the households have no car available to them for transportation.

Standing Rock Indian Reservation. The Standing Rock Indian Reservation is located in north-central South Dakota on the North Dakota border and included Corson County. According to the U.S. Census data the total population has decreased from 4,800 in 1980 to 4,195 in 1990. All other reservations experienced increases in the total population. The Census also indicates that there are 105 elderly individuals and 868 families on the reservation.

Yankton Indian Reservation. Yankton Reservation is located in southeastern South Dakota overlapping Charles Mix County. The Tribal Enrollment Office, indicated that the reservation population is approximately 2,900. According to the U.S. Census the

total population is 6,269; an over-count of almost two-thirds. According to the Enrollment Office about 30 percent of the households do not own a vehicle available; primarily the elderly and young married couples.

The Tribal Housing Authority provided updated household data for the Yankton Reservation. About 80 percent of all individuals who qualify for assisted housing apply for housing assistance. Three hundred and forty two (342) applicants have applied for assistance. The Census reports that in 1990 there were 578 low income families; again a significant over-count.

Summary of Transportation Service and Needs on South Dakota Indian Reservations.

During follow-up telephone interviews, the Tribal representative was asked about the existence of any transportation plans. Representatives also were asked to provide a description of the current transportation services as well as the type of service available to residents of the reservation.

For the most part only limited public transportation service is available on South Dakota Indian Reservations. Service is generally provided through specific elderly and health and nutrition programs. While in some cases general public riders are allowed, respondents believe it is not convenient for the public to use the service because of the long trips.

General transportation is further complicated by the high rate of households without a vehicle available for getting to jobs and grocery stores. According to one tribal representative , the elderly and the young married individuals suffer the most from lack of transportation.

Cheyenne River Indian Reservation. According to the Enrollment office, no transportation plan exists. There is no public transportation service set up with the exception of the Elderly Nutrition Program. The Program does provide limited transportation service to the elderly for nutritional needs.

Flandreau Indian Reservation. A taxi service was attempted, but failed. The cost of the service could not be offset by the use and participation by the community. A meals on wheels program does exist for both the City of Flandreau as well as the Reservation. However, the two programs are not coordinated. Senior Citizens generally remain on the Reservation and use the available services provided by the health and nutrition programs.

A charter service is in place for transporting school children. There is also service for the Head Start program and special events. Some attempts at coordination of services have been made. However, there is no coordination of everyday transportation services. Coordination of services occasionally centers on special event transportation.

Pine Ridge Indian Reservation. The Community Health Representatives' (CHR) Office provides transportation service to the on-site health clinic and the outlying clinics and hospitals. The service was originally intended for home visits.

According to the CHR it is cost prohibitive for tribal members to do daily shopping off the reservation. Therefore, they make a trip to the central tribal area offices for daily needs and services. There is a grocery store, but it is not well stocked according to the CHR. Additionally, it can cost up to $50 dollars to arrange a ride into town for necessities such as fresh fruit and vegetables.

Rosebud Indian Reservation. The Rosebud Tribe indicated several barriers to transportation in the Transportation Study Survey Form for Transit Provider Agencies in South Dakota. They indicated that additional funds are needed to purchase vehicles. The Tribe indicated that a needs assessment should also be conducted to properly address the unmet need, which also requires additional funding. Difficult barriers exist in providing service. The Tribe experiences accountability, paperwork and billing problems due to the long wait for payment.

There are problems with clients who do not show up at the pick-up points and attempt to ride when intoxicated. Clients experience problems due to geographical location. Clients on the Pine Ridge Indian Reservation need transportation, but are too far for the Rosebud agency to have it provided. Finally, many of the vehicles have over 100,000 miles and need to be replaced.

Sisseton Indian Reservation. No public transportation exists for the Reservation population. It is up to the individual to make arrangements for transportation for heath and job-related purposes.

Yankton Indian Reservation. There is no "commercial service" available on the Reservation, according to a tribal representative. The CHR does carry individuals for health-related services, but no formal transportation services is in existence. Individual must make their own arrangements.

Summary of Transportation Issues on South Dakota Indian Reservations

While transportation issues on South Dakota Indian Reservations are similar in type to the general population of the state, they are more severe due to specific geographic and socio-economic factors.

- There generally is a lack of sufficient individual resources to provide for personal transportation (low income and extremely low household automobile ownership).

- Distances to necessary services generally are very long over poor roads.

- Generally, public transportation services are non-existent on the Indian Reservations. Most service is provided by the Community Health Representative for obtaining health care or for nutrition services.

Appendix D

Demand Estimation Methodology

Two procedures were used to estimate total transit demand, and one procedure was used to estimate transit demand by the elderly and handicapped population. The procedures are:

Total Transit Demand

Method 1: Peterson & Smith Trip Generation Rate Model

$$D = \sum_{i=1}^{n} d_i \, (POP_i)$$

Where
- D = Total annual demand for transit trips
- d = annual trips per person in ith "target group"
- POP_i = population in the ith "target group"
- n = number of "target groups"

Two target groups were found to generate approximately 80 percent of the total transit demand based on observed experience with transit operations -- the elderly (age 65 and over) and the non-elderly, low-income population. The following equation was developed from this information.

$$D = [12 \, (POP_{elderly}) + 19 \, (POP_{non\text{-}elderly\ low\ income})]/.80$$

Source: "Estimating Demand for Rural Transportation," Ernest J. Peterson and Robert L. Smith, Jr., Proceedings of the First National Conference on Rural Public Transportation, U.S. Department of Transportation Office of University Research and Technology Sharing Program, October, 1976, DOT-TST-77-11, p 94; and as described in Rural and Small Urban Transit Manager's Workbook, Volume I. U.S. Department of Transportation, Federal Highway Administration, March, 1981, pp II-A-11-12.

Method 2: Department of Transportation Regression Model for Zonal Demand

Weekly Demand for all trip purposes

WKDMND = 0.0493 POP + 0.0658 MINORITIES + 0.578 ELDERS + 0.115 OCARF + 0.434 POORFM

(R = .94)

Variables:

WKDMND =	Weekly zonal demand for all trips (one-way)
POP =	Total zone population
MINORITIES =	Zone population for minorities
ELDERS =	Zone population of persons 65+
0CARF =	Zone population of zero-car families
POORFM =	Zone population of poverty level families

ANNUAL DEMAND = WKDMND X 52

Source: Hoel, L.A., M.J. Demetsky, D. Morris, B.T. Hargroves, J.R. Stone, B.H. Cottrell & A. Goldberg. "Transit Service and Organizational Alternatives for Low Density Suburban Rural Areas." University of Virginia, Charlottesville. Prepared for USDOT, Urban mass Transportation Adminstration, Washington, D.C., February, 1979. pp 26-37.

METHOD 3: Elderly and Handicapped Transit Factors

Elderly and Handicapped Mode Split by Mobility Type

Total E&H Population =	ELDERS + [(TOTAL POP - ELDERS) x .01 HANDICAPPED POPULATION + .01 NON-ELDERLY POPULATION]
Limited Mobility TH trips/year =	E&H POP x .25 limited mobility TH x 5.2 trips/week x 52 weeks/year x .35 transit mode
E&H Demand =	Limited Mobility TH trips + Homebound TH trips.

Source: "Description of the Transportation Handicapped Population," Peat, Marwick, Mitchell & Co., 1975, and "Trip Generation for Nursing Homes," Institute of Transportation Engineers, 1974.

Appendix E

A Summary of Survey of South Dakota Citizens' Public Transportation Need

INTRODUCTION

This report presents the procedures and findings of a statewide telephone survey of 403 randomly selected respondents in the state of South Dakota. The purposes of the telephone survey were to determine: the respondents needs for public transportation, the respondents' knowledge of transportation, the respondents' history of use of public transportation, the respondents' opinions of actual and ideal public transportation in South Dakota, and some of the respondents' attitudes toward public transportation.

The survey was conducted from September 27 to October 1, 1991. The calls were made from the Computer Assisted Telephone Interviewing (CATI) Laboratory at Eastern Montana College in Billings, Montana.

The remainder of this report is divided into four sections: Methodology, Findings, Summary, and Conclusions.

METHODOLOGY

The questions were initially constructed by Joe Floyd and Peter Schauer. The draft questionnaire was reviewed by Lowell Richards, Don Wilson, Sandy Mack and Donna Noel at a meeting in Bismark, North Dakota on September 17, 1991. This review resulted in a number of changes to the original questionnaire.

The sample for this survey was a random digit dialing sample of 2500 number that was purchased from Survey Sampling, Incorporated of Fairfield, Connecticut. To complete 403 interviews, telephone calls were made to 1447 telephone numbers. Numbers which were busy or which were unaswered were recalled up to five times in an attempt to complete the interview. When the study was completed, a total of 258 numbers (17.8%) remained in the recall queue because there was no answer, 33 (2.3%) remained in the queue because an answering machine had answered, and 20 numbers (1.4%) remained in the recall queue because they were busy. In addition, call backs were schedule with 31 potential respondents (2.1%). Two hundred fifty three (17.5%) of the numbers called were disconnected and another 72 (5.0%) were determined to be non residential. It was impossible to complete interviews with 34 (2.3%) of the respondents because they were not able to effectively communicate with the interviewer or there was not qualified respondent available. Three hundred forty four (23.7%) of the potential respondents contacted refused to be interviewed. The 403 completed calls accounted for 27.8% of the total sample to which calls were made and the response rate was 53.9% which seems a bit low but acceptable for this type of survey. Table One summarizes the final disposition of the 1447 telephone numbers which were called.

TABLE ONE

FINAL DISPOSITION FOR ALL TELEPHONE NUMBERS CALLED

No Answer	258	17.8%
Busy	20	1.4%
Answering Machine	33	2.3%
Disconnected	253	17.5%
Non Residential	72	5.0%
Not Completable	34	2.3%
Refused	344	23.7%
Completed	403	27.8%

The data from the completed surveys was electronically transferred to a VAX 8650 computer at Eastern Montana College. The computer program SPSS (Statistical Package for the Social Sciences) was used to analyze the data.

FINDINGS

Two types of findings are reported in the findings section: univariate and bivariate. Frequency distributions are provided for the responses to all questions. When further analysis was warranted, four types of bivariate statistical tests (chi-square, t-test, analysis of variance, and Pearsons r) were carried out. For the most part these tests were to determine if different types of people, as determined demographically, had different attitudes or different behaviors. Unless otherwise noted, relationships between variables are not reported unless the likelihood of a similar outcome occurring by chance is less than five times in one hundred (.05 significance level).

The Findings section is further divided into four sections: Who Are The Respondents, Transportation Needs of the Respondents, Respondents' Knowledge of and Use of Public Transportation, and Respondents' Opinions and Evaluation of Public Transportation.

Who are the Respondents

Table Two summarizes the sex and ages of the respondents. As Table Two shows, 47% of the respondents were male and 53% were female. The respondents ranged in age from 14 to 93. About 28% of the respondents were 30 or less while slightly more than 21% were over 60. The mean age of the respondents was 44.1.

TABLE TWO

RESPONDENTS' SEX AND AGE

Sex

Male	182	46.9%
Female	206	53.1%

Age

14-18	17	4.4%
19-22	22	5.7%
23-30	68	17.6%
31-40	81	20.9%
41-50	63	16.3%
51-60	53	13.7%
61-70	51	13.2%
71 and Older	32	8.3%

Mean Age = 44.1

Table Three summarizes information about the Socioeconomic status of the respondents. Table Three shows that 7.3% of the respondents had not completed high school while 44.8% were high school graduates, 23.3% had attended some college, 18.8% were college graduates and 5.7 had pursued post graduate studies. The mean education level for the respondents was 13.3 completed years of education.

TABLE THREE

RESPONDENTS' SOCIOECONOMIC STATUS

Educational Level

Less than 12th Grade	28	7.3%
High School Grad.	171	44.8%
Some College	89	23.3%
College Graduate	72	18.8%
Post Graduate Studies	22	5.7%

Mean Educational Level = 13.3

Occupation

Professional	30	7.8%
Managerial	23	6.0%
Technical Service	72	18.7%
Other Service	33	8.5%
Sales	20	5.2%
Skilled Labor	39	10.1%
Unskilled Labor	14	3.6%
Small Business (Rancher)	30	7.8%
Housewife	41	10.6%
Student	32	8.3%
Retired	43	11.1%
Disabled	5	1.3%
Unemployed	4	1.0%

Total Household Income in 1990

Less than $10,000	50	14.1%
$10,001 to $20,000	79	22.3%
$20,001 to $30,000	86	24.3%
$30,001 to $40,000	55	15.5%
$40,001 to $50,000	47	13.8%
$50,001 to $75,000	24	6.8%
$75,001 to $100,000	9	2.5%
Over $100,000	4	1.1%

About 19% of the respondents indicated there occupation as technical service which included such professions as engineers, teachers and nurses. Eleven percent of the respondents were retired and 10.6% indicated they were housewives. About 10% were skilled laborers while 8.5% indicated a non technical service occupation such as police officer, firefighter, cook or clerical. Eight and three tenths percent of the respondents were students. Nearly 8% indicated their occupation was professional while another 8% indicated they were small business owners and small business owners included farmers. Six percent of the respondents were employed in sales managerial positions, 5.2% indicated they were in sales, and 3.6% were employed in unskilled labor jobs.

About 36% of the respondents reported a gross household income of $20,000 or less in 1990, while about one quarter reported household incomes from $20,000 to $30,000 and slightly over 10% reported a household income in excess of $50,000 in 1990.

Table Four summarizes information about the location of the respondents' residences. First Table Four shows the county the respondent lived in. Completed interviews were obtained with respondents from 58 of the 66 counties in South Dakota. No respondents were interviewed from Buffalo, Campbell, Dewey, Jerauld, McPherson, Marshall, Stanley, or Todd counties. The percentage of respondents from each county compare favorably with the percentage of total state households from each county. Pennington County was somewhat over represented as 15.2% of the respondents were from Pennington County while only 11.7% of the total households in the state are in Pennington County.

Table Four shows that 53% of the respondents lived within 1 mile of a full service grocery store while 80% lived within 5 miles of a full service grocery store, and that the average distance from a respondents home to a grocery store was 4.1 miles. About one third of the respondents lived within 1 mile of a hospital while 61% lived within 5 miles of a hospital. The average distance from a respondent's house to the nearest hospital was 9.4 miles. About 44% of the respondents lived within 1 mile of the nearest doctor while 70% of the respondents lived within 5 miles of the nearest doctor. The average distance from a respondent's house to the nearest doctor was 6.7 miles

TABLE FOUR

RESPONDENTS' LOCATION

County of Residence

Aurora	2	.5%
Beadle	7	2.3%
Bennett	5	1.3%
Bon Homme	1	.3%
Brookings	18	4.6%

Brown	13	3.3%
Brule	1	.3%
Butte	5	1.3%
Charles Mix	11	1.8%
Clark	2	.5%
Clay	4	1.0%
Codington	13	3.3%
Corson	2	.5%
Custer	4	1.0%
Davison	12	3.1%
Day	2	.5%
Deuel	1	.3%
Douglas	2	.5%
Edmunds	1	.3%
Fall River	2	.5%
Faulk	2	.5%
Grant	3	.8%
Gregory	7	1.8%
Haakon	1	.3%
Hamlin	2	.5%
Hand	8	2.1%
Hanson	1	.3%
Harding	2	.5%
Hughes	9	2.3%
Hutchinson	2	.5%
Hyde	1	.3%
Jackson	2	.5%
Jones	1	.3%
Kingsbury	4	1.0%
Lake	4	1.0%
Lawrence	12	3.1%
Lincoln	9	2.3%
Lyman	1	.3%
McCook	3	.8%
Meade	20	5.1%
Mellette	1	.3%
Miner	3	.8%
Minnehaha	66	17.0%
Moody	2	.5%
Pennington	59	15.2%
Perkins	4	1.0%
Potter	1	.3%
Roberts	8	2.1%
Sanborn	2	.5%
Shannon	1	1.8%
Spink	7	1.8%
Sully	1	.3%
Tripp	2	.5%
Turner	6	1.5%
Union	8	2.1%
Walworth	3	.8%
Yankton	11	2.8%
Ziebach	1	.3%

Distance From Residence to Grocery Store

1 Mile or Less	206	53.1%
2-5 Miles	101	26.0%
6-10 Miles	43	11.9%
Over 10 Miles	38	9.8%

Mean Distance to Grocery Store = 4.1 Miles

Distance From Residence to Hospital

1 Mile or Less	130	33.5%
2-5 Miles	105	27.1%
6-10 Miles	45	11.6%
11-20 Miles	56	14.4%
Over 20 Miles	52	13.4%

Mean Distance to Hospital = 9.4 Miles

Distance From Residence to Doctor

1 Mile or Less	169	43.6%
2-5 Miles	101	26.3%
6-10 Miles	45	11.6%
11-20 Miles	41	10.6%
Over 20 Miles	32	8.2%

Mean Distance to Doctor = 6.7 Miles

Transportation Needs of the Respondents

The respondents were asked a series of questions about their needs for transportation. First they were questions about how they would get to a destination they had to get to if they could not drive and if no friends were available to take them. Table Five summarizes the answers to these questions.

TABLE FIVE

HOW WOULD YOU GET TO A NECESSARY DESTINATION

Within Ten Miles of Residence

Private Ground Trans.	122	30.9%
Walk or Bike	84	21.3%
Don't Know	66	16.7%
Public Ground Trans.	61	15.4%
Emergency Services	17	4.3%
Hitchhike	8	2.0%
Other	20	5.1%

25 to 50 Miles of Residence

Private Ground Trans.	117	30.0%
Don't Know	113	29.0%
Public Ground Trans.	79	20.3%
Emergency Services	5	1.3%
Walk or Bike	24	6.2%
Hitchhike	10	2.6%
Other	36	9.2%

100 to 150 Miles of Residence

Public Ground Trans.	138	34.5%
Private Ground Trans.	81	20.3%
Don't Know	67	16.8%
Private Air Trans.	51	12.7%
Emergency Services	1	.2%
Hitchhike	7	1.8%
Bike	5	1.3%
Other	33	8.2%

When the destination was within 10 miles of their residence, 31% of the respondents said they would take private ground transportation, 21% said they would walk or ride a bike, 17% said they did not know, 15% said they would use public ground transportation and 4.3% said they would attempt to use some sort of emergency transportation.

When the destination was between 25 and 50 miles from home, 30% indicated they would use private ground transportation, 29% said they didn't know how they would get there, 20% said they would use public ground transportation, and 6.2 % said they would walk or bike. When the destination was between 100 and 150 miles, 34.5% said they would use public ground transportation, 20.3% said they would use private ground transportation, 16.8% said they did not know, and 12.7% said they would use private air transportation.

Next respondents were presented with a series of situations or opportunities and asked if the lack of transportation had ever resulted in the loss of opportunities or in adverse resolutions of the situations. Table Six shows that few respondents had lost any of the listed opportunities or had any adverse resolutions to situations because of a lack of transportation. Eighteen respondents reported having skipped at least one meal, 13 respondents reported having turned down a job, 13 respondents reported losing an educational opportunity, 10 reported not being able to vote, 10 reported having a medical crisis, 6 mentioned being in a dangerous situation without transportation to get out of it, 7 reported having lost a job, and 2 reported having gone without shelter.

The second part of Table Six shows how many of these consequences each respondent indicated had happened to them at least once. As this part of the table shows, 88% of the respondents indicated none of the consequences had ever occurred to them while 6.5% indicated that at least one of the consequences had occurred, 4.0% indicated two had occurred, and 1.4% indicated that 3 or more of these consequences had occurred to them at least once.

Further analysis was undertaken to determine what types of respondents had experienced these consequences or missed opportunities. The number of consequences mentioned was not related to sex, distance from residence to grocery store, or distance from residence to doctors office. The number of consequences was determined to be positively correlated with distance to hospital and inversely correlated with age and education. This means that the more consequences a respondent indicated had happened to them, the further they were from a hospital, the younger

they were, and the lower was their educational level. In addition number of consequences reported was found to be related to income level. The highest mean number of consequences mentioned was found to be from respondents whose 1990 household income was less than $10,000.

TABLE SIX

CONSEQUENCES OF A LACK OF TRANSPORTATION

Type of Consequence

	Never	Once	More Than Once
Skipped Meals	385	10	8
Turned Down a Job	388	7	6
Lost Educational Opportunity	389	12	1
Not Able to Vote	391	8	2
Medical Crisis	393	6	4
Personal Safety	395	3	3
Lost Job	396	3	4
Gone Without Shelter	401	1	1

Number of Different Consequences Mentioned

0	355	88.1%
1	26	6.5%
2	16	4.0%
3	4	1.0%
4	1	.2%
5	1	.2%

Respondents' Knowledge of and Use of Public Transportation

The respondents were asked questions about their knowledge and use of public transportation. First they were asked how many public transportation systems they could name in South Dakota. As Table Seven shows, nearly half the respondents did not know of any systems, about a third knew of one system, slightly more than a tenth knew about two systems, and about 8% knew about three or more systems. Respondents from the following counties seemed to be over represented in knowing none of the systems: Brookings, Charles Mix, Clay, Codington, Gregory, Hutchinson, Kingsbury, Meade, Roberts, and Walworth. On the other hand respondents from Beadle,Bennett, Butte, Lawrence, Miner, Minnehaha and Spink Counties were under represented among respondents not knowing any of the systems.

TABLE SEVEN

NUMBER OF SOUTH DAKOTA PUBLIC TRANSPORTATION SYSTEMS KNOWN

0	169	47.3%
1	118	33.1%
2	41	11.5%
3	15	4.2%
4	6	1.7%
5 or More	8	2.2%

The respondents were asked if they had ever ridden on public transportation systems and those that indicated they had were asked if they were currently public transportation users. As Table Eight shows, about two thirds of the respondents indicated they had never ridden on public transportation while 28% had used public transportation in the past but no longer used it and 5.7% of the respondents reported they were currently users.

Ridership was not related to sex, educational level, income, distance from residence to grocery store, hospital or doctor. However ridership was related to age and occupation. The average age of those who had never ridden was 42.5, of those who had quit riding, 47.3, and of those who were riders the average age was 46.5. Respondents indicating their occupations were in sales, non technical services, unskilled labor, and students were the most likely to say they had never ridden and small business owners, and skilled laborers were the most likely to say they had quit riding.

TABLE EIGHT

PUBLIC TRANSPORTATION RIDERSHIP

Respondents Ridership

Have Never Ridden	265	65.8%
Quit Riding	115	28.5%
Current Rider	23	5.7%

Household Members Ridership Patterns

Additional Households Ever	32	12.1%
Additional Households Current	6	5.2%

Table Eight also shows that 12.1% of the respondents who reported they had never ridden on public transportation said that a member of their household had. In addition, 6 respondents who did not currently use public transportation indicated that a member of their household did. Therefore, 176 (43.6%) households contained members that did or had used public transportation.

Current users of public transportation lived in the following counties: Brookings (1), Brown (3), Clay (1), Douglas (1), Hand (1), Hughes (1), Lake (1), Lawrence (1), Minnehaha (8), Pennington (1), Roberts (1), and Spink (2). The counties with more than one rider are over represented with riders. While 3.3% of all respondents are from Brown County, 13.6% of the riders are from Brown County; while 17% of all respondents are from Minnehaha County, 36.4% of the riders are from Minnehaha County; and while 1.8% of the respondents are from Spink County, 9.1% of the riders are from Spink County. More than one respondent from the following counties indicated they had quit using public transportation: Brookings (6), Brown (3), Custer (2), Davison (5), Day (2), Hughes (5), Kingsbury (2), Lake (2), Lawrence (4), Meade (3), Minnehaha (24), Pennington (19), Roberts (3), Spink (2), and Yankton (2)

Those who were users of public transportation were asked some questions about the patterns and reasons for their ridership. Table Nine summarizes these ridership patterns.

Of the respondents who currently use public transportation, slightly more than half indicate they only use such transportation several times per year. Nearly one third of the riders, however, indicate they use public transportation two or three times per week.

The most common purpose for the use of public transportation is for social or recreational reasons followed by medical or dental, doing errands, going shopping, commuting to work, and

getting to nutritional program sites.

TABLE NINE

PATTERNS OF RIDERSHIP FOR CURRENT RIDERS

Frequency of Use

5 or More per Week	1	5.3%
2-3 per Week	6	31.6%
Several per Month	2	10.5%
Several per Year	10	52.6%

Purposes of Use

	Never	Occasionally	Frequently
Social or Recreational	12	8	3
Medical/Dental	15	5	2
Go to School	15	5	2
Doing Errands	17	3	3
Shopping	16	4	2
Commute to Work	16	3	2
Nutritional Program Sites	17	3	1

Reasons for Use

	Not a Reason	Minor Reason	Major Reason
Weather	6	13	4
Convenience	8	8	7
Relieve Auto Congestion	8	9	6
Ecological Reasons	10	6	7
Convenient Schedule	10	8	5
Buses Cheaper	10	9	4
Like to Ride	11	8	4
Reading or Work	12	9	2
Enjoy Talking on Bus	13	8	2
Don't Drive or Have Car	13	3	5
Physical Disability	16	2	5

Would You Ride More With Changes

Yes	10	43.5%
No	13	56.5%

What Changes

Better Availability	8	80.0%
Lower Cost	2	20.0%

Respondents report the most common reason for riding the bus is weather, followed by convenience and relieving auto congestion, then expense, convenient schedule, and ecological reasons, then liking to ride, then because they can read or work on the bus, then don't drive or

have access to a car, and finally, having a physical disability.

Ten of the respondents who were riders said they would ride more with changes to public transportation. Eight of these indicated they would ride more with better availability while 2 said they would ride more if the cost were less.

Respondents who stopped using public transportation were asked why they had stopped. As Table Ten shows about two thirds indicated they no longer had a need to use public transportation while 18% indicated it was no longer available, 3.7 said it became too expensive and 3.6% said they didn't know why they had quit. Those who indicated they had quit riding because public transportation was no longer available were from the following counties: Codington, Davison, Deuel, Faulk, Hughes, Lake, Lyman, Mellette, Minnehaha, Pennington, Roberts, and Tripp.

Reason for no longer riding was also found to be related to the distance from the respondents residence to the grocery store. Those who indicated they no longer rode because transportation was no longer available lived an average of 9.53 miles from a grocery store while the average distance to the store for the 88 respondents answering this question was 3.98 miles. Similarly, respondents who indicated they stopped riding because public transportation was no longer available lived an average of 22.53 miles from the nearest hospital while the average distance from residence to hospital for individuals answering this question was 9.42 miles. The same relationship existed for distance to the nearest doctor: 15.73 miles for those saying they stopped riding because public transportation was not available as compared to an average of 6.93 for respondents indicating they had quit riding.

TABLE TEN

REASONS FOR NOT USING PUBLIC TRANSPORTATIONS AND CHANGES THAT MIGHT RESULT IN USE FOR NON RIDERS

For Respondents Who Quit Riding

Reason For No Longer Riding

No Longer Need to	76	67.8%
No Longer Available	20	17.9%
Became Expensive	4	3.6%
Don't Know	4	3.6%
Other	7	6.5%

Could Changes Get You to Ride Again

Yes	36	32.4%
No	75	67.5%

What Changes

Better Availability	21	63.7%
Lower Cost	5	15.2%
Don't Know	3	9.1%
Other	4	12.1%

For Respondents Who Never Rode

Reasons for Not Riding

No Need	168	63.4%
None Available	66	24.9%
Location Inconvenient	12	4.5%
Time Inconvenient	10	3.8%
Other	9	3.4%

Could Changes Get You To Ride

Yes	83	32.2%
No	175	67.8%

What Changes

Make It Available	31	42.5%
Expanded Service	29	39.7%
Publicize Schedule	5	6.8%
Lower Cost	5	6.8%
Other	3	4.2%

About one third of the respondents who had stopped using public transportation said that changes in public transportation might result in them using it again. Of those indicating what change would be helpful, 64% said better availability and 15.2% said lower cost. There was no relationship between whether sex, age, educational level, occupation nor income and whether the respondent said they might ride again with changes.

The respondents who had never used public transportation were asked why they had never used it. These answers are also summarized in Table Ten. Sixty three percent of these respondents said they had no need for public transportation and about one quarter said that public transportation was not available to them. The respondents who said that public transportation was not available to them were from the following counties: Aurora, Beadle, Bennett, Brown, Butte, Charles Mix, Clay, Codington, Custer, Gregory, Hand, Harding, Hughes, Htchinson, Jackson, Jones, Lawrence, Lincoln, Meade, Miner, Minnehaha, Pennington, Perkins, Roberts, Spink, Tripp, Turner, Union, Walworth, Yankton and Ziebach.

Reason for never using transportation was found to be related to the distance the respondent lived from the hospital. Respondents who indicated they do not use public transportation because none is available lived an average of 15.28 miles from a hospital while the average number of miles from home to hospital for respondents not using public transportation was 9.95 miles. A similar relationship was found with distance to the doctor. Respondents indicating they did not ride because public transportation was not available lived an average of 11.93 miles form the nearest doctor while the average for respondents not using public transportation was 6.95.

About one third of the respondents who had never used public transportation indicated that changes in public transportation might result in their use of public transportation. Of the respondents indicating what changes would be of benefit, 42.5% said making public transportation available and 39.7% said expanding public transportation service. There was no relationship between sex, age, educational level, nor income and whether the respondent said they would or would not ride again with changes. However, occupation was related to this answer. Respondents who indicated their occupation was service, or who were retired, or who

were students were the most likely to say they would use public transportation if changes were made.

Respondents who indicated they would ride if public transportation was made available lived an average of 11.22 miles from the doctor while all other respondents lived an average of 6.3 miles from the doctor. However, no similar relationship was found between whether they indicated they would ride if transportation was made available and distance to the grocery store or hospital. The average age of those who said they would ride if transportation was made available was 38.6 as compared to an average age of 44.6 for the remaining respondents. While this relationship was not significant at the .05 level, the probability of this difference in means occurring by chance is .07. The occupations of technical services and sales were over represented among respondents saying they would begin riding if public transportation was made available.

Respondents' Opinions and Evaluation of Public Transportation

A major goal of this research project was to come up with a standard for public transportation in South Dakota. A standard was seen as a compromise between an ideal system and practical issues such as funding and logistics. The stand was constructed of five dimensions: for whom, where, cost, and when in terms of both days of the week and hours of the day. Table Eleven summarizes the answers on the five dimensions of this standard. As Table Eleven shows, 72% of the respondents believed service should be available to all people while 22% believed public transportation should only be available to people with specific needs. When the respondents were classified as urban (Minnehaha and Pennington Counties) or rural (all other counties), it was determined that rural and urban respondents answered this question differently. While 82.9% of urban respondents felt public transportation should be available to all people, only 67% of rural respondents felt the same way. Twenty five percent of rural respondents believed public transportation should only be available for people with special needs while only 14.6% of urban people espoused a similar belief.

About half the respondents believed service should be available from any point in the state to any other point in the state, 23% said service should be available everywhere but only for local trips, 17% believed service need only be available in cities, and 8.7% of the respondents said they did not know where service should be available.

About 2% of the respondents believed service should be free, 21% said there should be no cost for people who had special needs, 32% indicated they believed there should be a reasonable fee, about 33% said there should be a sliding scale, 9.3% indicated the fee should pay for the total cost of the service and 2.3% of the respondents said they did not know what the service should cost.

A relationship was found to exist between a respondents attitude toward cost of service and whether the respondent lived in an urban or rural area. Urban residents were more likely to believe the service should be available for a reasonable fee while rural respondents were more likely to believe that a sliding scale should be used or that the fee should pay for the total cost of the system.

TABLE ELEVEN

PREFERENCES FOR PUBLIC TRANSPORTATION SYSTEM CHARACTERISTICS

To Whom Available

All People	279	72.1%
People with Needs	84	21.7%
For No one	3	.8%
Don't Know	21	5.4%

Where Available

Everywhere-Point to Point	194	51.2%
In Cities Only	65	17.2%
Everywhere, but local	87	23.0%
Don't Know	33	8.7%

Cost of Service

No Cost	9	2.3%
No Cost to Needy	81	20.9%
Reasonable Fee	123	31.7%
Sliding Scale	128	33.0%
Pay Total Cost	36	9.3%
Don't Know	11	2.8%

Source of Other Funding

Lottery	143	43.6%
Don't Know	54	16.5%
Gas Tax	43	13.1%
Sales Tax	19	5.8%
Income Tax	18	5.5%
Advertising	15	4.6%
License Fee	11	3.4%
Other Tax	9	2.7%
Other	16	4.9%

Days of Service

7 Days per Week	217	57.7%
6 Days per Week	41	10.9%
5 Days per Week	57	15.2%
4 or Less Days/Week	35	9.3%
Don't Know	26	6.9%

Hours of Service

24 Hours per Day	107	27.9%
15-18 Hours per Day	124	32.3%
8-10 Hours per Day	129	33.6%
Don't Know	24	6.3%

The respondents who provided an answer implying funds beyond user fees were necessary were asked where the additional funds should come from. Forty four percent of these respondents believed the lottery should provide the additional funds while 16.5% said they did not know, 13.1% said a gas tax, 5.8% indicated from a sales tax, 5.5% favored the income tax, 4.6% said the money should come from advertising, and 3.4% said from a license fee.

About 58% of the respondents believed that service should be available 7 days per week, 15% felt service should be available 5 days per week, 11% believed service should be available 6 days per week, 9% said 4 or less days per week and about 7% indicated they did not know how many days per week service should be available.

A relationship was found between attitudes toward the number of days the service should be available and whether the respondent lived in an urban or rural county. Urban respondents were more likely than rural residents to believe service should be available 6 or 7 days per week while rural residents were more likely than urban residents to believe that service should be available 5 days per week or 4 or less days per week.

One third of the respondents believed 8 to 10 hours of service per day was sufficient and slightly fewer (32.3%) of the respondents indicated they would prefer 15-18 hours per day of service. About 28% of the respondents believed service should be available 24 hours per day and 6.3% indicated that they did not know how many hours per day of service they preferred.

Preference for hours of service was also found to be related to whether the respondent was urban or rural. Urban respondents were more likely than rural respondents to want service available for 15 to 18 hours per day while rural respondents were more likely than urban respondents to want service available for only 8 to 10 hours per day or to say they did not know what their preference was for hours of service.

The standard preferred by the majority of respondents, then is a system of public transportation from any point in the state to any other point in the state, available to all people with either a sliding scale or a reasonable fee for either 8 to 10 hours per day or 15 to 18 hours per day seven days per week.

The respondents were asked to evaluate public transportation in South Dakota. First they were asked to give public transportation a rating of poor, fair, good, very good, or excellent. Table Twelve presents the results of this as well as other evaluative questions. As Table Twelve shows, about one fifth of the respondents rated public transportation as poor, another fifth rated it as fair, one fifth rated public transportation as good, 5% provided a good rating and 1.2% said excellent. On a 1 to 5 scale where 1 is poor, 2 is fair, 3 is good, 4 is very good, and 5 is excellent, this produces a mean score of 2.25.

Next the respondents were asked if they believed public transportation in South Dakota was inadequate and needed improvement, adequate or more than adequate so that cuts were necessary to save money. Forty one percent of the respondents believed that public transportation was inadequate and needed improvement while 11.1% believed it was adequate, 1.3% believed that cuts in public transportation were necessary in order to save money, and nearly 47% indicated they did not know how adequate public transportation was in South Dakota.

The respondents who indicated that the public transportation was inadequate and in need of improvement were asked what improvements were necessary. About 30% said better availability of service was needed, 23.3% said expanded service was needed, 14.4% indicated more buses were needed, 11.4% said more rural buses were needed, and 9.6% said a bus system was needed.

Respondents suggesting improvements were asked how the improvements should be funded. The most common answer was from the lottery (36.8%) followed by user fees (20.4%), then taxes (15.8%).

TABLE TWELVE

RESPONDENTS' EVALUATION OF PUBLIC TRANSPORTATION IN SOUTH DAKOTA

Overall Evaluation

Poor	82	20.3%
Fair	90	22.3%
Good	101	25.1%
Very Good	20	5.0%
Excellent	5	1.2%
Don't Know	103	25.6%

Mean Evaluation = 2.25

State of South Dakota Public Transportation

Inadequate	155	41.0%
Adequate	42	11.1%
Cuts Necessary	5	1.3%
Don't Know	176	46.6%

Improvements Needed

Better Availability	42	28.8%
Expanded Service	34	23.3%
More Buses	21	14.4%
More Rural Buses	17	11.6%
Need a Bus System	14	9.6%
Don't Know	6	4.1%
Lower Cost	4	2.7%
More for Elderly	3	2.0%
More City Buses	2	1.4%
Better Publicity	2	1.4%
Clean up Buses	1	.7%

Source of Funding for Improvements

Lottery	56	36.8%
User Fees	31	20.4%
Taxes	24	15.8%
From Other Services	3	2.0%
Other	16	10.5%
Don't know	22	14.5%

Best Thing About Public Transportation in South Dakota

Don't Know	132	37.6%
Good for Disadvantaged	59	16.8%
Availability	35	10.0%
Cost	32	9.1%
Nothing	23	6.5%
Convenience	23	6.5%
Good Service	21	6.0%
Environmental Reasons	10	2.8%
Don't Have It	7	2.0%
That Its There	7	2.0%
Safer	1	.3%
Helps Economy	1	.3%

Worst Thing About Public Transportation in South Dakota

Don't Have Any	124	36.2%
Don't Know	95	27.8%
Inconvenient	52	15.2%
High Cost	22	6.4%
Nothing	20	5.8%
Too Limited	18	5.3%
Fear for Safety	6	1.7%
Crowded	5	1.5%

The respondents were also asked what they believed were the best and worst thing about public transportation in South Dakota. Nearly 38% of the respondents said they did not know the best thing about public transportation in South Dakota. About 17% said the best thing was that it was good for the disadvantaged, 10% mentioned availability, 9.1% said cost, 6.5% said nothing, 6.5% said convenience, and 6% said good service. The most common mentioned worse thing was that there wasn't any public transportation (36.2%) followed by don't know (27.8%), then inconvenient (15.2%), high cost (6.4%), nothing (5.8%), and too limited (5.3%). Respondents who said the worst thing about public transportation was that there wasn't any public transportation were from the following counties: Pennington (18), Minnehaha (6), Meade (5), Lawrence (3), Brookings (3), Codington (2), Lake (2), Gregory (2) and one respondent from Walworth, Lincoln, Hand, Brown, Hughes, Kingsbury, Union, Turner, Perkins, Hutchinson, Fall River, Aurora, and Beadle.

The respondents were also asked to what extent they agreed or disagreed with several attitudinal statements. They were asked to use a response scale of strongly disagree, disagree, neutral, agree, and strongly agree. Table Thirteen presents the results of these attitudinal statements and the order in Table Thirteen is provided by the mean score assigned to the item on the scale above where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree, and 5 was strongly agree.

The statement agreed with by most of the respondents was that all people have the right to get to where they have to go and if they do not have the means to get there, transportation should be provided for them. Over 85% of the respondents either agreed or strongly agreed with this statement. The next most commonly agreed with statement was that public transportation saves energy and close behind was the statement that public transportation reduces traffic congestion. About 83% of the respondents agreed with both of these statements.

About 73% of the respondents agreed or strongly agreed that the use of public

transportation reduces pollution. About 54% believed that people have the right to get to where they want to go and if they do not have the means to get there, transportation should be provided for them. About 48% of the respondents either agreed or strongly agreed that public transportation was only for the disadvantaged. Respondents who were current riders were the most likely to strongly disagree or disagree that transportation was only for the disadvantaged. Those who had quit riding were the next most likely to disagree with that statement. Those who had never ridden were the most likely to agree that public transportation was only for the disadvantaged.

TABLE THIRTEEN

ATTITUDES TOWARD PUBLIC TRANSPORTATION

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
Right/Have to Go	1.8%	5.4%	7.0%	70.3%	15.5%	3.92
Saves Energy	1.6%	8.5%	6.2%	68.6%	15.1%	3.87
Reduces Traffic Congest.	1.0%	9.8%	6.2%	68.1%	14.8%	3.86
Reduces Pollution	1.8%	17.3%	7.8%	60.2%	12.9%	3.65
Right/Where Want	4.7%	23.6%	17.4%	44.7%	9.5%	3.31
Only For Disadvantaged	9.2%	36.0%	7.1%	40.4%	7.3%	3.01

SUMMARY

A telephone survey was completed with a random sample of 403 South Dakota residents 14 years of age or older. The following points summarize the results of this survey.

•The "typical" or "average" respondent was a 44 year old woman with 13.3 years of education. The most common occupation for respondents was technical service and one quarter of the respondents reported a yearly household income in 1990 of between $20,000 and $30,000.

•Nearly a third of the respondents were from Minnehaha or Pennington County but respondents were drawn from 58 of the 66 counties in South Dakota.

•The "typical" or average" respondent also lived 4.1 miles from a full service grocery store, 6.7 miles from the nearest doctor, and 9.4 miles from the nearest hospital.

•Most respondents indicated they would either take private ground transportation or walk or bike if they had to get to a destination within ten miles of their home a they had no access to a car or someone to take them. When the distance to the necessary destination increased to 25 to 50 miles, the most commons means of transportation mentioned was private ground transportation followed by don't know and then public ground transportation. When the distance was increased to 100 to 150 miles, the most common answer was public ground transportation, followed by private ground transportation and then don't know and private air transportation.

•The vast majority of respondents did not report many lost opportunities and serious or dangerous situations resulting from a lack of available transportation. About 4% reported having skipped at least one meal because of a lack of transportation while 3% said they had turned down a job or lost an educational opportunity and 2.5% said they had not voted. Eighty eight percent reported that none of the opportunities listed had been lost while 6.5% indicated

one lost opportunity or negative consequence due to problems of transportation and 4.0% reported two types of lost opportunities or negative consequences. People reporting these events lived further from hospitals than those not reporting events, were younger than those not reporting these events, were less educated than persons not reporting these events, and were poorer economically than respondents not reporting these events.

•Nearly half the respondents did not know the names of any of the 82 systems of public or special transportation in the state of South Dakota and an additional one third only knew the name of one system.

•Nearly two thirds of the respondents reported they had never ridden on public transportation while 28.5% said they had ridden but had quit, and only 23 (5.7%) respondents reported being current users of public transportation. Additionally, 12.1% of the respondents who reported they had never ridden indicated a member of their household had ridden and therefore 43.6% of of the 403 households included a member who had or did use public transportation. Six respondents who who did not themselves currently use public transportation reported that a member of their household did. Therefore, 7.2% of the 403 households contacted included a member who was a current user of public transportation. Ridership was found to be related to age and occupation. The average age of those who had never ridden was 42.5, for those who had quit riding it was 47.3, and the average age of riders was 46.5. Respondents who were in sales, non technical services, unskilled labor, and students were the most likely to say they had never ridden while skilled laborers were the most likely to say they had quit riding.

•The most common frequency of use reported by respondents who use public transportation was only two or three times per year. The most common purpose for a public transportation trip was social or recreational followed by medical or dental appointments and then going to school. The most commonly mentioned reason for using public transportation was weather followed by convenience, relieving auto congestion, ecological reasons, and convenient schedule. About 43% of the respondents who used public transportation said they would use it more if there was better availability or lower cost.

•The most common reason for having quit using public transportation was that the respondent no longer had a need to use it and the second most common reason was that public transportation was no longer available. About a third of the respondents who had quit using public transportation reported that they might use it again if changes were made, and once again the two most common changes were better availability and lower cost. The reason respondents gave for no longer riding was found to be related to some other variables. Respondents who reported they no longer rode because public transportation was no longer available lived further from a grocery store than other respondents, lived further from a hospital than other respondents, and lived further from the doctor than other respondents.

•The most common reason given for never having used public transportation was not having a need to followed by none being available. About one third of the respondents who had never used public transportation said they might if changes were made and the two most common changes mentioned were to make public transportation available and to expand service. Reason for never using public transportation was found to be related to some other variables. Respondents who reported they had never used public transportation because it was no longer available lived further from a hospital than other respondents and lived further from the doctor than other respondents. Respondents employed in service professions, who were retired, or who were students were the most likely to say they would ride again if changes were made. Respondents

who indicated they would use public transportation if it were made available lived further from the nearest doctor than other respondents, were younger than other respondents, and respondents who were employed in technical services and sales were more likely than other respondents to indicate they would begin riding public transportation if it were made available.

•The general preference of respondents for a standard for public transportation in South Dakota was: it should be available to everyone; it should be available from any place in the state to any other place; it should be available at a reasonable cost or on a sliding scale depending on the resources of the user; it should operate between 8 and 18 hours per day seven days per week. Urban respondents were more likely than rural respondents to believe public transportation should be available to all people, to believe service should be available for a reasonable fee, to believe service should be available 6 or 7 days per week, and to believe service should be available 15 to 18 hours per day.

•Most respondents favored the lottery for providing funding in addition to user fees for public transportation.

•Respondents provided a rather dismal evaluation of public transportation in South Dakota. On a scale of one to five where 1 was poor, 2 was fair, 3 was good, 4 was very good, and 5 was excellent, the average score given to public transportation was 2.25. When asked if public transportation was inadequate, adequate or too adequate and cuts were necessary, the most common answer given by 47% of the respondents was that they did not know followed by inadequate (41%).

•The most common improvement mentioned by respondents who thought public transportation was inadequate and needed improvement was better availability followed by expanded services and more buses. Once again, respondents favored the lottery to provide the funding for improvements.

•When asked what was the best thing about public transportation in South Dakota, the most common answer was don't know followed by good for the disadvantaged. When asked what the worst thing was, over one third of the respondents said that there wasn't any in South Dakota, and 28% said they did not know.

•Over 85% of the respondents agreed that there are certain things a person has to do in order to survive, and if a person does not have the means to get to the appropriate places, then transportation should be provided for them. About three quarters of the respondents believed that public transportation saves energy and about the same number believe it reduces traffic congestion. Slightly fewer respondents believed that public transportation reduces pollutions. Aver 50% of the respondents believed that a person has the right to get to where they want to go and if they do not have the means to get there, transportation should be provided for them. Nearly 50% believed that public transportation was only for the disadvantaged. Respondents who were current riders were the most likely to strongly disagree or disagree that public transportation was only for the disadvantaged, those who quit riding were the next most likely to disagree with the statement and those who had never ridden were the most likely to agree that public transportation was only for the disadvantaged.

CONCLUSIONS

Three general conclusions can be drawn form this study. First respondents did not seem to know a lot about public transportation in South Dakota. When asked if public transportation in South Dakota was inadequate and improvements were necessary, or if it was adequate or if it was more than adequate and cuts were necessary to save money, the most common answer was don't know (46.6%). When asked to evaluate public transportation on a 1 to 5 scale where 1 is poor, 2 is fair, 3 is good, 4 is very good, and 5 was excellent the most common answer was also don't know (25.6%). When asked what was the worst thing about public transportation in South Dakota over one third of the respondents said the worst thing was that it did not exist. And 47% of the respondents did not know the name of any public transportation system in the state.

The second conclusion that can be drawn is that respondents who did have knowledge of public transportation in South Dakota did not evaluate public transportation very highly. Forty one percent of the respondents felt public transportation in South Dakota was inadequate and in need of improvement as compared to 11.1% who felt it was adequate and 1.3% who felt it was more than adequate and that cuts were necessary. On the one to 5 scale mentioned above, public transportation received a mean score of 2.25 much closer to fair than to good.

The third conclusion that can be drawn from this study is that respondents set a high standard for the type of public transportation system they would like to see in South Dakota. Nearly three quarters of the respondents believe public transportation should be available to all people in South Dakota. Over half of the respondents believed public transportation should be essentially available from any point in the state to any other point and another 23% said public transportation should be available everywhere in the state but only for local trips.

About two thirds of the respondents believed public transportation should be available for a reasonable fee or on a sliding scale basis and another 21% believe it should be free to the disadvantaged. Fifty seven percent of the respondents believed there should be seven day per week service, another 11% said service should be available six days per week and 15.2% said service should be available 5 days per week. About one third of the respondents believe service should be available 8 to 10 hours per day, another one third believe it should be available 15 to 18 hours per day and 28% believe service should be available 24 hours per day.

About 85% of the respondents agreed or strongly agreed that people have to get to certain destinations and if they do not have the means to get to those destinations, transportation should be provided. Eighty four percent of the respondents either agreed or strongly agree that public transportation saves energy and 83% either agreed or strongly agreed that public transportation reduces traffic congestion. Sixty three percent of the respondents believe public transportation reduces pollution. Finally, about 54% of the respondents believe that all people have a right to get to where they want to go and if they dod not have the means to get there, transportation should be provided for them.

Appendix F

South Dakota Transit Services Inventory 1991

Introduction to Transit Services in South Dakota

Public transportation services are provided to the citizens of South Dakota through a variety of agencies in the state. The transportation services of primary interest in this study include those operated by public and private non-profit agencies serving the general public and special populations. The services operate in both urbanized areas of the state, as well as non-urbanized cities, counties, and regions of the state. Funding for these agencies include a mix of both federal and local funds, as well as fares, donations, and fee-for-service contracts.

Survey Design and Data Collection

The written survey was design was adapted form undated materials supplied by the state of Alabama in early september of 1991 and was presented to the project advisory committee meeting in Bismarck, South Dakota on September 17, 1991. Survey were mailed to 86 agencies on September 24, 1991 with post paid pre addressed return envelopes for response. The return deadline for completed surveys was October 18, 1991.

A total of 41 agencies responded and returned the written surveys. A data base file was then generated to tally the responses. For the most part respondents were able to fill out sections of the survey completely with the exception of providing maps of current services and gaps in services. However, the urban services did not supply trip purposes because this data is not generally collected.

The following sections of this report discuss the results of the written survey agency response. Percentage are based on the total number of agencies that responded to the question being discussed. The base number of agencies is 41. However, since some agencies could not or did not provide information in some sections, the base number in derived from the total that did respond to the question. When this phenomenon occurs the reader is alerted to the total base number being used in the following text. An attempt was made to include all sections and subsections of the written response. Some sections such as trips purpose and ridership discussions draw from multiple areas of the written survey to provide a more complete description of transportation service in South Dakota.

Urban Public Transit Services

There are two urbanized areas in South Dakota as defined by the Urban Mass Transportation Act: Minnehaha (Sioux Falls) and Pennington (Rapid City) Counties. Both urbanized areas receive formula allocations from Section 9 of the Urban Mass Transportation Act, which is distributed in each urbanized area of 50,000 population or more. FY91 allocations to the urbanized areas were approximately $310,400 to Rapid City and $534,700 to Sioux Falls, for a total of $845,100.

The transit agency providing public transit services in Sioux Falls is Sioux Falls Transit, which operates both fixed route and paratransit services. Sioux Falls Transit operates nine fixed routes provide pulse serve with a total fleet size of 26 buses.[1] Average annual ridership is 448,278 passenger trips.

Rapid Transit provides transit service in Rapid City. While currently operating as a demand-response service, the agency is implementing a fixed route service for the coming year. Total annual ridership is 73,400 passenger trips.

Rural Transit Services

Transportation services operate in many of the non-urbanized portions of South Dakota. Non-urbanized transportation, by Urban Mass Transportation Administration definition, is any transportation provided in areas of less than 50,000 population. The primary funding source for rural public transportation services is Section 18 of the Urban Mass Transportation Act which provides capital, administrative, and operating funds. The FY91 allocation to South Dakota was approximately $424,600.

Fifteen agencies currently receive operating funds in South Dakota through the Section 18 program.

A total of 53 vehicles were operated in FY90, traveling approximately 610,000 miles and providing 375,000 passenger trips.

Specialized Transportation Services

Specialized services in the state include those targeted for specific user groups; primarily elderly or disabled passengers, either in urban or rural areas. The South Dakota Department of Social Services and the Department of Transportation receive money from Title III-B of the Older Americans' Act to fund capital purchases and operating expenses. Administrative expenses also are eligible expenses in funds distributed to the Department of Transportation, however, no administrative costs may be expended from the Title III-B funds.

Twenty-one agencies in South Dakota receive operating funds from the Title III-B program for transportation services. The list of those agencies in FY90 included the following:

Aberdeen Area Senior Citizens Center
Area IV Senior Citizens Planning Council
Bennett County Senior Citizens
Blue Blanket Valley Senior Citizens
Eastern Pennington County Transit
Community and Youth Involved Center
Fall River County Elderly and Handicapped Service
Haakon County Prairie Transportation Service
Hill City Senior Citizens
Huron Area Senior Citizens
Inter-Lakes Community Action
LIVE Center
Mead County Senior Citizens
Miller Housing Commission
Mitchell Area Senior Citizens
Mobridge Senior Citizens Center
Rural Office of Community Services
Salem Senior Citizens Center
Senior Citizens Services of Vermillion
Sioux Falls Senior Citizens Center
Yankton Area Senior Citizens Center

In addition to the Title III-B program, Section 16(b)(2) of the Mass Transportation Act provides capital assistance to private non-profit agencies for transportation of the elderly and disabled.

Section 16(b)(2) funds are provided to the South Dakota Department of Transportation on a formula basis from the U.S. Department of Transportation Urban Mass Transportation Administration. The FY91 allocation to South Dakota was $219,500. Fifty-six agencies received Capital assistance from the Section 16(b)(2) program in the past year. During FY90, 139 vehicles were operated under the program, traveling approximately 1.4 million miles and carrying 1 million passengers.

Table F-1 provides a summary of the transportation allocation for public specialized transportation for the past three years.

Table F-1
Transportation Funding Allocation*

	FY89	FY90	FY91
Section 18	$411,600	$408,500	$424,600
Section 16(B)(2)	$219,400	$219,400	$219,500
Section 9	$767,400	$787,600	$845,100
Title III-B	$253,000	$255,400	$268,100

* Rounded to the nearest $100.

The Purpose of the Transit Service Inventory

A thorough knowledge of the characteristics of South Dakota transportation providers is important to the research design of this study in developing paired sites and identifying potential gaps or needed expansion of transportation services. Information about organizational operating characteristics, strengths, weaknesses, and constraints will contribute to the reliability of the model developed to assess unmet transportation demand in the state.

Inventory Methodology

Data were collected for the transit service inventory from several sources. The following details primary sources of data, methods of collecting information, and data limitations.

Literature Review

Historical operations data and funding were collected from documents provided by the South Dakota Department of Transportation. The state management plan, for both the Section 18 and 16(B)(2) programs, previous studies, annual statistical compendia, transportation development plans, and intra-agency memos reporting operational statistics provided background information on existing transportation services in South Dakota.

Written Survey

In addition to existing system data, a written survey was developed for distribution to all transit providers, both public and specialized, in the state. The purpose of the survey was to update operational statistics of existing systems, determine plans for service development, and determine service gaps and problems as perceived

by the operations. A copy of the survey form used in this study is attached to this report. The survey was developed by the project team with review and comment from SDDOT staff and the project advisory committee.

The mailing list for the written survey was provided by the South Dakota Department of Transportation and was sent to 86 South Dakota transportation providers. A total of 41 surveys were returned for inclusion in the database (four additional surveys were returned well after the deadline), a response rate of 47 percent. Table F-3 provides a list of names and locations of all responding agencies and their primary funding source. A complete listing of names and address of agencies responding to the survey, is attached to this report.

Because surveys were not received from all provider agencies in the state, and data on the returned surveys were incomplete in some cases, the survey cannot be used as a true inventory. However, the response provides a sufficient sample from which to draw conclusions and the status of South Dakota transit, to determine development trends for the future, and to make a general assessment of service gaps in the state.

Site Visits

As a strategy to inventory existing services, in-person meetings were held with several of the providers in the state, representing Section 18, Section 16(b)(2), Section 9, and Title III-B recipients, and a representative of tribal transportation services. A list of agencies with whom the project team met and their locations is provided in Table F-2. A complete listing of names and address of agencies participation in the site visit is attached to this report in Appendix B of the main report.

Table F-2
Project Site Visits

Project Name	Contact	Date Visited
Aberdeen Area Senior Center, Inc.	Donna Seaton, Director	10/24/91
Area IV Sr. Citizens Plng. Count	Carol Seurer, Director	10/24/91
Bennett County Sr. Citizens Ctr.	Donna Noel, Director	10/02/91
Black Hills Workshop & Trng Ctr	Connie Keyser, VP of Finance	10/04/91
Canyon Lake Senior Center	Homer Merfelt, Director	10/04/91
Custer Area Senior Transportation	Janet Glenn, Director	10/03/91
Eastern Pennington County Transit	Joan Renner, Director	10/04/91
Huron Area ATC	Patty Wendelgass, Mgr.	10/23/91
Huron Area Senior Center	Sandy Mack, Manager	10/23/91
Keystone Senior Citizen Center	James Halley, Chairman	10/04/91
Live Center, Inc.	Marlys J. Sittner, Manager	09/20/91
City of Mitchell	Brenda Paradis, Director	
Rapid Transit	Rich Sagen, Director	
Rosebud Sioux Tribe	Connie Horse Looking, Director	10/02/91
Rural Office of Community Services	Winnie Jo Jons, Director	10/01/91
Sioux Falls Transit & Paratransit	John Roberts, Planner	10/25/91
Sioux Vocational Services, Inc.	Anne Rieck Mosena	10/25/91
Spink County Sr. Citizens Council	Peggy Morris, Coordinator	10/23/91
Yankton Area Sr. Citizens Center, Inc.	Katie Baldwin, Director	09/30/91

Table F-2
South Dakota Agencies Responding to the Written Provider Survey

Agency	Contact Person	City	Phone	Funding (a)
ABERDEEN AREA SENIOR CENTER, INC.	DONNA SEATON	ABERDEEN	605-225-0081	18
ADULT SERVICES AND AGING	LEOTA A. OUAM	RAPID CITY	605-394-2536	na
AREA IV SR CITIZENS PLNG COUNCIL	CAROL SEURER	SISSETON	605-698-7511	18/IIIb
BENNETT COUNTY SR CITIZEN CTR	DONNA NOEL	MARTIN	605-685-6642	16b2
BLACK HILLS CHILDREN'S HOME	RANDY RASMUSSEN	RAPID CITY	605-343-5422	na
BLACK HILLS WORKSHOP/TRAINING CTR	CONNIE R. KEYSER	RAPID CITY	605-343-4550	16b2/9
BOX ELDER PIONEER SR CITIZEN CTR	MICKEY CURINGTON	BOX ELDER	605-923-3564	na
BRIDGEWATER COMMUNITY VAN	ROSE VARGAS	BRIDGEWATER	605-729-2738	18
CANYON LAKE SENIOR CITIZENS CTR	HOMER MERFELD	RAPID CITY	605-394-1798	na
CHAMBERLAIN ADJ TRAINING CENTER	GLORIA PEARSON	CHAMBERLAIN	605-734-5542	16b2
COMMUNICATION SERVICE FOR THE DEAF	BENJAMIN J. SOUKUP	SIOUX FALLS	605-339-6718	na
CUSTER AREA SENIOR TRANSPORTATION	JANET GLENN	CUSTER	605-673-3687	na
DAKOTA MENTAL HEALTH CENTER	ROCHELLE VOIGHT	MITCHELL	605-996-9686	16b2
EASTERN PENNINGTON COUNTY TRANSIT	JOAN RENNER	WALL	605-279-2663	18/16b2
EUREKA HEALTH CARE CENTER	WALTER DOHN	EUREKA	605-284-2145	na
FALL RIVER COUNTY E&H SERVICES INC.	DONNA RUDNIK	HOT SPRINGS	605-745-4067	16b2
HURON AREA ATC	PATTY WENDELGASS	HURON	605-352-5698	16b2
HURON AREA SENIOR CENTER	SANDY MACK	HURON	605-352-3477	18/IIIB
INTER-LAKES COMMUNITY ACTION INC.	LADONNA JULIAN	BROOKINGS	605-692-6391	18/IIIb
KEYSTONE SR CITIZEN CENTER	JAMES HALLEY	KEYSTONE	605-666-4661	na
LENNOX LIFE ENRICHMENT FOR ELDERLY	DONNA HAMERLY	LENNOX	605-647-2238	18
LEWIS/CLARK MENTAL HEALTH CENTER	EUGENE P. ENGEN	YANKTON	605-665-4606	na
LIVE CENTER INC.	MARLYS J. SITTNER	LEMMON	605-374-3742	16b2/18
MEADE COUNTY SR CITIZENS TRANSP.	LARRY LOOBEY	STURGIS	605-347-5048	16b2
MITCHELL RSVP	BRENDA PARADIS	MITCHELL	605-996-6459	16b2
NORTHERN HILLS GENERAL HOSPITAL	MARK THURINGER	DEADWOOD	605-578-2313	16b2
NORTHERN HILLS TRAINING CENTER	RICK BURTON	SPEARFISH	605-642-2785	16b2
RAPID TRANSIT	RICH SAGEN	RAPID CITY	605-394-6631	9
ROSEBUD SIOUX TRIBE	CONNIE HORSE LOOKING	ROSEBUD	605-747-2718	18
RURAL OFFICE OF COMMUNITY SERVICES	WINNIE JO JONS	LAKE ANDES	605-487-7634	18
SANBORN COUNTY RURAL BUS	MYRNA PETERSON	WOONSOCKET	605-796-4319	18
SCOTLAND GOOD SAMARITAN CENTER	TOM HOY	SCOTLAND	605-583-2216	16b2
SR CITIZEN SERVICES INC.	GERALD BENINGA	SIOUX FALLS	605-236-6722	16b2
SR CITIZENS SERVICES OF VERMILLION	HARVEY HANSON	VERMILLION	605-624-8072	16b2
SIOUX FALLS CHILDREN'S HOME	DEANNE BAUSERMAN	SIOUX FALLS	605-334-6004	na
SIOUX FALLS TRANSIT	JOHN ROBERTS	SIOUX FALLS	605-339-7130	9
SIOUX FALLS PARATRANSIT	JOHN ROBERTS	SIOUX FALLS	605-339-7130	9

Agency	Contact Person	City	Phone	Funding (a)
SIOUX VOCATIONAL SERVICES INC	BOB SCHMIDT	SIOUX FALLS	605-336-7100	16b2
SPEARFISH SR TRANSPORTATION	BARB CLINE	SPEARFISH	605-642-7977	na
SPINK COUNTY SR CITIZENS COUNCIL	PEGGY L. MORRIS	REDFIELD	605-472-1552	18
YANKTON AREA SR CITIZENS CENTER INC	KATIE BALDWIN	YANKTON	605-665-4685	16b2

(a) 18 denotes Section 18 of the Urban Mass Transportation Act.
16 denotes Section 16(B)(2) of the Urban Mass Transportation Act.
9 denotes Section 9 of the Urban Mass Transportation Act.
IIIB denoted Title IIIB of the Older americans Act.
na denotes "not available"

Operating Characteristics of South Dakota Transit Services

A total of 41 transit providers responded to the survey. Some agencies were not able to provide information in various categories, however the overall completeness of the responses was generally very good. The following sections will describe various components of the operating characteristics of South Dakota Transit Services including, legal status of the providers, service characteristics, staffing characteristics, performance indicators, organizational characteristics, equipment replacement schedules, and funding characteristics.

Legal Status of Transit Services.

Thirty-six of the survey respondents listed their legal status as private or public non-profit agencies. The remaining agencies identified their agencies as public governmental agencies.

Services Provided by Agencies

Respondents indicated all services that they provide in their communities. Thirty-nine of the agencies are direct providers of transportation; in addition, many other services are provided by these agencies. Approximately half of the agencies provide health care, social services, and/or nutrition services. Other common services offered included counseling, job training, and information/referral services.

Of the 41 agencies that responded, 58 percent indicated that they operate their own transportation systems with staff assigned specifically for that purpose. Staff members included paid drivers, with a component within the organization to administer and operate the program. Approximately 46 percent of the responding agencies indicated that agency vehicles are driven by non-transportation staff members, such as caseworkers. Forty-one percent of the agencies indicated that personal vehicles of agency staff are used to provide, operate or arrange client transportation.

Only about 24 percent of the agencies contract or purchase services from another organization. Approximately 30 percent of the agencies use volunteers or family members to organize, provide or arrange transportation. Twenty-four percent of the agencies implement a system of paid in advance user subsidy (cash, script, token or ticket). Only one out of the 41 agencies indicated that the agency is not involved in passenger transportation in any manner. Table 4 indicates the rank order of services that transit agencies provide directly to clients.

Table 4
Services Provided by South Dakota Transportation Agencies

Service Provided	Number of Agencies
Transportation	39
Nutrition	21
Health Care	19
Social Services	17
Information/Referral	15
Job Training	11
Counseling	10
Job Placement	9
Mental Health	8
Nursing Home	8
Other	8
Day Care	5
Homemaker/Chore	5

Total Number of Respondents = 41

Types of Transportation Services Provided

Of the 41 respondents, 16, or 39 percent, offer a repetitively scheduled transportation service operating on regular routes. Thirty agencies, or 73 percent, provide demand-responsive (Call-a Ride, Reserve-a-Ride) service. Eleven out of the 30 agencies that offer demand-responsive service require advance reservations.

About half of the agencies that responded offer regularly scheduled transportation, but do not operate on an established route system. Fifty-eight percent of the agencies provide on need, emergency basis service, or service as related to

casework. This type of service is directly tied to the high percentage of transportation services provided for health care and social services. Finally, 15 percent of the respondents indicated that transportation services are provided for other purposes.

The highest rated trip purpose for passengers in 1990, according to the South Dakota DOT statistical report for Public and Special Transportation in South Dakota, was for nutrition, and consisted of 24 percent of the total trips made. Trips for education comprised 21 percent of the total trip purposes. On the 1991 written surveys completed by provider, the highest rated trip purpose was health and medical-related purposes, representing approximately 20 percent of the total trips provided by agencies. Trips for nutritional purposes comprised another 20 percent of the total trips provided. Employment-related trips represented approximately 9 percent of the total on the written surveys.

Approximately 62 percent of all trip purposes were for health (20 percent), nutrition (20 percent), shopping (11 percent) and recreation (10 percent) purposes. Approximately 8 percent of the trips were listed as other purposes (3 percent) or unknown trip purposes. The remaining 30 percent of trips were for employment, including volunteer employment (10 percent), education (8 percent), social interaction (6 percent), personal needs(4 percent), social services (3 percent), and lively-hood support (1 percent).

Hours of Transportation Services

All agencies that provide direct services do so during the weekdays. Slightly less than half of the agencies provide services on Saturday and Sunday. Table 5 shows the percentage of agencies that provide services during a given week.

Table 5
Day of Service for South Dakota Transit Agencies

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NO.	17	37	36	38	36	38	19
%	41%	90%	88%	93%	88%	93%	46%

The average number of days in a year that agencies use for budget purposes is 241. Therefore, there are 124 days a year or the equivalent of approximately 4 months a year that no transportation service is provided.

Transit Staffing Characteristics

Twenty-four, or 58 percent of the responding agencies operate their own transportation system with staff assigned specifically for that purpose. Only about 15 percent of the respondents provided information on the types of drivers. The following table shows the average number of drivers and their affiliation to the agency.

Table 6
Driver Staffing of South Dakota Transit Agencies

Agency Position	Total	Average Number of Drivers/ Agency
Paid full-time	17	4.2
Paid part-time	20	5.0
Agency staff	13	7.2
Volunteers	12	9.1

n = 24

As shown in the table, approximately 71 percent of the agencies employ paid full-time drivers; approximately 83 percent employ paid part-time drivers. In addition, approximately half of the responding agencies use agency staff and or volunteers. An average of 5 drivers are employed by each agency.

Agencies were asked to estimate the total annual person-hours that staff and volunteers devoted to providing passenger transportation by functional area; ie. administration, maintenance, dispatching, and driving. While the information on volunteer hours provided on the surveys was too incomplete to summarize, thirty-six agencies did provide information on staff hours. The average annual staff hours per agency were calculated and are summarized in Table 7.

Table 7
Total Average Annual Staff Hours Per Agency: Rural and Specialized

FUNCTIONS	AVERAGE	PERCENT OF TOTAL
Administration	961	17.46%
Maintenance	192	3.48%
Dispatch	302	5.48%
Driver	4,051	73.56%
Total	5,506	100%

Almost two-thirds of staff hours are devoted to the function of providing direct transportation to passengers, as reflected by the 74 percent total average annual staff hours provided by drivers. Rural and specialized service agencies also spend about 20 percent of their staff hours on administrative functions. A relatively small portion, less than 10 percent, of staff hours is devoted to the functions of maintenance and dispatch.

Not unexpectedly, urban public systems reported greater allocation of staff time to the maintenance and dispatch function. Still, over half the total staff hours are devoted to the function of providing drivers. Urban public systems also have a higher proportion of staff hours devoted to the function of providing maintenance. It is likely that it is more cost effective for large providers to retain, on staff, their maintenance personnel, while small providers are more likely to contract for such services.

Table 8
Total Average Annual Staff Hours Per Agency:
Urban Public Systems(a)

FUNCTIONS	AVERAGE	PERCENT OF TOTAL
Administration	546	13.70%
Maintenance	625	15.67%
Dispatch	709	17.78%
Driver	2,108	52.85%
Total	3,988	100%

(a) Urban Public Systems in Sioux Fall and Rapid City, South Dakota.

Transit Performance Indicators of South Dakota Transit Agencies

Three basic performance measures illustrate the relative performance of South Dakota transit agencies. Agencies are divided into two groups; first, those that receive funding through Section 16(b)(2); and second, those agencies that receive funding through Section 18. As discussed earlier in this report, the Section 16(b)(2) program is a supplemental program to UMTA capital assistance program to assist agencies in providing transportation to the elderly and disabled population where "public transportation services are unavailable, insufficient, or inappropriate."[2]

Section 18 funds are available to agencies for expenditures for public transportation projects in areas other than areas with population greater than 50,000, additionally, the goals of the program are:

"to enhance the access of people in non-urbanized areas to health care, shopping, education, employment, public service, recreation; to assist in the maintenance, development, improvement, and use of public transportation systems is in rural and small urban areas; to encourage and facilitate the most efficient use of all federal funds used to provide passenger transportation in non-urbanized areas through the coordination of programs and services."[3]

The following table provides performance indicators for a list of agencies and sub-agencies that receive Section 16(B)(2):

Table 9

Performance Indicators for Section 16(B)(2) Providers: 1990[4]

Agency	Cost/Mile (a)	Cost/Passenger (a)	Passenger/Mile (a)
Aberdeen Area Senior Citizens Center - Aberdeen	.36/.22	.34/.38	1.05/.58
ADVANCE - Brookings	.44/.33	.41/.70	1.08/.47
Area IV Senior Citizens Planning Council	.55	.41	1.34
Eureka Transportation System	.11	1.03	.10
Wester Community Van	.64	.19	3.33
Takakwitha Transportation Project - Sisseton	.26	.77	.34
Bennett County Senior Citizens - Martin			
Kyle Transportation System	.32	1.56	.21
Martin Transportation System	.37	.62	.59
Black Hills Workshop & Training Center - Rapid City	.28/.20	.33/.36	.85/.56
Black Hills Foundation for Education	.35	.44	.79
Excellence - Sturgis - Deadwood	.24	.99	.24
Blue Blanket Valley Senior Citizens - Hoven	.39	.42	.93
Bridgewater Senior Citizens Center - Bridgewater	.18	.40	.46
Capital Area Counseling Service/Community Coord. Serv.	.59	.80	.74
Chamberlin Adjustment Training Center - Chamberlin	.32/.15	.24/.53	1.34/.28
Children Home Society - Sioux Falls	.32/.13	.35/.78	.91/.16
Children Home Society - West Rv Children Hm. Rockerville	.19	.52	.36
Community Coordinating Services - Ft. Pierre and Pierre	.82	.68	1.21
Crippled Children Hospital and School - Sioux Falls	.69	2.04	.34
Dakota Mental Health Center - Mitchell	.17	.32	.54
Eastern Pennington County Transit System - Wall	.51	5.59	.09
Every Citizen Counts Organization - Madison	.72/.47/.24	.46/.26/.26	1.58/1.82/.93
Fall River County Elderly & Handicapped service Hot Springs	.30	.58	.52
Grant County Senior Citizens - Milbank	.57	.71	.81
Haakon Co. Prairie Transportation Service - Philip	.42	.96	.43
Hill City Senior Citizens - Hill City	.66	.24	2.77
Human Service Agency - Watertown	.99	.26	3.81
Huron Area Adjustment Training Center - Huron	.35	.37	.97

Agency	Cost/Mile	Cost/Passenger	Passenger/Mile
Huron Area Senior Center - Huron	.38	.21	1.82
Inter-Lakes Community Action Madison			
Brookings Transportation System	.22	.46	.47
Dual County Transportation System	.28	.50	.55
Lake County Transportation System - Madison	.46	.06	7.64
Watertown Transportation System	.27	.46	.59
	.42	.26	1.61
Lennox Life Enrichment for Elderly -Lennox	1.21	.96	1.26
LIVE-Center - Lemmon	.71	.46	1.53
McCrossan Boys Ranch - Rural Sioux Falls	.08	.56	.31
Mead County Senior Citizens	.30	.73	.41
Center - Sturgis	.31	.75	.41
Miller Transportation System	.54	.98	.55
Mitchell Area Adjustment	.91	1.33	.68
Training Center - Mitchell	.33	.34	1.0
Mitchell Area Senior Citizens - RSVP - Mitchell	.42	.74	.57
Mobridge Senior Citizens Center - Mobridge	.28	1.07	.26
Morningside Manor - Alcester	.76	6.09	.16
North Central Health Service - Spearfish			
Belle Fourche Health Care Center - Belle Fourche	1.58	6.30	.25
David Dorsett Home - Spearfish	.25	1.23	.20
Lake Preston Transportation System - Lake Preston	.62	.87	.71
Northern Hills Training	.48	.48	1.26
Center - Spearfish	.23	.32	.72
Oahe Adult Habilitation and Education - Pierre	.43	.89	.48
Project C.A.R. - Sioux Falls	.34	.98	.35
Rural Office of Community Services			
Aurora County Trans System- White Lake	.18	1.02	.18
Centerville Transportation System - Centerville	1.12	6.09	.18
Salem Senior Citizens Center - Salem	.60	.39	1.54
Scotland Good Samaritan Center - Scotland	.48	.58	.83
Senior Citizens Services - Sioux Falls	.30	.89	.34
Senior Citizens Services of Vermillion - Vermillion	.28/.16	.33/.39	.82/.40
Sinte Gleske Oyate Transportation - Rosebud Indian Rs.	.19	.29	.67
Sioux Falls Chap No. 1, Disabled Am. Veteran's - Sioux Falls	.53	2.20	.24
Sioux Vocational Services, Sioux Falls	.34/.36/.17	.41/.33/1.05	.84/1.10/.17
Sisseton-Whapeton Sioux Tribe - Tribal Elderly Program	.18	.30	.60
South Central Adjustment Training Center - Winner	.20	.08	2.58
South Dakota Assoc of the Deaf - Sioux Falls	.30	.73	.41
Southeast Mental Health Center - Sioux Falls	.49	.97	.50
Southeast SD Activity Center - Vermillion	.28/.70	.57/.31	.50/2.30
Southern Hills Developmental Services	.20	.22	.58
Spike County Senior Citizens - Redfield	.20	.27	.74

Contact	Cost/Mile	Cost/Passenger	Passenger/Mile
West River Mental Health Center - Rapid City Area	.25	.44	.56
Rapid City Area	.44	.65	.67
Spearfish Area	.16	.63	.25
Yankton Area Adjustment Training Center - Yankton	.33	.25	1.34
	.20	.64	.31
	1.12	.11	10.35
	.18	.57	.32
Yankton Enrichment Services	.33	3.37	.10
Average			

(a) cells with more than one measure indicates that statistics on multiple vehicles for that agency.

Section 18

The following table lists the performance indicators for the Section 18 grantees the provide transportation in South Dakota:

Table 10
Performance Indicators for Section 18 Providers: 1990[5]

Agency	Cost/Mile	Cost/Passenger	Passenger/Mile
Aberdeen Area Senior Center	1.53	1.61	.95
Area IV Senior Citizens Planning Council	1.11	1.44	.77
Bridgewater Senior Center	1.0	2.32	.43
Grant County Senior Citizens	2.53	3.12	.81
Huron Area Senior Citizens	1.88	1.17	1.60
Inter-lakes Community Action	1.4	1.33	1.05
Lennox Life Enrichment for the Elderly	2.86	2.28	1.29
LIVE Center	.67	1.72	.39
Lower Brule Sioux Tribe	1.10	10.03	.11
City of Mitchell	1.69	2.43	.69
Rosebud Sioux Tribe	.78	1.48	.53
Rural Office of Community Service	1.12	2.14	.52
Salem Senior Citizens	1.80	1.17	1.54
Sanborn County	.92	3.79	.24
Spink County Senior Citizens	.98	1.19	.82
Average	1.15	1.61	.72

Ridership Characteristics

Thirty-nine agencies provided information concerning average annual ridership. Sioux Falls Transit provides 448,278 trips; Sioux Falls Para Transit provides 73,800; and Rapid Transit provides 73,400 average annual trips. Average annual passenger trips

provided by rural and specialized agencies were 1,663,848. The following table provides summary data of the two groups. Table 12 provides information for all urban transit providers, and table 12 provides a summary of all rural and specialized agencies

Table 11
Summary of Average Annual Ridership Characteristics

	Ridership characteristics			Estimate of individuals and trips in need of transportation	
	Trips	Unduplicated Riders	Riders who use Wheelchairs	Estimated Trips	Estimated Unduplicated Riders
GRAND TOTAL	1,663,848	57,913	148,658	127,616	28,273
Rural & Specialized	1,068,374	21,913	15,516	127,616	25,023
Urban	595,478	36,000	133,142	0	3,250
PERCENT OF TOTAL					
Rural & Specialized	64.2%	37.8%	10.4%	100.0%	88.5%
Urban	35.8%	62.2%	89.6%	0.0%	11.5%

Table 12
Summary of Average Annual Ridership Characteristics: Urban Providers

	Ridership characteristics					
	Avg Annual Trips		Avg Annual		Avg Annual	
	Total	% Total	Total	% Total	Total	% Total
SIOUX FALLS TRANSIT	448,278	75.3%	0	0%	59,342	45%
SIOUX FALLS PARATRANSIT	73,800	12.4%	36,000	100%	73,800	55%
RAPID TRANSIT	73,400	12.3%	0	0%	NA	0%
TOTAL	595,478	100.0 %	36,000	100%	133,142	100 %
AVERAGE	198,493	33.3%	12,000	33%	66,571	50%

Table 13
Summary of Average Annual Ridership Characteristics: Rural and Specialized Providers

	Ridership characteristics: Average Annual						Estimate of individuals and trips in need of transportation			
	Trips	% of Total	Avg Annual Unduplicatd Riders		Unduplicated Riders who use Wheelchairs		Estimated Trips		Estimated Unduplicated Riders	
			Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total
ABERDEEN AREA SENIOR CENTER, INC.	52,382	4.9%	566	2.6%	816	5.3%	15,120	11.8%	7,560	30.2%
ADULT SERVICES AND AGING	824	0.1%	156	0.7%	15	0.1%	400	0.3%	100	0.4%
AREA IV SR CITIZENS PLNG COUNCIL	98,000	9.2%	1,100	5.0%	200	1.3%	72,000	56.4%	500	2.0%
BENNETT COUNTY SR CITIZEN CTR ASSOC	6,944	0.6%	128	0.6%	0	0.0%	80	0.1%	30	0.1%
BLACK HILLS CHILDREN'S HOME	17,311	1.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
BLACK HILLS WORKSHOP/TRAININ G CTR	168,502	15.8%	300	1.4%	300	1.9%	0	0.0%	0	0.0%
BOX ELDER PIONEER SR CITIZEN CTR	48	0.0%	14	0.1%	1	0.0%	0	0.0%	0	0.0%
BRIDGEWATER COMMUNITY VAN	5,600	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CANYON LAKE SENIOR CITIZENS CTR	1,087	0.1%	0	0.0%	0	0.0%	1,800	1.4%	480	1.9%
CHAMBERLAIN ADJ TRAINING CENTER	33,950	3.2%	34	0.2%	34	0.2%	0	0.0%	0	0.0%
COMMUNICATION SERVICE FOR THE DEAF	3,436	0.3%	5,520	25.2%	5,520	35.6%	0	0.0%	0	0.0%
CUSTER AREA SENIOR TRANSPORTATION	4,383	0.4%	176	0.8%	132	0.9%	180	0.1%	180	0.7%
DAKOTA MENTAL HEALTH CENTER	5,040	0.5%	2,580	11.8%	1	0.0%	0	0.0%	0	0.0%
EASTERN PENNINGTON COUNTY TRANSIT	3,950	0.4%	70	0.3%	12	0.1%	288	0.2%	720	2.9%
EUREKA HEALTH CARE CENTER	142	0.0%	487	2.2%	269	1.7%	0	0.0%	0	0.0%
FALL RIVER COUNTY E&H SERVICES INC.	7,530	0.7%	129	0.6%	538	3.5%	0	0.0%	0	0.0%
HURON AREA ATC	85,045	8.0%	109	0.5%	10	0.1%	260	0.2%	260	1.0%
HURON AREA SENIOR CENTER	91,884	8.6%	2,018	9.2%	246	1.6%	4,600	3.6%	780	3.1%

	Trips	% of Total	Avg Annual Unduplicatd Riders		Unduplicated Riders who use Wheelchairs		Estimated Trips		Estimated Unduplicated Riders	
			Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total
INTER-LAKES COMMUNITY ACTION INC.	120,632	11.3%	1,121	5.1%	1,408	9.1%	0	0.0%	0	0.0%
KEYSTONE SR CITIZEN CENTER	156	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
LENNOX LIFE ENRICHMENT FOR ELDERLY	5,247	0.5%	200	0.9%	20	0.1%	0	0.0%	0	0.0%
LEWIS/CLARK MENTAL HEALTH CENTER	960	0.1%	192	0.9%	1	0.0%	520	0.4%	5	0.0%
LIVE CENTER INC.	35,760	3.3%	375	1.7%	10	0.1%	12,500	9.8%	175	0.7%
MEADE COUNTY SR CITIZENS TRANSP.	6,676	0.6%	357	1.6%	50	0.3%	0	0.0%	0	0.0%
MITCHELL RSVP	110,521	10.3%	546	2.5%	4,852	31.3%	5,000	3.9%	1,200	4.8%
NORTHERN HILLS GENERAL HOSPITAL	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%
NORTHERN HILLS TRAINING CENTER	35,400	3.3%	503	2.3%	2	0.0%	2,000	1.6%	4	0.0%
ROSEBUD SIOUX TRIBE	5,700	0.5%	360	1.6%	48	0.3%	12	0.0%	12	0.0%
RURAL OFFICE OF COMMUNITY SERVICES	99,004	9.3%	2,263	10.3%	615	4.0%	11,280	8.8%	340	1.4%
SANBORN COUNTY RURAL BUS	5,635	0.5%	100	0.5%	30	0.2%	0	0.0%	0	0.0%
SCOTLAND GOOD SAMARITAN CENTER	840	0.1%	76	0.3%	74	0.5%	0	0.0%	0	0.0%
SIOUX FALLS CHILDREN'S HOME	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%
SIOUX VOCATIONAL SERVICES INC	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%	No Response	0.0%
SPEARFISH SR TRANSPORTATION	7,000	0.7%	70	0.3%	200	1.3%	1,000	0.8%	100	0.4%
SPINK COUNTY SR CITIZENS COUNCIL	24,668	2.3%	2,040	9.3%	36	0.2%	0	0.0%	0	0.0%
SR CITIZEN SERVICES INC.	3,100	0.3%	0	0.0%	0	0.0%	0	0.0%	12,500	50.0%
SR CITIZENS SERVICES OF VERMILLION	8,013	0.8%	123	0.6%	60	0.4%	0	0.0%	0	0.0%
YANKTON AREA SR CITIZENS CENTER INC	13,000	1.2%	200	0.9%	16	0.1%	576	0.5%	77	0.3%
TOTAL	1,068,370	100.0%	21,913	100.0%	15,516	100.0%	127,616	100.0%	25,023	100.0%
AVERAGE	30,525	2.9%	626	2.9%	431	2.8%	3,545	2.8%	715	2.9%

Organizational Characteristics and Coordination Activities

The survey section on coordination requested agency managers' opinions on the issue of coordination with other organizations. When asked if an agency would want to participate in a system of arranging and coordinating the provision of transportation for the clients of other organizations, 41 percent of the respondents said yes, definitely and 18 percent responded perhaps. Twenty-three percent indicated that it was doubtful or that they would definitely would not want to participate in the arrangement and coordination of services. Eighteen percent indicated that they definitely would not want to participate in coordination activities.

Thirty of the 40 agencies that responded (77 percent) have, in the past, coordinated or entered into cooperative arrangements with other organizations to provide transportation. The remaining 9 agencies (23 percent) have not engaged in coordination activities at all.

Agencies identified the likely client response to coordination of services and shared ridership with clients from other organizations. Only about a third of the respondents indicated that there would be no anticipated problems with their clients riding with clients from other agencies. About 46 percent indicated that some problems could be expected. Finally, 21.2 percent of the respondents indicated that there would be numerous problems with such a system and of that number, 2.6 percent indicated that it would be impossible, their clients could not ride with clients of other agencies.

Finally, agencies were given the opportunity to indicate and name specific barriers to the ability to coordinate and/or consolidate transportation services. Thirty-nine agencies identified barriers to coordination efforts. The following table lists twelve possible choices and indicates the percent of all agencies that identified the topic as a barrier.

Table 14
Barriers to Coordination

Specific Barrier Problem	Total	Percent
Not Enough Vehicles	13	38.2%
Client Attitudes/Preferences	12	35.3%
Other	12	35.3%
Geographic Location (too many miles to nearest other provider	11	32.4%
Expected Reduction in Quality/Coverage/Efficiency of Service	9	26.5%
Not enough Seats on Existing Vehicles	9	26.5%
Accountability/Paperwork/Billing Problems	8	24.3%
Federal Regulations	6	18.5%
Other Organization's Regulations	6	18.4%
State Regulations	5	15.0%
Contractual specifications	2	6.8%
Organization's Regulations	2	6.8%

n = 34

The frequency of problems cited ranged from a low of 2 to a high of 12. More than one-third of the respondents identified the following as barriers to coordination: "not enough vehicles," "other," "client attitudes and preferences," and "geographic location (too many miles to nearest other provider)." Approximately one-fourth of the respondents cited the following problems in coordination: "expected reduction in quality," "coverage," and "efficiency of service," "not enough seats on vehicles," and "problems with accountability, paperwork, and billing."

Since the problem topics were broad, respondents were asked to identify specific problems within each category. The following lists specific comments identified by respondents as problems.

- **Federal Regulations**
  People not understanding regulations.
  Those under 60 must pay actual cost.
  They change so fast; no one can keep up.

- **Contractual Specifications**
  Some nursing homes will not make a contract.
  Insurance and liability coverage.

- **State Regulations**
  Primary service to elderly/disabled only.
  Center may only transport severely and persistently mentally ill.
  State social service does not want to reimburse us for services.

- **Your Organization's Regulations**
  Riders over 55 or wheelchair/severely physically disabled.
  A few board members do not agree with expansion.

- **Other Organization's Regulations**
  Protecting own turf.
  Insurance requirements.
  Riders involved only with own agency- or needs to go out of city limits
  Their needs and time schedules- especially school system.
  Schools, Head Start, say they cannot provide rides to others.

- **Expected Reduction in Quality/Coverage/Efficiency of Services**
  Not nearly enough vehicles drivers and money available.
  With more staff, better quality/coverage, etc.

- **Accountability/Paperwork/Billing Problems**
  Coordination of all agencies would need Central/Executive full-time administration.
  Sometimes the wait for a payment could be as long as two months.
  Need $40,000 to hire an accountant.

More staff- which means more money.

- **Client Attitudes/Preferences**
  Some elderly are set in ways- riding with school age or adjustment training center.
  Elderly seem to prefer separate services; each agency/organization has special-needs clients.
  Some clients don't show up or they're not at the pick up points. Many times the clients are drunk.
  All clients are deaf.
  You can't be everything to everyone all of the time!
  Behavior problems.
  Clients feel they are owed this service and that becomes a problem. Some clients who ride a lot don't get along with each other.

- **Geographic Location (too many miles to nearest other provider)**
  Clients on the Pine Ridge Reservation have a hard time getting transportation to their apartments and it is too far for us to go to get them.
  We have this problem with people in the county (15 miles out of town).

- **Not Enough Vehicles**
  Many agencies have no vehicles.
  Mostly all our vehicles have over 100,000 miles.
  We have more requests which makes it hard when one doesn't have enough vehicles.
  Must have mini-buses as well as accessible vehicles with lifts for the vehicles with lifts do not have much room.

- **Not enough Seats on Existing Vehicles**
  On occasion, need another lift.
  Cannot fit own clients in vehicles at times.
  Need a wheelchair vehicle that can adequately seat people.
  Our vehicles tend to be full at this point.
  If required services accelerate, one vehicle will not be enough.

- **Other**
  Public transportation not available.
  Schedules and destinations & number of riders to serve.
  Only to their particular need-based clientele.
  Coordination.
  Not enough staff driver man hours.
  Auto insurance liability.
  Since all clients are deaf, the driver must know sign language to communicate.
  Staff scheduling.
  Cost of transportation.

Clearly, the category of "Other" identifies a wide range of issues for agencies. Problems identified, range from the ability to communicate with clients with special needs to the need for public transportation and additional staff and funding.

Capital Replacement Schedules

As one agency indicated in the previous section, most of their vehicles have over 100,000 miles. This is not unusual for many of the providers. The following section and tables will describe the overall transit fleet in the State of South Dakota.

Agencies were asked to provide information on the number of vehicles the agency operates, as well as vehicle description, mileage, and special equipment such as lifts or ramps and communication capabilities. The following tables and narrative describe the state of South Dakota's transit capabilities. The information is divided into eight replacement schedules and identifies the vehicles that need to be replaced in 1991 and subsequent years until 1997. Some data is projected to be replaced beyond the study period. In this specific case a list of the vehicles and agencies are provided.

The rural and specialized vehicle inventory was developed from 30 surveys which excluded agencies that do not own vehicles or did not provide inventory data. Total number of vehicles in the replacement schedule database is 240.

Based on UMTA vehicle replacement guidelines of a minimum of 100,000 miles (or 6 years), vehicles in the inventory that currently exceed this standard were scheduled for replacement in the current year. Agencies were asked, however not all did so, to estimate the expected year of replacement for their vehicles. This is reflected in the last column of the replacement table attached to the end of this report. At least 73 of the vehicles were noted by agency managers as in need of replacement by 1993. For this reason, we believe the criteria established by the replacement schedule is reasonably accurate.

Methodology

A master list for the vehicle inventory was generated to derive the replacement schedules. Included in this master list were all listed vehicles along with their current odometer mileage and estimated FY 1990 total mileage. From this list, all agency vehicles that did not provide mileage information were removed and placed in a separate list. The three large providers Sioux Falls Transit, Sioux Falls Paratransit, and Rapid City Transit were also removed and placed in a separate list. Because the urban carriers have a different replacement criteria, they will be discussed later in this section.

The second step was to estimate the total miles for each vehicle for 1991. The FY 1990 yearly miles were used as an average yearly constant for later projection. Thus, the formula for estimating the total miles on a given vehicle, in replacement year 1991, is the total miles on the vehicle (current odometer reading) plus the total miles added in FY 1990. The result of this calculation is the total miles for 1991.

To project the future replacement year total miles, the formula computed the previous year's total miles, in this case FY 1991, plus the base year, or constant FY 1990 average annual miles. The resulting value of this computation is the total miles in 1992. This analysis assumes that the average annual miles in FY 1990 remain constant in projected years. To better understand the computation, the following example is given:

Current Odometer reading + Average Annual Miles 1990 = Total miles in 1991
75,859 + 23,000 = 98859

Example 1

Odometer	Avg FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY1995	FY 1996	FY 1997
75,000	5,000	80,000	85,000	90,000	95,000	100,000	105,000	110,000

As you can see from this example, this vehicle would be eligible to be replaced in fiscal year 1995. This same formula was applied to all vehicles to determine in what year a give vehicle would be eligible for replacement. The results of these calculation appears in the replacement schedules attached to this report. However, a summary of the various grouping of vehicle replacement schedules is provided for discussion.

Based on this analysis, an estimated 36 percent of vehicles are eligible for replacement by FY 1993. The following table provides a summary of the vehicles to be replaced by Section 18 or Section 16(b)(2) program.

Table 15
Summary of Vehicle Replacement

Replacement Year	Total Number of Vehicles	Number of Section 18 Vehicles	% of Total	Number of Section 16 Vehicles	% of Total
FY 1992	62	22	35.48	40	64
FY 1993	10	4	40.0	6	60
Subtotal	72	26	36.0	46	64
1994	12	6	50.0	6	90
95	7	2	28.0	5	72
96	5	1	20.0	4	80
97	10	3	30.0	7	70
TOTAL	106	38	36.0	68	64

n = 200

Description of Transit Fleet

From the information provided by agency managers, in the transit inventory list, a general description of the transit fleet in South Dakota can be drawn. A list of vehicles and agency information is provided in a table called South Dakota Provider Data Base Transportation Study-1990, attached to this report. Four categories were used to analyze the vehicle inventory data. The four categories are: vehicles listed with complete data, vehicles with missing data, vehicles whose scheduled replacement is beyond the study period and vehicles listed by urban providers. The following provides a list of the total number of vehicles in the four categories:

Vehicle listed with complete data 161
Vehicles with missing data 39
Vehicles scheduled replacement beyond study period 56
Vehicles listed by urban providers 40
Total vehicles in database 240

Most agencies use a van, minibus or mini-van to transport clients. There is an average of 12 seats per vehicle and all, but one vehicle of the 116 are owned by the operating agency. Approximately 27 percent of the agencies provide a lift or ramp to clients and there are an average of 60 wheelchair stations operated by the 41 agencies. Additionally, only 43 percent of the respondents indicated that they had communication capabilities through radio, citizens band, or telephone access.

Statistic summaries appear at the end of the tables attached to this report and are based on the total vehicles that appear in that table. Information provided for the transit inventory was obtained from the Transportation Study Survey Form For Transit Provider Agencies in South Dakota. Further, statistical calculations were performed only on those variables that were logical. The following table is provided to summarize the transit inventory data:

Table 16
Summary of Vehicle Inventory Data

Summary Topic	Total Number	% of Total
Total vehicles with over 100,000 miles	84	38%
Total Number of Vehicles older than 1984	72	43%
Total number of vehicles with Lift or Ramp	45	26%
Total number of vehicles with communication capabilities	70	43%

Only 24.3 percent of the agencies indicated that they have been approved or have budget authority to purchase new vehicles this fiscal year. Nineteen vehicles are approved to be purchased in this fiscal year by at least ten agencies. Of the ten agencies, seven indicated that the vehicle is being purchased as replacement for an existing vehicle. Three of the agencies indicated that they are purchasing a vehicle for expansion purposes.

Transit System Budgeting

Transit managers were asked to list the organization's revenues for funding transportation operations only and to indicate the sources for revenue. Of the 31 agencies providing revenue sources on the survey, an average of $58,609 was received from federal sources; $53,474 from local sources; and $17,651 from fares. Additionally, agencies receive $7,011 from other sources. The total average amount of revenues received was $139,882 and responses ranged from a low of $300 to a high of $1,807,049.

Agency managers were then asked to provide the total annual transportation budget, using actual data from FY 1991 and an estimated budget for FY 1992. The following table provides a summary of that information. Budget cost are categorized into two groups; total operating costs and total administrative costs.

Table 17
Total Operating and Administrative Costs by Agency

	FY 1991			FY 1992			FY91 -FY92
AGENCY	OPER COST	ADMIN COST	FY 1991 TOTAL	OPER COST	ADMIN COST	FY 1992 TOTAL	% CHNG
ABERDEEN AREA SENIOR CENTER, INC.	74,964	14,115	89,079	85,617	30,050	115,667	29.9%
ADULT SERVICES AND AGING	0	0	0	0	0	0	
AREA IV SR CITIZENS PLNG COUNCIL	91,700	36,220	127,920	96,000	41,830	137,830	7.8%
BENNETT COUNTY SR CITIZEN CTR ASSOC	20,167	5,119	25,286	21,337	5,116	26,453	4.6%
BLACK HILLS CHILDREN'S HOME	12,872	3,800	16,672	18,792	0	18,792	12.7%
BLACK HILLS WORKSHOP/TRAINING CTR	458,000	27,300	485,300			na	
BOX ELDER PIONEER SR CITIZEN CTR	300	0	300	300	0	300	0%
BRIDGEWATER COMMUNITY VAN	5,705	3,952	9,657	9,500	4,865	14,365	48.8%
CANYON LAKE SENIOR CITIZENS CTR	2,263	0	2,263	2,338	0	2,338	3.3%
CHAMBERLAIN ADJ TRAINING CENTER	42,817	na	42,817			na	
COMMUNICATION SERVICE FOR THE DEAF	9,782	373,805	383,587	11,030	415,672	426,702	11.2%
CUSTER AREA SENIOR TRANSPORTATION	9,787	0	9,787	10,125	3,925	14,050	43.6%
DAKOTA MENTAL HEALTH CENTER	5,800	0	5,800	941	0	941	-83.8%
EASTERN PENNINGTON COUNTY TRANSIT	8,249	982	9,231	9,960	740	10,700	15.9%
EUREKA HEALTH CARE CENTER	3,480	0	3,480	3,528	0	3,528	1.4%
FALL RIVER COUNTY E&H SERVICES INC.	13,066	2,454	15,520	14,991	3,254	18,245	17.6%
HURON AREA ATC	67,737	0	67,737	72,780	0	72,780	7.4%
HURON AREA SENIOR CENTER	82,851	32,182	115,033	91,270	41,330	132,600	15.3%
INTER-LAKES COMMUNITY ACTION INC.	120,649	39,440	160,089	155,750	41,560	197,310	23.3%

Table 17 (cont.)	FY 1991			FY 1992			91-92
AGENCY	OPER COST	ADMIN COST	FY 1991 TOTAL	OPER COST	ADMIN COST	FY 1992 TOTAL	% CHNG
KEYSTONE SR CITIZEN CENTER	1,900	0	1,900	1,900	0	1,900	0%
LENNOX LIFE ENRICHMENT FOR ELDERLY	10,899	3,021	13,920	13,360	3,300	16,660	19.7%
LEWIS/CLARK MENTAL HEALTH CENTER	8,605	0	8,605	7,685	0	7,685	-10.7%
LIVE CENTER INC.	49,612	18,125	67,736	78,530	36,210	114,740	69.4%
MEADE COUNTY SR CITIZENS TRANSP.	16,331	0	16,331	17,300	0	17,300	5.9%
MITCHELL RSVP	82,254	4,899	87,153	89,850	11,280	101,130	16.0%
NORTHERN HILLS GENERAL HOSPITAL			na			na	
NORTHERN HILLS TRAINING CENTER	45,788	2,200	47,988	53,232	2,450	55,682	16.0%
RAPID TRANSIT	241,774	78,847	320,621	384,000	79,000	463,000	44.4%
ROSEBUD SIOUX TRIBE	120,760	28,600	149,360	132,020	32,150	164,170	9.9%
RURAL OFFICE OF COMMUNITY SERVICES	165,468	50,423	215,891	176,664	53,000	229,664	6.4%
SANBORN COUNTY RURAL BUS	16,923	6,466	23,389	20,550	7,600	28,150	20.4%
SCOTLAND GOOD SAMARITAN CENTER	6,600	240	6,840	7,171	240	7,411	8.4%
SIOUX FALLS CHILDREN'S HOME	10,887	0	10,887	10,812	0	10,812	-0.7%
SIOUX FALLS PARATRANSIT	530,734	109,266	640,000	481,811	53,804	535,615	-16.3%
SIOUX FALLS TRANSIT	1,574,064	232,985	1,807,049	1,395,755	224,455	1,620,210	-10.3%
SIOUX VOCATIONAL SERVICES INC	141,074	0	141,074	158,000	0	158,000	12.0%
SPEARFISH SR TRANSPORTATION	0	0	0	11,624	3,744	15,368	
SPINK COUNTY SR CITIZENS COUNCIL	29,100	7,800	36,900	35,520	10,730	46,250	25.3%
SR CITIZEN SERVICES INC.	50,972	0	50,972	14,250	0	14,250	-72.0%
SR CITIZENS SERVICES OF VERMILLION	12,305	5,103	17,408	12,695	5,027	17,722	1.8%
YANKTON AREA SR CITIZENS CENTER	14,825	5,222	20,047	16,059	5,244	21,304	6.3%
GRAND TOTAL	$ 4,161,065	$ 1,092,565	$ 5,253,630	$ 3,723,047	$ 1,116,576	$ 4,839,624	-7.9%

While some agencies do anticipate an increase in the FY 1992 budget, most as shown in the above table, anticipate a decreased in the projected budget for FY 1992 by almost 15 percent. Approximately 80 percent of the total budget, for all agencies that

responded, is allocated to operating costs. The remaining 20 percent of the budget pays for administrative and overhead costs. This percentage ratio remains approximately consistent for the estimated 1992 budget of an 80/20 split between operational and administrative costs.

Analysis of Operating Costs

The following set of tables divides the budget into specific operational and administrative costs. This analysis provides a clearer description of what percentage of the budget is allocated to any one item. Additionally, it was anticipated that the three largest providers, having a significantly larger budget, would skew the results of the analysis. Therefore, the percent of the total budget spent on each area is analyzed both with and without the three largest providers.

Table 18 Transit Operating Costs 1991

OPERATING COSTS	TOTAL	% OF TOTAL	RURAL & SPECIALIZED AGENCIES	% OF TOTAL
Wages	2,325,536	59.52%	891,896	49.48%
Fuel	474,083	12.13%	336,144	18.65%
Subcontracting	24,076	0.62%	24,076	1.34%
Vehicle Depreciation	401,654	10.28%	171,044	9.49%
Vehicle Insurance	236,128	6.04%	171,128	9.49%
Radio	10,243	0.26%	4,609	.26%
Staff reimbursement	50,962	1.30%	38,835	2.15%
Other Reimbursement	1,900	0.05%	1,900	.11%
Parts	257,747	6.60%	105,429	5.85%
Subcontracted Maintenance	40,926	1.05%	32,995	1.83%
Other	84,183	2.15%	24,584	1.36%
Total	3,907,439	100.00%	1,802,642	100.00%

Almost 60 percent of the total operating budget is spent on wages. Less than 3.5 percent is spent on sub-contracted or purchased service and maintenance, communications, and staff reimbursements. These figures remain approximately the same for the projected 1992 budget.

Rural and specialized providers spend approximately 50 percent of their total operating budgets on wages. An additional 20 percent of the total Rural & Specialized budget is consumed by fuel costs. This is almost twice as much as the total agencies spend on fuel costs. It is likely that larger agencies can purchase fuel in such a quality that savings are realized because of bulk purchasing. There does not appear to be much diversity in the percent of total budget spend on remaining items parts, reimbursements, and communication costs for Rural & Specialized providers compared to the total.

Table 19
Transit Operating Costs 1992

TRANSIT OPERATIONS	TOTAL	% OF TOTAL	R&S	% OF TOTAL
Wages	2,105,713	64.00%	782,826	55.41%
Fuel	372,116	11.31%	251,035	17.77%
Subcontracting	19,940	0.61%	19,940	1.41%
Vehicle Depreciation	201,495	6.12%	88,017	6.23%
Vehicle Insurance	202,410	6.15%	134,909	9.55%
Radio	6,611	0.20%	1,147	0.08%
Staff Reimbursement	32,713	0.99%	20,887	1.48%
Other Reimbursement	2,000	0.06%	2,000	0.14%
Parts	178,582	5.43%	49,747	3.52%
Subcontracted Maintenance	40,716	1.24%	33,516	2.37%
Other	128,121	3.89%	28,827	2.04%
TOTAL	3,290,417	100.00%	1,412,851	100.00%

With regard to the total projected FY 1992 budget; all costs are estimated to decrease except vehicle insurance, subcontracted maintenance costs, and other costs. However, these figures are estimated to increase by less than one-half of one percent. Figures for rural and specialized providers also remain approximately consistent, with the exception of an approximate 5 percent increase in wages.

Approximately 24 percent of all transit provider budgets are allocated to administrative and overhead costs. Wages account for approximately 43 percent of the total administrative budget. Rural and specialized providers allocated approximately 50 percent of administrative budget to wages. According to the figures in Table 16, professional fees and agency liability and insurance account for approximately 44 percent of the total administrative budget. Only about 5 percent of the administrative budget is devoted to professional fees by rural and specialized agencies. However, rural and specialized agencies devote almost 10 percent of their budgets to insurance.

The remaining 13 percent of the total administrative costs include travel expenses, office supplies, postage and other miscellaneous costs. All receive less than a five percent dedication of the total budget. This pattern of budget distribution is mirrored in the total costs for rural and specialized providers and also applies to travel expenses for rural and specialized providers.

TABLE 20
TABLE ADMINISTRATIVE AND OVERHEAD 1991

Administration and Overhead	Total	% of Total	Rural & Specialized	% of Total
Wages	467,592	42.72%	362,858	53.88%
Profess. Fees	299,039	27.32%	36,995	5.49%
Travel Ex.	45,895	4.19%	37,565	5.58%
Office Sup.	34,286	3.13%	23,824	3.54%
Liability	186,121	17.00%	184,221	27.35%
Postage	23,168	2.12%	17,206	2.55%
Other	38,459	3.51%	10,798	1.60%
Total	1,094,560	100.00%	673,467	100.00%

The FY 1992 schedule of administrative costs reflects multiple changes in the distribution of the total administrative costs. Wages are projected to increase by about 6 percent. Office supply costs are also projected to increase, however only minimally. The table does show a 10 percent decrease in the amount of the budget allocated to professional fees. Liability and insurance is also projected to decrease by about 14 percent. Finally, postage costs are estimated to increase by as much as 17 percent.

The estimated FY 1992 figures for rural and specialized agencies remains approximately the same as FY 1991. Minimal decreases are anticipated in wages, office supplies, and liability and insurance.

TABLE 21
ADMINISTRATION AND OVERHEAD 1992

Administration and Overhead	Total	% of Total	Rural & Specialized	% of Total
Wages	479,274	48.31%	381,956	53.51%
Profess. Fees	178,393	17.98%	39,639	5.55%
Travel Ex.	49,156	4.95%	41,356	5.79%
Office Sup.	31,801	4.95%	21,957	3.08%
Liability	189,399	3.21%	187,480	26.26%
Postage	22,805	19.09%	18,205	2.55%
Other	41,274	2.30%	23,250	3.26%
Total	992,102	100.00%	713,843	100.00%

Perceived Gaps and Anticipated Expansion

Gaps are identified as areas or towns that are served by a transit provider less than once per week. Transit managers were asked to identify the number of unduplicated persons and trips who

need transportation by are presently unserved but the agency. Approximately 46 percent of the total number of agencies indicated that there is an average of 1,488 persons who are identified as in need of transportation but are unserved by the agency.

Eighteen agencies identified an average of 7,089 trips that are unprovided. The percent of unmet trips of the 40,854 total number of trips made by agencies is approximately 17 percent. Should this ridership need be met an agency could expect an average increase in ridership of more than 15 percent; assuming full transportation needs can be met. Further, more than 50 percent of the agencies expect this current unmet need to persist into the future.

To gain a clearer picture of the unmet transit need in South Dakota, agencies listed the area for which gaps in service exist and the types of services needed to address the current unmet need.

- **Provider Comments on Service Gaps**

- These towns are very small and distance is great.
- Alpena - every other week.
- Wessington - 2nd and 4th Wednesday.
- Hitchcock - 1st, 3rd, & 5th Wednesday.
- Iroquois, Yale, Cavour - Fridays (must have 4 riders minimum).
- Emery and Alex are less than once/week. However, the contract we have with Hanson Co. specifies 2 trips/mo.
- All areas except Rapid City and Ellsworth Air Force Base.
- We serve only the city of Yankton, no other areas outside the city limits. Towns, areas, not served at all /country dwellers; Gayville, Volin, Mission Hill, Tabor, Tyndall, Springfield.
- Brandon, Garretson, Baltic, Colton, Dell Rapids, Valley Springs
- We are a nursing home. We offer transportation to our residents, and pickup/take home 5-6 adult care residents 5 days a week. We have made our van available to our community elderly Wednesdays, but no one used it.
- Norris, SD Mellette County.
- Ideal, SD Tripp County.
- Harrel, SD Tripp County.
- Deadwood, Lead, Rapid City.
- Longlake, Leola, Hosmer.
- Major service provided in Lennox - All service is demand.
- Lewis and Clark Mental Health Center mainly provides transportation for clients in the Yankton area.
- Mt. Vernon - Service provided upon request.
- Ethan - Service provided upon request.
- All trips when provided <u>have</u> to have more than five passengers. Door-to-door service - these towns have no housing facilities - rural clients meet in town to meet the bus.
- We make weekly trips to Frankfort - bi-weekly trips to Mellette or NW Spink area. Bi-weekly trips to Aberdeen, Watertown, and Huron areas. Special trips to other areas other than specified about 8 times a year.
- The only towns in the area to be served daily are Sisseton, Britton, Webster, Waubay, Faulkton, Bowdle. Eureka is served three days per week.
- Hecla, Houghton, Frederick, Westport, Claremont, Groton, Columbia, Verdon, Ferney, Stratford, Warner.
- Kadoka has no bus service - Occasionally, some of the Kadoka elderly will use the Philip bus.
- The Kyle van used to service the Potato Creek area, but this has been discontinued.
- Any place outside of Chamberlain.
- There are twelve days of operation per month in Clark, Hamlin and Kingsbury counties.
- The only gaps would be possible evening and weekend service. We have never tried to provide this service because of the known excessive cost.

- St. Onge, Whitewood, Central City, Deadwood, Lead, Pluma (all Lawrence communities, except Spearfish).
- Areas of the community where gaps are present include: Hayward, Norton-Freelich, Tomar-Tuthill, O'Gorman, Western Heights (north half), and southeast Sioux Falls.

- **Provider Comments on Services Needed to Address Unmet Need in South Dakota**

- These towns have very few elderly and handicapped people.
- Medical runs from county to City of Sioux Falls.
- ASA transportation services are very limited. Clients must be eligible for services and only essential trips for medical, shopping for groceries and etc. are allowed. Clients need a system they can use for a wide variety of needs.
- Out of towners (Hitchcock) want the bus to come every week.
- Occasionally, W/C riders have to wait for ride because of amount of riders.
- Requirement of 4 riders is hard for Alpena and Iroquois to meet.
- City bus system that operates past 6 p.m. and on weekends.
- More vehicles, more drivers, larger staff, and more money for program to operate--could then pick up elderly and handicapped in rural areas where no doctor, clinic, pharmacy, nutrition programs, etc., are located.

If Scotland had a meal site for senior citizens, transportation would be helpful, but it is not currently utilized even though we have aggressively made it known of its availability.

- Funds are needed to purchase more vehicles and we will need to go out to these communities to assess their needs.
- A volunteer brings two from Belle Fourche. A BHS vehicle brings two from Deadwood/Lead.
- Providing transportation in surrounding rural areas, more staff, more vehicles.
- Weekend bus service would be nice. People are rather isolated on weekends, especially the handicap. Also evening transportation.
- With 2 additional vehicles, we would station 1 vehicle in Faith and 1 vehicle in McIntosh. Would operate in town daily. Plus Faith could connect with Lemmon bus en route to Rapid City. McIntosh would connect with Lemmon bus en route to Bismarck. Also McIntosh to Lemmon 1 x weekly for medical, shopping, etc. Also, if I had additional operating funds would extend service hours in Bison and Lemmon. In Lemmon, would extend to cover weekends and evening hours for social and community activities, movies, ball games, etc.
- Parkston, Menno, Freeman, Olivet - 1 day a week. Corsica, Platte, Geddes, Lake Andes, Wagner, Dante - additional 2 days a month.
- We have 40 small towns in our area which do not have any transit service-some have a monthly or twice a month trip to a large town. We need newer vehicles in Faulk, Edmunds, and McPherson counties to provide more routes to Aberdeen. We could use

station wagons or mini-vans to serve smaller towns because there are not enough people to fill vans or mini-busses.

- The unmet needs are evening, early morning and weekend trips for employment, medical treatment, church, shopping, business, and socializing. The people outside the city limits are also asking for more rides.
- Martin elderly do not feel they need additional service. I feel a monthly trip to Rapid City would help some of the elderly, i.e. doctor appointments, etc. Martin businesses also get very upset if we take elderly out of town for shopping or doctor appointments.
- Kyle needs to make at least a weekly trip to either Martin or Rapid City. However, the participants are not willing to pay for these services.
- None of those who use the vans (Martin & Kyle) are willing to donate much. They feel the rides should be free. I have spent the last 5 years trying to change this thinking, and have not succeeded yet.
- Transportation is limited on Sundays between 2:00 p.m. and 6:30 a.m. on Mondays due to staff not available.
- Minivan.
- Medical conditions which prohibit lengthy waiting periods for service would benefit from more services. Church and their affiliates as well as transportation to funerals are not currently needs I am able to meet. Transportation to and from airline reservations out of my area.

Immediate Operational Issues Facing South Dakota Agencies

All Section 18 and 16(b)(2) recipients in the state were surveyed to determine managers issues and concerns relevant to improving or expanding transportation services in their respective service areas. Comments provided by the managers grouped around three major issues: funding, service design/service levels, and vehicle design and replacement. The following are excerpts from the provider survey.

Service Levels

- Only public transportation within whole city of Yankton is one taxi, which runs only very sporadically and is too expensive for most people. No public transportation in rural areas and surrounding small towns.

- We have offered transportation to our community one day a week, both contractually with Rural Office of Community Services and on our own at our expense. It has been aggressively promoted, yet no one uses it. It is a waste of time to administer a service that no one uses.

- Communication Service for the Deaf has 3 other offices, Rapid City, Aberdeen, and Pierre. Those areas don't have transportation services for the deaf and hard of hearing clients. There is a great need.

- Increasing numbers of children are receiving services at our agency. We need additional vehicles to serve these children.

- We have many areas and back roads where you wouldn't believe there was even a house. Many of these are a long way out of town. It's very hard on equipment and also hard to decide what to charge these people. Maybe you could help us with this problem with ideas that come from this survey.

- Our service very nicely serves the needs of our people.

Capital Design and Replacement Concerns

- The bus that is equipped with steps makes it hard for those who have arthritic hips and knees to climb the steps and they are embarrassed to use the lift.

- Difficulty for older individuals getting in and out of van. One van services only 7 clients at a time. No air conditioning in van, difficult for individuals on medication in summer.

- We need little vans with lifts to transport people in our city - not big gas users.

- Several of our vehicles are over 100,000 miles and in poor condition. We are desperately trying to replace them by purchasing from federal surplus property and the use of UMTA Section 16(b)(2) grant funds.

Funding Concerns

- We need to increase salary of transit staff. How do we convince boards and legislators of the tremendous responsibility that these people have?

- Transporting the elderly will never be cost efficient. Those that need it the most can't afford the cost.

- New vehicle cost is out of sight.

- Lack of state funding for elderly and handicapped riders.

- The project is very diversified. Money always is a problem and it shouldn't be for the service we provide. Our buses are old but look good and run rather well considering the age. Drivers are underpaid due to funding. Need more staff, especially to assist the elderly and handicap.

- The senior organizations cannot afford any more match. Our donations are very low - especially at Kyle, and I honestly don't believe they will increase unless the Tribe or some organization donates for the riders. Most of my elderly will stay home rather than donate more!

- Our greatest concerns have been for adequate funds for vehicle replacement and operation. Our operating and administrative budgets have been bare bones the past years. Any expansion or improvement would need to be funded entirely by local monies.

Description of Agency's Future Plans

Agency plans for future transportation services included new services, expansion of service area, new equipment, changes in operation strategy and possible reduction in services. Approximately 42 percent of the agencies indicated that plans for new equipment are in the works. Approximately 20 percent of the agencies responded that new services are anticipated, and 20 percent indicated that expansion of the service area is planned for the future. Approximately 4.5 percent of the agencies indicated that they plan to reduce services in the future.

The following list is a compilation of the comments agency managers provided describing the future plans for transportation service:

- **New Services anticipated**
  Serve small towns weekly (1993).
  Upon request.
  New senior housing being built (1992).

- **Expand Service Area**
  Expanded service to other towns.
  May expand county wide.

- **New Equipment**
  Replacement (1995/2000).
  Replace vehicle (1992).
  Get larger van.
  New mini-bus (1993).
  Replacement Vehicles.

Replacement Vehicles; radio equipment for 2 vehicles.
Minivan (1994).
New van (1993).
8 passenger van with wheel chair ramp (Within 1 year).
Busses are old (when monies are available).

- **New Operating Strategy**
  Promote public transportation.
  Lift equipped.
  More advertising all year.
  Better scheduling (immediately).

- **Experimental Project**
  Expanding of trips/day (1993-94).
  Mini trips for entertainment (Trying now).

- **New Service Area**
  Start a transportation system (June 1992).
  Transportation of vocational rehabilitation clients. (November 1, 1991).

- **Reduce Service**
  No longer can afford (Immediately).

- **Other**
  Support Community Efforts - Transportation tickets for the low income elderly is administered by us as most of these people are clients and we don't have to set up a system to screen and get information to be considered eligible. We already have access to that information.

  We plan to change our name and advertise our service as "Public."

  With the present funding problems we are trying to exist and will plan for the future more if State funding is a possibility.

  More participation.

  At this point, my goal is to just maintain the services we currently provide. If we had adequate funding and could find reliable drivers, I would like to offer out-of-town trips for Kyle especially. But without the participants' assuming part of the costs, I question whether it will happen. Of course, I will continue to market the services we provide and try to increase riders on a local basis. But again, the ones who need the rides are the ones who won't donate (not even $.25)

The following comments were provided by the urban agencies. Sioux Falls Transit plans to replace vehicles. Additionally, they plan to change their operating strategy to accommodate (per ADA) "shorter mileage, longer time, and fewer stops." SFT also plans to engage in the experimental project 85% ethanol project. Finally, they plan on a reduction of services per ADA. Sioux Falls Para Transit (SFPT) indicated that it is considering a new operating strategy of contracting with private operators. RTS will begin fixed route transit service in July 1992. It will provide complementary paratransit service as required under UMTA.

Summary of South Dakota Transit Services Inventory

- There are two urbanized areas in South Dakota as defined by the Urban Mass Transportation Act: Minnehaha (Sioux Falls) and Pennington (Rapid City) Counties. Both urbanized areas receive formula allocations from Section 9 the Urban Mass Transportation Act, which is distributed in each urbanized area of 50,000 population or more. FY91 allocations to the urbanized areas total approximately $845,100.

- Non-urbanized transportation, by Urban Mass Transportation Administration definition, is any transportation provided in areas of less than 50,000 population. The primary funding source for rural public transportation services is Section 18 of the Urban Mass Transportation Act which provides capital, administrative, and operating funds. The FY91 allocation to South Dakota was approximately $424,600.

- Specialized services in the state include those targeted for specific user groups; primarily elderly or disabled passengers, either in urban or rural areas. The South Dakota Department of Social Services and the Department of Transportation receive money from Title III-B of the Older Americans' Act to fund capital purchases and operating expenses. Twenty-one agencies in South Dakota receive operating funds from the Title III-B program for transportation services.

- The purpose of the written survey was to update operational statistics of existing systems, determine plans for service development, and determine service gaps and problems as perceived by the operations. A total of 41 surveys were returned for inclusion in the database, a response rate of 47 percent. The response provides a sufficient sample from which to draw conclusions about the status of South Dakota transit, to determine development trends for the future, and to make a general assessment of service gaps in the state.

- Thirty-nine of the agencies are direct providers of transportation; in addition to other social services. Approximately half of the agencies provide health care, social services, and/or nutrition services. Other common services offered included counseling, job training and information/referral services.

- 39 percent of the agencies surveyed offer a repetitively scheduled transportation service operating on regular routes. 73 percent provide demand-responsive (Call-a Ride, Reserve-a-Ride) service. Eleven out of the 30 agencies that offer demand-responsive service require advance reservations. About half of the agencies that responded offer regularly scheduled transportation, but do not operate on an established route system.

- Approximately 62 percent of all trip purposes are for daily needs or activities health (20%), nutrition (20%), shopping (11%) and recreation (10%) purposes. Approximately 8 percent of the trips are listed as for other purposes (3%) or are for unknown trip purposes. The remaining 30 percent of trips are for employment including volunteer employment (10%), education (8%), social interaction (6%), personal needs(4), social services (3), lively-hood support (1%).

- Direct Transportation service is most frequently offered during weekdays. Less than 50 percent of the agencies surveyed offer direct services on the weekends.

- Twenty-four, or 58 percent of the responding agencies operate their own transportation system with staff assigned specifically for that purpose. Approximately 71 percent of the agencies employ paid full-time drivers; 83 percent employ paid part-time drivers. An average of 5 drivers are employed by the agencies.

- Two-thirds of the total staff hours (3,988) are devoted to the function of providing direct transportation to passengers. Approximately 74 percent of the total average annual staff hours are allocated to drivers. Rural and specialized service agencies also spend about 20 percent of their staff hours on administrative functions. Less than 10 percent, of staff hours is devoted to the functions of maintenance and dispatch. Urban public systems reported greater allocation of staff time to the maintenance and dispatch function. Urban public systems also have a higher proportion of staff hours devoted to the function of providing maintenance. It is likely that it is more cost effective for large providers to retain,on staff, their maintenance personnel, while small providers are more likely to contract for such services.

- 41 percent of the respondents indicated that they are interested in coordination; 18 percent responded perhaps; twenty-three percent indicated that it was doubtful or that they would definitely would not want to participate in the arrangement and coordination of services. Eighteen percent indicated that they definitely would not want to participate in coordination activities.

- About a third of the respondents indicated that there would be no anticipated problems with their clients riding with clients from other agencies. About 46 percent indicated that some problems could be expected. Finally, 21.2 percent of the respondents indicated that there would be numerous problems with such a system and of that number, 2.6 percent

indicated that it would be impossible, clients could not ride with clients of other agencies.

- More than one-third of the respondents identified the following as barriers to coordination: "not enough vehicles," "other," "client attitudes and preferences," and "geographic location (too many miles to nearest other provider)." Approximately one-fourth of the respondents cited the following problems in coordination: "expected reduction in quality," "coverage," and efficiency of service;" "not enough seats on vehicles;" and "problems with accountability, paperwork, and billing."

- Of the 200 vehicles listed by the rural and specialized providers, 106 vehicles are eligible for replacement by FY 1997. Of this, 35 percent are eligible by FY 93. Eligibility is determined by mileage. Therefore some vehicles maybe eligible based on the model year.

- There is an average of 12 seats per vehicle and all but one vehicle of the 116 are owned by the operating agency. Approximately 27 percent of the agencies provide a lift or ramp to client and there are an average of 60 wheelchair stations operated by the 41 agencies. Additionally, only 43 percent of the respondents indicated that they had communication capabilities through radio, citizens ban, or telephone access.

- Of the 31 agencies providing revenue sources on the survey, an average of $58,609 was received from federal sources; $53,474 from local sources; and $17,651 from fares. Additionally, agencies receive $7,011 from other sources. The total average amount of revenues received is $139,882 and responses ranged from a low of $300 to a high of $1,807,049.

- In FY 1991 approximately 78%, a total of 3,907,439, of the total operating budget is allocated for operating costs. The remaining 22 percent, a total of 1,094,560 is allocated to Administration costs. This ratio is estimated to remain constant for FY 1992.

- Rural and specialized providers spend approximately 50 percent of their total operating budgets on wages. An additional 20 percent of the total Rural & Specialized budget is consumed by fuel costs. This is almost twice as much as the total agencies spend on fuel costs.

- Approximately 46 percent of the total number of agencies indicated that there is an average of 1,488 persons who are identified as in need of transportation and the agency is unable to serve. Eighteen agencies identified an average of 7,089 trips that are unprovided. The percent of unmet trips of the 40,854 total number of trips made by agencies is approximately 17 percent. More than 50 percent of the agencies expect this current unmet need to persist into the future.

- Comments provided by the responding agency managers regarding immediate operational issues facing South Dakota Agencies grouped around three major issues: funding, service design/service levels, and vehicle design and replacement.

Endnotes

1. Sioux Falls Paratransit Program Plan, Draft. Department of Planning and Building Services and Sioux Falls Transit/Paratransit, Sioux Falls, South Dakota, November 8, 1991.

2. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal Year 1990

3. SDDOT, Public and Special Transportation in South Dakota, Statistical Report for Fiscal Year 1990.

4. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal year 1990.

5. South Dakota Department of Transportation, Public and Special Transportation in South Dakota, Statistical Report for Fiscal Year 1990.

Explanation of Provider Data Base and Replacement Schedules for 41 South Dakota Transit Agencies.

The following tables supplement the information provided in Appendix F. The first table: South Dakota Provider Data Base lists the Agencies, vehicles and vehicle information. This table includes only those agencies and vehicles for which complete information was available. Thirty-two agencies provided information on a total of 161 vehicles. There were 240 Vehicles identified by all agencies.

Of the 240 vehicles, 40 were listed by urban providers and are listed in the Supplement Table 8: Urban Transit Data: Replacement Schedule. Further more since urban vehicles have a different replacement schedule than to rural and specialized providers, no replacement estimation was preformed in this section of the report. The remaining 39 vehicles of the original 240 are vehicles listed by agencies that did not provide complete information on the vehicles and therefore no replacement estimation could be preformed. A listing of the Vehicles with missing data appears in Supplement Table 9. A complete methodological discussion of replacement scheduling and the results is contained in appendix F.

The following replacement tables list the vehicles to be replaced in that study year and summarize the data for Replacement Schedule Year 1992, 1993, 1994, 1995, 1996, and 1997. Finally, of the 240 vehicles, 54 of the vehicles are estimated to be replaced sometime beyond the study period. A list of these vehicles appears in Summary Table 10.

Supplement Table 1
South Dakota Provider Data Base Transportation Study - 1990

Agency	OP Cost	Vehl Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
A5T, Sisseton	91700	Chev	1991	Van	13	7,250	14,715	Own	Sec. 18	Lift	2	Radio	1999
A5T, Sisseton	0	Ford	1988	Van	10	20,703	7,025	Own	16B2	Lift	2	Radio	1997
A5T, Sisseton	0	Ford	1988	Van	15	66,070	22,701	Own	16B2	None	0	Radio	1994
A5T, Sisseton	0	Ford	1987	Sedn	6	127,500	31,220	Own	16B2	None	0	Radio	1993
A5T, Sisseton	0	Chev	1985	Van	12	66,410	11,412	Own	16B2	None	0	Radio	1995
A5T, Sisseton	0	Ford	1985	Van	13	29,404	4,534	Own	16B2	Lift	2	Radio	1998
A5T, Sisseton	0	Ford	1984	Van	10	78,284	7,983	Own	Sec. 18	RMP	1	Radio	1994
A5T, Sisseton	0	Dodg	1979	Van	14	166,294	4,346	Own	16B2	None	0	Radio	1994
A5T, Sisseton	0	Ford	1979	Van	12	158,965	1,028	Lse	16B2	None	0	Radio	1994
A5T, Sisseton	0	Ford	1975	Van	12	91,000	1,551	Own	OASA	None	0	Radio	1994
AASC, Aberdeen	74964	Ford	1984	Miniv	17	94,548	12,252	Own	UMTA	None	0	Radio	1992
AASC, Aberdeen	0	Ford	1985	Miniv	17	79,037	11,784	Own	UMTA	None	0	Radio	1994
AASC, Aberdeen	0	Ford	1986	Van	15	90,313	16,271	Own	UMTA	None	0	Radio	1993
AASC, Aberdeen	0	Ford	1988	Miniv	6	50,386	19,914	Own	UMTA	Lift	2	Radio	1995
ATC, Chamberlain	0	Plym	1983	Sedn	5	89,637	3,392	Own	Agency	None	None	None	1993
ATC, Chamberlain	0	Chev	1988	Miniv	8	35,040	10,240	Own	16B2	None	None	Radio	1995
ATC, Chamberlain	0	Ford	1986	Van	15	56,932	6,294	Own	16B2	None	None	Radio	1996
ATC, Chamberlain	0	Dodg	1983	Van	15	65,757	4,372	Own	16B2	None	None	Radio	1992
ATC, Chamberlain	0	Dodg	1977	Van	15	77,909	2,456	Own	16B2	None	None	None	1992
ATC, Chamberlain	0	Ford	1988	Sedn	6	40,524	10,262	Own	16B2	None	0	None	1994
BCSC, Martin	0	Ford	1986	Van	15	133,538	22,732	Own	16B2	Ramp	None	St. Band	1992
BCSC, Martin	20167	Ford	1988	Van	15	24,994	6,900	Own	16B2	Ramp	None	St. Band	2000
BEPSC,Box Elder	300	Ford	1989	Sedn	4	2,300	10,000	Own	Spec.	NA	0	DNA	1999
BHCH, Rapid City	0		1988	Van	15	0	18,000	Own	NR	0	0	None	NR
BHCH, Rapid City			1990	Van	15	0	21612	Own	NR	0	0	None	NR

Agency	OP Cost	Vehl Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
BHWCH, Rapid City	458000	Ford	1979	Van	8	136329	9465	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1981	Van	12	132,091	6,935	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1981	Van	12	101,592	3,303	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1979	Van	8	132,859	4,007	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1979	Van	8	110,308	6,680	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1978	Van	8	133,928	7,830	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1979	Van	8	101,635	8,042	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1979	Van	15	129,771	15,150	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1984	Van	15	89,262	35,819	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1980	Van	12	149,858	11,358	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1980	Van	12	143,780	3,059	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1981	Van	12	94,165	18,593	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1983	Van	5	83,522	5,203	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1984	Van	8	43,970	21,748	Own	NR	NR	NR	NR	1993
BHWCH, Rapid City	0	Ford	1984	Van	8	99,254	18,525	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1984	Van	15	130,018	7,637	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1985	Van	12	69,473	3,749	Own	NR	NR	NR	NR	1993
BHWCH, Rapid City	0	Dodg	1985	Van	15	92,342	11,770	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Dodg	1985	Van	5	78,365	9,364	Own	NR	NR	NR	NR	1993
BHWCH, Rapid City	0	Ford	1985	Van	12	116,458	6,747	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1986	Van	12	36,205	10,353	Own	NR	NR	NR	NR	1995
BHWCH, Rapid City	0	Ford	1986	Van	12	80,713	10,383	Own	NR	NR	NR	NR	1994
BHWCH, Rapid City	0	Ford	1986	Van	15	101,110	16,298	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1987	Van	10	27,850	7,651	Own	16B2	Lift	2	NR	1996

Agency	OP Cost	Vehl Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
BHWCH, Rapid City	0	Dodg	1987	Van	15	89,858	1,006	Own	NR	NR	NR	NR	1995
BHWCH, Rapid City	0	Dodg	1987	Van	5	85,489	17,832	Own	NR	NR	NR	NR	1995
BHWCH, Rapid City	0	Ford	1989	Van	15	18,254	12,105	Own	16B2	NR	NR	NR	1998
BHWCH, Rapid City	0	Ford	1989	Van	15	16,163	11,642	Own	16B2	NR	NR	NR	1998
BHWCH, Rapid City	0	Ford	1990	Van	15	27,609	27,609	Own	16B2	NR	NR	NR	1998
BHWCH, Rapid City	0	I.H.	1972	Bus	36	162,089	13,433	Own	NR	NR	NR	Radio	1991
BHWCH, Rapid City	0	I.H.	1981	Bus	18	100,308	2,728	Own	NR	Lift	2	Radio	1992
BHWCH, Rapid City	0	Ford	1988	Bus	25	119,150	8,556	Own	NR	NR	NR	Radio	1995
BHWCH, Rapid City	0	I.H.	1977	Bus	24	100,296	5,217	Own	NR	NR	NR	Radio	1992
BHWCH, Rapid City	0	I.H.	1977	Bus	36	159,256	21,428	Own	NR	NR	NR	Radio	1992
BHWCH, Rapid City	0	Chev	1978	Bus	40	116,494	10,254	Own	NR	NR	NR	Radio	1992
BHWCH, Rapid City	0	Chev	1980	Bset	16	97,820	5,046	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1981	Bset	16	109,804	13,543	Own	16B2	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1981	Bset	13	79,224	2,210	Own	16B2	Lift	2	NR	1992
BHWCH, Rapid City	0	Chev	1983	Bset	11	78,538	2,143	Own	16B2	Lift	2	NR	1993
BHWCH, Rapid City	0	Chev	1983	Bset	11	88,820	6,432	Own	16B2	Lift	2	NR	1993
BHWCH, Rapid City	0	Ford	1985	Bset	16	51,749	10,624	Own	16B2	NR	NR	NR	1994
BHWCH, Rapid City	0	Ford	1985	Bset	13	31,421	3,697	Own	16B2	Lift	2	NR	1994
BHWCH, Rapid City	0	Ford	1986	Bset	16	33,433	6,533	Own	16B2	NR	NR	NR	1995
BHWCH, Rapid City	0	Chev	1986	Bset	13	38,963	9,515	Own	16B2	Lift	2	NR	1995
BHWCH, Rapid City	0	Chev	1987	Bset	16	30,113	8,952	Own	16B2	NR	NR	NR	1996
BHWCH, Rapid City	0	Chev	1988	Bset	16	27,853	12,040	Own	16B2	NR	NR	NR	1997
BHWCH, Rapid City	0	Chev	1989	Bset	13	23,734	11,916	Own	16B2	Lift	2	NR	1998
BHWCH, Rapid City	0	Chev	1985	Wag	0	102,804	1,581	Own	NR	NR	NR	NR	1992

Agency	OP Cost	Vehl Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
BHWCH, Rapid City	0	Chev	1986	Wag	0	103,642	2,720	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Pont	1977	Wag	0	103,061	24,429	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1976	LTD	0	134,061	59,192	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Ford	1978	LTD	0	89,377	2,744	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Olds	1980	Wag	0	32,357	10,866	Own	NR	NR	NR	NR	1992
BHWCH, Rapid City	0	Chev	1984	Wag	0	87,209	12,439	Own	NR	NR	NR	NR	1992
BSC, Bridgewater	5705	Ford	1990	Van 12-1	15	13,000	NA	Own	UMTA	Ramp	0	Radio	1996
CAST, Custer	0	Chev	1986	Van	10	40106	11425	Own	16B2	Lift	2	None	NR
CLSC, Rapid City	2263	Ford	1973	Van	12	80,620	4,902	Own	Pvt. Gft	None	0	None	1995
CSD, Sioux Falls	9782	Ford	1987	Van	13	57,433	8,588	Own	NR	None	None	Radio	1994
DHCF, Spearfish	0	Chev	1981	Van	15	71,043	NR	Own	NR	None	None	Radio	1993
DMH, Mitchell	5800	E350	1986	Van	15	48,798	9,361	Own	NR	Lift	NR	None	NR
EHCC, Eureka	3450	Ford	1985	Van	13	29,022	5,271	Own	AR.5 Trns.	Lift	1	Radio	1995
EPCT, Wall	8249	Ford	1986	Van	15	55,594	8,470	Own	UMTA	None	1	None	1993
FRCEHS, Hot Spg.	13066	Ford	1985	Van	14	69,787	17,048	Own	18	Lift	1	Phone	1993
HASC, Huron	82851	Maxi	1983	Van	15	122,099	17,794	Own	UMTA	None	0	Radio	1990
HASC, Huron	0	Ford	1988	Mvan	16	92,311	14,701	Own	Sec.18	None	0	Radio	1991
HASC, Huron	0	Wgn	1989	Mvan	24	54,150	14,641	Own	Sec.18	None	0	Radio	1993
HASC, Huron	0	Chap	1991	Mvan	9	32,165	11,035	Own	16B2	Lift	2	Radio	1996
HASC, Huron	0	Ford	1991	Mvan	16	8,713	8,713	Own	16B2	None	0	Radio	1998
HAATC, Huron	67737	Dodg	1976	P-up	NR	180,896	600	Own	16B2	NR	NR	None	NR
HAATC, Huron	0	Malib	1977	Wag	NR	197,800	13,928	Own	16B2	NR	NR	None	1991
HAATC, Huron	0	Chev	1979	Van	NR	124,598	11,092	Own	16B2	NR	NR	None	1994
HAATC, Huron	0	GMC	1979	Van	NR	90,900	10,620	Own	16B2	NR	NR	None	1991
HAATC, Huron	0	Dodg	1981	P-up	NR	67,189	1,679	Own	16B2	NR	NR	None	NR
HAATC, Huron	0	Plym	1983	Sedn	NR	97,681	11,830	Own	16B2	NR	NR	None	1992
HAATC, Huron	0	Capr	1994	Wag	NR	97,836	3,421	Own	16B2	NR	NR	None	1993
HAATC, Huron	0	Dodg	1985	Van	NR	98,177	11,159	Own	16B2	NR	NR	None	1992
HAATC, Huron	0	Chev	1986	Mbus	NR	59,912	19,982	Own	16B2	NR	NR	None	1994
HAATC, Huron	0	Fore	1987	Van	NR	68,126	17,619	Own	16B2	NR	NR	None	1993

Agency	OP Cost	Vehi Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
HAATC, Huron	0	Dodg	1990	Van	NR	15,497	2,875	Own	16B2	NR	NR	None	1996
HAATC, Huron	0	Ford	1990	Mbus	NR	10,975	6,665	Own	16B2	NR	NR	None	1995
ILCA, Brookings	120649	Ford	1984	Mvan	19	167,633	18,123	Own	UMTA	Lift	2	Radio	1991
ILCA, Brookings	0	Ford	1987	Van	12	64,224	14,551	Own	UMTA	Lift	1	Radio	1993
ILCA, Brookings	0	Ford	1986	Mvan	19	88,932	15,675	Own	UMTA	Lift	2	Radio	1995
ILCA, Brookings	0	Chev	1987	Van	16	46,948	11,008	Own	UMTA	None	0	None	1995
ILCA, Brookings	0	Ford	1987	Van	12	38,278	11,444	Own	UMTA	Lift	1	None	1996
ILCA, Brookings	0	Ford	1988	Van	12	18,257	6,309	Own	UMTA	Lift	1	Radio	2005
ILCA, Brookings	0	Ford	1982	Van	12	148,670	4,585	Own	UMTA	Lift	1	None	1995
ILCA, Brookings	0	Chev	1986	Van	12	70,139	11,842	Own	UMTA	Lift	1	Radio	1993
ILCA, Brookings	0	Ford	1988	Van	15	75,859	23,007	Own	UMTA	Ramp	1	Radio	1992
LCMHC, Yankton	8605	Ford	1986	Mvan	8	89,279	9,576	Own	16B2	None	None	None	NR
LCMHC, Yankton	0	Chev	1978	Mvan	9	125,353	2,748	Own	General	None	None	None	NR
LIVE, Lemmon	49611	Ford	1980	Van	8	115,000	4,768	Own	16B2	Lift	2	Radio	1993
LIVE, Lemmon	0	Ford	1982	Van	5	385,000	35,889	Own	Live	None	0	Radio	1992
LIVE, Lemmon	0	Dodg	1985	Van	15	84,000	4,141	Own	16B2	None	0	Radio	1995
LIVE, Lemmon	0	Dodg	1985	Van	15	97,000	13,262	Own	16B2	None	0	Radio	1994
LIVE, Lemmon	0	Dodg	1987	Van	15	106,000	15,074	Own	Live	None	0	Radio	1992
LIVE, Lemmon	0	Chev	1987	Wag	NR	85,500	19,600	Own	Live	None	0	Radio	1993
LIVE, Lemmon	0	Ford	1988	Mbus	10	22,500	6,433	Own	16B2	Lift	1	Radio	NR
LIVE, Lemmon	0	Chev	1990	Mbus	16	10,000	2,882	Own	16B2	None	0	Radio	NR
LLEFTEC, Lennox	10899	Ford	1984	Mbus	17	36,514	6,320	Own	Sec. 18	Ramp	NR	Radio	1994
NHTC, Spearfish	0	Ford	1988	Sedn	8	26,514	8,314	Own	Medaid	None	NR	None	1994
NHTC, Spearfish	0	Ford	1984	Van	15	55,468	7,938	Own	Medaid	Lift	1	Radio	1993
NHTC, Spearfish	0	Ford	1991	Bus	26	4,055	6,046	Own	Medaid	None	NR	Radio	1994
NHTC, Spearfish	0	Chev	1990	Sedn	7	26,146	17,143	Own	16B2	None	NR	None	1996
NHTC, Spearfish	0	Dodg	1987	Sedn	7	57,045	11,358	own	16B2	None	NR	None	1993
NHTC, Spearfish	0	Dodg	1990	Sedn	7	15,182	8,880	own	16B2	None	NR	Noe	1995
RSTT, Rosebud	120760	Ford	1988	Van	8	73,089	NR	Own	Sec. 18	DNA	DNA	Radio	NR
RSTT, Rosebud	0	Ford	1988	Van	8	96,332	NR	Own	Sec. 18	DNA	DNA	Radio	NR
RSTT, Rosebud	0	Ford	1987	Van	8	102,418	NR	Own	Sec. 18	Ramp	2	Radio	NR

Agency	OP Cost	Vehi Mod	Year	Type	Cap	Current Odom.	FY90 TotMil	Own Lse	Fund Source	Ramp Lift	W.C St.	Radio CB/PH	Yr. Rpl.
RSTT, Rosebud	0	GMC	1985	Van	8	140,782	NR	Own	Sec. 18	DNA	DNA	Radio	NR
RSTT, Rosebud	0	Ford	1986	Van	15	115,808	NR	Own	Sec. 18	DNA	DNA	None	NR
RSTT, Rosebud	0	Ford	1986	Van	15	125,090	NR	Own	Sec. 18	DNA	DNA	None	1992
RSTT, Rosebud	0	Ford	1980	Sedn	5	117,164	NR	Own	Sec. 18	DNA	DNA	Radio	1992
RSVP, Mitchell	82254	Chev	1981	Van	19	42,231	DNA	Own	Sec. 18	Lift	2	Radio	1993
RSVP, Mitchell	0	Chev	1980	Van	11	39,238	10,209	Own	Sec. 18	Lift	0	Radio	1994
RSVP, Mitchell	0	Chev	1982	Van	16	28,020	11,183	Own	Sec. 18	NR	0	Radio	1995
RSVP, Mitchell	0	Ford	1985	Van	16	98,117	13,923	Own	Sec. 18	NR	0	Radio	1994
RSVP, Mitchell	0	Ford	1987	Van	9	44,748	7,139	Own	16B2	Lift	2	Radio	1996
SCSCC, Redfield	29100	Ford	1988	Van	15	56,865	20,997	Own	Fed&Co	None	None	Radio	1994
SCSCC, Redfield	0	Chev	1979	Mbus	13	123,468	3,497	Own	Fed&Co	Lift	2	Radio	1990
SCSCC, Redfield	0	Ford	1980	Van	11	83,684	10,485	Own	Fed&Co	NR	NR	Radio	1993
SCSV Inc, Vermillion	12305	Ford	1988	Mvan	12	33,306	8,183	Own	16B2	Lift	1	Radio	1994
SCRB, Woonsocket	16923	Chev	1990	Van	15	41,166	23,404	Own	Fed&Co	Lift	NR	Radio/ CB	1993
SGSCNH, Scotland	6600	Ford	1981	Mvan	14	31,569	NR	Own	16B2	Lift	2	Radio/ CB	1996
SSTC, Spearfish	11624	Dodg	1979	Van	14	67,866	0	Own	NA	None	None	Radio	1993
SVS, Sioux Falls	141074	Ford	1987	Van	15	NR	9,000	Own	16B2	None	None	None	1997
SVS, Sioux Falls	0	Ford	1986	Van	15	NR	9,000	Own	16B2	None	None	None	1996
SVS, Sioux Falls	0	Ford	1985	Van	15	NR	9,000	Own	16B2	None	None	None	1995
SVS, Sioux Falls	0	Ford	1984	Van	15	NR	9,000	Own	16B2	None	None	None	1994
SVS, Sioux Falls	0	Chev	1990	Van	12	NR	9,000	Own	16B2	Lift	1	None	2000
SVS, Sioux Falls	0	Chev	1983	Van	12	NR	9,000	Own	16B2	Lift	1	None	1998
SVS, Sioux Falls	0	Chev	1989	Sedn	7	NR	12,000	Own	16B2	None	None	None	1999
SVS, Sioux Falls	0	Ford	1988	Sedn	7	NR	12,000	Own	16B2	None	None	None	1998
YASCC, Yankton	14825	Chev	1984	Van	13	64,751	12,278	Own	16B2	NR	1	Radio	1993
TOTAL 161 Vehicles	1469263				12	74,832	10,235	160		45	60	70	
					AVG	AVG	AVG			26.88%		43.75%	

Supplement Table 2
FY 1992

Vehicle Replacement Schedule: 1992
Vehicles eligible for replacement: 1992
Rural and Specialized Agencies Responding to 1991 Survey

Agency	Agency Type	Operating Cost	Vehicle Model	Year	Type	Seating Capac	Current Odometer	FY90 TotMile	FY92 TotMile	Own/ Lease	Ramp/ Lift	Wheelchair Stations	Radio/CB or Phone	Expected Replacement
LIVE, Lemmon	18	0	Ford	1982	Van	5	385,000	35,889	420889	Own	None	0	Radio	1992
HAATC, Huron	16	0	Malibu	1977	Wagon	NR	197,800	13,928	211728	Own	NR	NR	None	1991
BHWCH, Rapid City	16	0	Ford	1976	LTD	0	134,061	59,192	193253	Own	NR	NR	NR	1992
ILCA, Brookings	18	120,649	Ford	1984	Minivan	19	167,633	18,123	185756	Own	Lift	2	Radio	1991
HAATC, Huron	16	67,737	Dodge	1976	Pick-up	NR	180,896	600	181496	Own	NR	NR	None	NR
BHWCH, Rapid City	16	0	I.H.	1977	Bus	36	159,256	21,428	180684	Own	NR	NR	Radio	1992
BHWCH, Rapid City	16	0	I.H.	1972	Bus	36	162,089	13,433	175522	Own	NR	NR	Radio	1991
AST, Sisseton	18	0	Dodge	1979	Van	14	166,294	4,346	170640	Own	None	0	Radio	1994
BHWCH, Rapid City	16	0	Dodge	1980	Van	12	149,858	11,358	161216	Own	NR	NR	NR	1992
AST, Sisseton	18	0	Ford	1979	Van	12	156,965	1,028	159993	Lease	None	0	Radio	1994
AST, Sisseton	18	0	Ford	1987	Sedan	6	127,500	31,220	158720	Own	None	0	Radio	1993
BCSC, Martin	16	0	Ford	1986	Van	15	133,538	22,732	156270	Own	Ramp	None	St. Band	1992
ILCA, Brookings	18	0	Ford	1982	Van	12	148,670	4,585	153255	Own	Lift	1	None	1995
BHWCH, Rapid City	16	0	Dodge	1980	Van	12	143,780	3,059	146839	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	458,000	Ford	1979	Van	8	136,329	9,465	145794	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Dodge	1979	Van	15	129,771	15,150	144921	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Chev	1978	Van	8	133,928	7,830	141758	Own	NR	NR	NR	1992
RSTT, Rosebud	18	0	GMAC	1985	Van	8	140,782	NR	140782	Own	DNA	DNA	Radio	NR
HASC, Huron	18	82,851	Mad	1983	Van	15	122,099	17,794	139893	Own	None	0	Radio	1990
BHWCH, Rapid City	16	0	Chev	1981	Van	12	132,091	6,935	139026	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Ford	1984	Van	15	130,018	7,637	137655	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Chev	1979	Van	8	132,859	4,007	136866	Own	NR	NR	NR	1992
HAATC, Huron	16	0	Chev	1979	Van	NR	124,598	11,092	135690	Own	NR	NR	None	1994
LCMHC, Yankton	16	0	Chev	1978	Minivan	9	125,353	2,748	128101	Own	None	None	None	NR
BHWCH, Rapid City	16	0	Ford	1988	Bus	25	119,150	8,556	127706	Own	NR	NR	Radio	1995
BHWCH, Rapid City	16	0	Pont	1977	Wagon	0	103,061	24,429	127490	Own	NR	NR	NR	1992
SCSCC, Redfield	18	0	Chev	1979	Minibus	13	123,468	3,497	126965	Own	Lift	2	Radio	1990
BHWCH, Rapid City	16	0	Chev	1978	Bus	40	116,494	10,254	126748	Own	NR	NR	Radio	1992
RSTT, Rosebud	18	0	Ford	1986	Van	15	125,090	NR	125090	Own	DNA	DNA	None	1992
BHWCH, Rapid City	16	0	Dodge	1984	Van	15	89,262	35,819	125081	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Chev	1981	Busette	16	109,804	13,543	123347	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Chev	1981	Busette	16	109,804	13,543	123347	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Ford	1985	Van	12	116,458	6,747	123205	Own	NR	NR	NR	1992
LIVE, Lemmon	18	0	Dodge	1987	Van	15	106,000	15,074	121074	Own	None	0	Radio	1992
LIVE, Lemmon	18	49,611	Ford	1990	Van	8	115,000	4,768	119768	Own	Lift	2	Radio	1993
BHWCH, Rapid City	16	0	Ford	1984	Van	8	99,254	18,525	117779	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Ford	1986	Van	15	101,110	16,298	117408	Own	NR	NR	NR	1992
RSTT, Rosebud	18	0	Ford	1990	Sedan	5	117,164	NR	117164	Own	DNA	DNA	Radio	1992
BHWCH, Rapid City	16	0	Chev	1979	Van	8	110,308	6,680	116988	Own	NR	NR	NR	1992
RSTT, Rosebud	18	0	Ford	1986	Van	15	115,808	NR	115808	Own	DNA	DNA	None	NR
BHWCH, Rapid City	16	0	Ford	1981	Van	12	94,165	18,593	112758	Own	NR	NR	NR	1992
RSVP, Mitchell	18	0	Ford	1985	Van	16	96,117	13,923	112040	Own	NR	0	Radio	1994
LIVE, Lemmon	18	0	Dodge	1985	Van	15	97,000	13,262	110262	Own	None	0	Radio	1994
BHWCH, Rapid City	16	0	Chev	1979	Van	8	101,635	8,042	109677	Own	NR	NR	NR	1992
HAATC, Huron	16	0	Plymouth	1983	Sedan	NR	97,681	11,830	109511	Own	NR	NR	None	1992
HAATC, Huron	16	0	Dodge	1985	Van	NR	96,177	11,159	109336	Own	NR	NR	None	1992
HASC, Huron	18	0	Ford	1988	Minivan	16	92,311	14,701	107012	Own	None	0	Radio	1991
AASC, Aberdeen	18	74,964	Ford	1984	Minivan	17	94,548	12,252	106800	Own	None	0	Radio	1992
AASC, Aberdeen	18	0	Ford	1986	Van	15	90,313	16,271	106584	Own	None	0	Radio	1993
BHWCH, Rapid City	16	0	Chev	1986	Wagon	0	103,642	2,720	106362	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	I.H.	1977	Bus	24	100,296	5,217	105513	Own	NR	NR	Radio	1992
LIVE, Lemmon	18	0	Chev	1987	Wagon	NR	85,500	19,600	105100	Own	None	0	Radio	1993
BHWCH, Rapid City	16	0	Ford	1981	Van	12	101,592	3,303	104895	Own	NR	NR	NR	1992
ILCA, Brookings	18	0	Ford	1986	Minivan	19	88,932	15,675	104607	Own	Lift	2	Radio	1995
BHWCH, Rapid City	16	0	Chev	1985	Wagon	0	102,804	1,581	104385	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Dodge	1985	Van	15	92,342	11,770	104112	Own	NR	NR	NR	1992
BHWCH, Rapid City	16	0	Dodge	1987	Van	15	96,831	6,607	103438	Own	NR	NR	NR	1995
BHWCH, Rapid City	16	0	Dodge	1987	Van	5	85,489	17,832	103321	Own	NR	NR	NR	1995
BHWCH, Rapid City	16	0	I.H.	1981	Bus	18	100,308	2,728	103036	Own	Lift	2	Radio	1992
BHWCH, Rapid City	16	0	Chev	1980	Busette	16	97,820	5,046	102866	Own	NR	NR	NR	1992
RSTT, Rosebud	18	0	Ford	1987	Van	8	102,418	NR	102418	Own	Ramp	2	Radio	NR
HAATC, Huron	16	0	GMC	1979	Van	NR	90,900	10,620	101520	Own	NR	NR	None	1991
HAATC, Huron	16	0	Caprice	1984	Wagon	NR	97,836	3,421	101257	Own	NR	NR	None	1993
Total	62	853,812			Average		122,601	11,515	134,116		8	13	26	

Section 18 22
Section 16 (B)(2) 40

Supplement Table 3
FY 1993

Vehicle Replacement Schedule: 1993
Vehicles elegible for replacement: 1993

Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Seat Cap	Current Odometer	FY90 TotMile	FY93 TotMile	Ownv Lease	Ramp/ Lift	Wheelchair Stations	Radio/CB or Phone	Year of Expected Replaceme
ILCA, Brookings	18	0	Ford	1988	Van	15	75,859	23,007	121873	Own	Ramp	1	Radio	1992
BHWCH, Rapid City	16	0	Chev	1984	St.Wagon	0	87,209	12,439	112087	Own	NR	NR	NR	1992
A5T, Sisseton	18	0	Ford	1988	Van	15	66,070	22,701	111472	Own	None	0	Radio	1994
LCMHC, Yankton	16	8605	Ford	1986	Minivan	8	89,279	9,576	108431	Own	None	None	None	NR
SCSCC, Redfield	18	0	Ford	1980	Van	11	83,684	10,485	104654	Own	NR	NR	Radio	1993
FRCEHS, Hot Spg.	16	13066	Ford	1985	Van	14	69,787	17,048	103883	Own	Lift	1	Phone	1993
HAATC, Huron	16	0	Ford	1987	Van	NR	68,126	17,619	103364	Own	NR	NR	None	1993
AASC, Aberdeen	18	0	Ford	1985	Minivan	17	79,037	11,784	102605	Own	None	0	Radio	1994
BHWCH, Rapid City	16	0	Chev	1983	Bussette	11	88,820	6,432	101684	Own	Lift	2	NR	1993
BHWCH, Rapid City	16	0	Ford	1986	Van	12	80,713	10,383	101479	Own	NR	NR	NR	1994
TOTAL 10		21,671			Average:	10	78,858	14,147	107,153	10	3	4	5	

Section 18	4
Section 16(b)(2)	6

Supplement Table 4
FY 1994

Vehicle Replacement Schedule: 1994
Vehicles elegible for replacement: 1994

Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Sea Cap	Current Odometer	FY90 TotMile	FY93 TotMile	Own/ Lease	Lift/ Ramp	Wheel Statio	Radio/CB or Phone	Expected Replacem
HAATC, Huron	16	0	Chev	1986	Minibus	NR	59,912	19,982	119,858	Own	NR	NR	NONE	1994
SCSCC, Redfield	18	29,100	Ford	1988	Van	15	56,865	20,997	119,856	Own	None	None	Radio	1994
SCRB, Woonsocket	16	16,923	Chev	1990	Van	15	41,166	23,404	111,378	Own	Lift	NR	Radio/CB	1993
BHWCH, Rapid City	16	0	Ford	1990	Van	15	27,609	27,609	110,436	Own	NR	NR	NR	1998
AASC, Aberdeen	18	0	Ford	1988	Minivan	6	50,386	19,914	110,128	Own	Lift	2	Radio	1995
BHWCH, Rapid City	16	0	Chev	1984	Van	8	43,970	21,748	109,214	Own	NR	NR	NR	1993
ILCA, Brookings	18	0	Ford	1987	Van	12	64,224	14,551	107,877	Own	Lift	1	Radio	1993
BHWCH, Rapid City	16	0	Dodge	1985	Van	5	78,365	9,364	106,457	Own	NR	NR	NR	1993
ILCA, Brookings	18	0	Chev	1986	Van	12	70,139	11,842	105,665	Own	Lift	1	Radio	1993
A5T, Sisseton	18	0	Ford	1984	Van	10	78,284	7,983	102,233	Own	Ramp	1	Radio	1994
YASCC, Yankton	16	14,825	Chev	1984	Van	13	64,751	12,278	101,585	Own	NR	1	Radio	1993
A5T, Sisseton	18	0	Chev	1985	Van	12	66,410	11,412	100,646	Own	None	0	Radio	1995
TOTAL 12		60,848			Average:	11	58,379	16,464	107,770	12				

Section 18 6
Section 16(B)(2) 6

Supplement Table 5
FY 1995

Vehicle Replacement Schedule: 1995
Vehicles elegible for replacement: 1995
Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Seat Cap	Current Odometer	FY90 TotMile	FY95 TotMile	Own/	Lift/ Ramp	W.C. ST.	Radio/CB	Year of Expect
HASC, Huron	18	0	Wgn	1989	Minivan	24	54,150	14,641	112714	Own	None	0	Radio	1993
BHWCH, Rapid City	16	0	Dodge	1983	Van	5	83,522	5,203	104334	Own	NR	NR	NR	1992
ATC, Chamberlain	16	0	Plym	1983	Sedan	5	89,637	3,392	103205	Own	None	None	None	1993
NHTC,Spearfish	16	0	Dodge	1987	Sedan	7	57,045	11,358	102477	own	None	NR	None	1993
LIVE, Lemmon	18	0	Dodge	1985	Van	15	84,000	4,141	100564	Own	None	0	Radio	1995
BHWCH, Rapid City	16	0	Ford	1978	LTD	0	89,377	2,744	100353	Own	NR	NR	NR	1992
CLSC, Rapid City	16	2263	Ford	1973	Van	12	80,620	4,902	100228	Own	None	0	None	1995
TOTAL 7					Average:	10	76907	6626	103411		0	0	2	

Section 18	2
Section 16(B)(2)	5

Supplement Table 6
FY 1996

Vehicle Replacement Schedule: 1996
Vehicles elegible for replacement: 1996

Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Seat Cap	Current Odometer	FY90 TotMile	FY96 TotMile	Own/	Lift/ Ramp	W.C. St	Radio/CB	Year of Expect
NHTC,Spearfish	16	0	Chev	1990	Sedan	7	26,146	17,143	125,203	Own	None	NR	None	1995
BHCH, Rapid City	16	0		1990	van	15	0	21,612	126,481	Own	0	0	None	0
BHWCH, Rapid City	16	0	Ford	1985	Bussette	16	51,749	10,624	112,612	Own	NR	NR	NR	1994
ILCA, Brookings	18	0	Chev	1987	Van	16	46,948	11,008	111,381	Own	None	0	None	1995
CSD, Sioux Falls	16	9,782	Ford	1987	Van	13	57,433	8,588	114,018	Own	None	None	Radio	1994
TOTAL 5		9,782			Average:	13	36,455	13,795	117,939	5	0	0	1	

Section 18 1
Section16(B)(2) 4

Supplement Table 7
FY 1997

Vehicle Replacement Schedule: 1997
Vehicles elegible for replacement: 1997
Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Seat Cap	Current Odometer	FY90 TotMile	FY97 TotMile	Own/	Lift/ Ramp	W.C. ST.	Year of Expected	Year of Expect
CAST, Custer	16	0	Chev	1986	van	10	40,106	11,425	108,656	Own	Lift	2	None	NR
BHCH, Rapid City	16	0		1988	van	15	0	18,000	108,000	Own	0	0	none	0
ILCA, Brookings	18	0	Ford	1987	Van	12	38,278	11,444	106,942	Own	Lift	1	None	1996
EPCT, Wall	16	8,249	Ford	1986	Van	15	55,594	8,470	106,414	Own	None	1	None	1993
DMH, Mitchell	16	5,800	E350	1986	Van	15	48,798	9,361	104,964	Own	Lift	NR	None	NR
NHTC,Spearfish	16	0	Ford	1984	Van	15	55,468	7,938	103,096	Own	Lift	1	Radio	1993
ATC, Chamberlain	16	0	Ford	1988	Sedan	6	40,524	10,262	102,096	Own	None	0	None	1994
RSVP, Mitchell	18	0	Chev	1980	Van	11	39,238	10,209	100,492	Own	Lift	0	Radio	1994
AST, Sisseton	18	0	Ford	1975	Van	12	91,000	1,551	100,306	Own	None	0	Radio	1994
BHWCH, Rapid City	16	0	Chev	1988	Bussette	16	27,853	12,040	100,093	Own	NR	NR	NR	1997
TOTAL 10					Average:	13	43,686	10,070	104,106		5	5	3	

Section 18 3
Section 16(B)(2) 7

Supplemental Table 8
Urban Transit Data

Vehicle Replacement Schedule: Urban South Dakota Systems Responding to 1991 Survey

Agency	Model	Vehic. Year	Vehic. Type	Seat Cap.	Current Odometer	FY90 Totmile	Own/ Lease	Lift/ Ramp	W/C Stations	Radio/ CB Phone	EXP YR Replc.
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1993
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1993
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1993
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1993
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1994
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1994
SFPT, Sioux Falls	Ford	1983	Minivan	1	NR	NR	Own	Lift	5	Radio	1994
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	Own	Lift	5	Radio	1999
SFT, Sioux Falls	GMC	1963	Bus	53	NR	5,519	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1963	Bus	53	NR	5,272	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,683	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,061	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,080	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,048	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,538	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,527	Own	None	0	Radio	NR
SFT, Sioux Falls	GMC	1973	Bus	42	NR	1,249	Own	None	0	Radio	NR
SFT, Sioux Falls	TMC-30	1981	Bus	32	242,851	22,428	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	268,348	28,171	Own	None	0	Radio	1994
SFT, Sioux Falls	TMC-30	1981	Bus	32	255,638	24,749	Own	None	0	Radio	1994
SFT, Sioux Falls	TMC-30	1981	Bus	32	250,481	26,205	Own	None	0	Radio	1994
SFT, Sioux Falls	TMC-30	1981	Bus	32	260,492	29,919	Own	None	0	Radio	1993
SFT, Sioux Falls	TMC-30	1981	Bus	32	276,228	33,222	Own	None	0	Radio	1993
SFT, Sioux Falls	TMC-30	1981	Bus	32	264,767	31,127	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	254,728	30,394	Own	None	0	Radio	NR
SFT, Sioux Falls	TMC-30	1981	Bus	32	278,172	34,273	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	270,126	29,891	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	272,954	30,485	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	268,496	30,459	Own	None	0	Radio	1993
SFT, Sioux Falls	TMC-30	1981	Bus	32	263,334	30,986	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	255,524	34,213	Own	None	0	Radio	1995
SFT, Sioux Falls	TMC-30	1981	Bus	32	NR	3,358	Own	None	0	Radio	1993
SFT, Sioux Falls	TMC-30	1981	Bus	32	NR	4,070	Own	None	0	Radio	1993
RT, Rapid City	Wyn Tms	1984	Minivan	18	154,000	18,000	Own	None	0	Radio	1992
RT, Rapid City	Wyn Tms	1984	Minivan	18	159,000	23,000	Own	None	0	Radio	1992
RT, Rapid City	Wyn Cha	1987	Minivan	22	83,000	20,000	Own	None	0	Radio	1993
RT, Rapid City	Wyn Cha	1987	Minivan	22	83,000	21,000	Own	None	0	Radio	1993
RT, Rapid City	Collins	1988	Van	14	70,000	21,000	Own	Lift	2	Radio	1994
RT, Rapid City	Collins	1988	Van	14	69,000	19,000	Own	Lift	2	Radio	1994
RT, Rapid City	Supreme	1990	Bus	25	27,000	15,000	Own	None	0	Radio	1995
RT, Rapid City	Supreme	1990	Bus	25	28,000	15,000	Own	None	0	Radio	1995
RT, Rapid City	Supreme	1991	Van	15	13,000	NR	Own	Lift	2	Radio	1996
RT, Rapid City	Supreme	1991	Van	15	14,000	NR	Own	Lift	2	Radio	1996
Total 50			Average:	27	168,544	11,919	Total:	19			

Supplement Table 9

Vehicle Replacement Schedule: Unknown
Vehicles elegible for replacement: Unknown
Rural and specialized Agencies Responding to 1991 Survey

Agency Name Code	Vehicle Model	Year	Type	Seating Capacity	Current Odometer	FY90 TotMile	FY91 TotMile	Own/ Lease	Lift or Ramp	NO. of Wheelchai Stations	Radio/CB or Phone	Year of Expected Replacem
ADVANCE, Brooking	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
ASA, Rapid city	NR	NR	NR	NR	NR	NR	0	NR	NR	0	NR	NR
ATC, Aberdeen	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
BBSC, Haven	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
BFHCC, Belle Fourch	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
BHCH, Rapid City	NR	1990	Wagon	NR	NR	NR	0	Lease	None	0	None	
BTS, Huron	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
C&YI, Ft Pierre	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
CAC, Pierre	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
CCHO&S, Sioux Fall	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
CCS, Huron	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
CHS, Sious Falls	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
CLSC, rapid City	Ford	1973	Van	12	NA	NA	0	Own	None	0	None	NR
ECCO Inc., Madison	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
EROS VP Asn., Sx Fl	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
ETP, Olgency Village	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
FMVP, Rapid City	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
HCPT, Phillip	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
HSA/ATCO, Wate to	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
KMM, Lake Presto n	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
KSCC, Pennington		(USE INDIVIDAUL PRIVATE AUTOS)					0	NR	NR	NR	NR	NR
MAATC, Mitchell	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
MBR, Sioux Falls	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
MCSC, Sturgis	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
MSCC Inc, Mobrid e	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
OAHE Inc, Pierre	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
Pj.CAR, Sioux Falls	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
Pj.Mob., Sioux Falls	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
ROCS Inc, Lake And	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
RTS, Rapid City	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
SCATC Inc, Winner	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
SCRB, Woodsocket	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
SCS, Sioux Falls	Ford	1986	Van	12	NR	NR	0	Own	None	0	None	1992
SECC, Sioux Falls	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
SFCH, Sioux Falls	Chev	1991	Van	15	NR	NR	0	Leased	None	0	None	NR
SFPT, Sioux Falls	Ford	1991	Minivan	17	NR	NR	0	Own	Lift	5	Radio	1999
SHDS Inc, Hot Spring	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
SSC Inc, Salem	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
TGSC, Tripp	NR	NR	NR	NR	NR	NR	0	NR	NR	NR	NR	NR
TOTAL 39				56	0	0	0		1	5	1	

Supplement Table 10

Vehicle Replacement Schedule: Beyond Study Period
Vehicles elegible for replacement: Beyond Study Period

Rural and Specialized Agencies Responding to 1991 Survey

Agency	Age Typ	Operating Cost	Vehicle Model	Year	Type	Seat Cap	Current Odometer	FY90 TotMile	FY96 TotMile	Own/ Lease	Fund Ramp/ Lift	NO. of Wheelchair Stations	Radio/CB or Phone	Year of Expected Replacement
AST, Sisseton	18	91,700	Chev	1991	Van	13	7,250	14,715	110255	Own	Lift	2	Radio	1999
HASC, Huron	18	0	Chap	1991	Minivan	9	32,165	11,035	109410	Own	Lift	2	Radio	1996
BHWCH, Rapid City	16	0	Chev	1986	Van	12	36,205	10,353	108676	Own	NR	NR	NR	1995
BHWCH, Rapid City	16	0	Olds	1980	St.Wagon	0	32,357	10,866	108419	Own	NR	NR	NR	1982
BHWCH, Rapid City	16	0	Chev	1989	Bussette	13	23,734	11,916	107146	Own	Lift	2	NR	1998
ATC, Chamberlain	16	0	Chev	1988	Minivan	8	35,040	10,240	106720	Own	None	None	Radio	1995
RSVP, Mitchell	18	0	Chev	1982	Van	16	28,020	11,183	106301	Own	NR	0	Radio	1995
BHWCH, Rapid City	16	0	Chev	1986	Bussette	13	38,963	9,515	105568	Own	Lift	2	NR	1995
BHWCH, Rapid City	16	0	Ford	1989	Van	15	18,254	12,105	102989	Own	NR	NR	NR	1998
ATC, Chamberlain	16	0	Ford	1986	Van	15	56,932	6,294	100990	Own	None	None	Radio	1996
BHWCH, Rapid City	16	0	Ford	1989	Van	15	16,163	11,642	97657	Own	NR	NR	NR	1998
BHWCH, Rapid City	16	0	Dodge	1987	Van	15	89,858	1,006	96900	Own	NR	NR	NR	1995
ATC, Chamberlain	16	0	Dodge	1983	Van	15	65,757	4,372	96361	Own	None	None	Radio	1992
RSTT, Rosebud	18	0	Ford	1988	Van	8	96,332	NR	96332	Own	DNA	DNA	Radio	NR
BHWCH, Rapid City	16	0	Dodge	1985	Van	12	69,473	3,749	95716	Own	NR	NR	NR	1993
ATC, Chamberlain	16	0	Dodge	1977	Van	15	77,909	2,456	95101	Own	None	None	None	1992
RSVP, Mitchell	18	0	Ford	1987	Van	9	44,748	7,139	94721	Own	Lift	2	Radio	1996
BHWCH, Rapid City	16	0	Chev	1981	Bussette	13	79,224	2,210	94694	Own	Lift	2	NR	1992
BHWCH, Rapid City	16	0	Chev	1983	Bussette	11	78,538	2,143	93539	Own	Lift	2	NR	1993
BHWCH, Rapid City	16	0	Chev	1987	Bussette	16	30,113	8,952	92777	Own	NR	NR	NR	1996
SCSV Inc, Vermillion	18	12,305	Ford	1988	Minivan	12	33,306	8,183	90587	Own	Lift	1	Radio	1994
NHTC,Spearfish	16	0	Ford	1988	Sedan	8	26,514	8,314	84712	Own	None	NR	None	1994
SVS, Sioux Falls	16	0	Chev	1989	Sedan	7	NR	12,000	84000	Own	None	None	None	1999
SVS, Sioux Falls	16	0	Ford	1988	Sedan	7	NR	12,000	84000	Own	None	None	None	1998
BHWCH, Rapid City	16	0	Ford	1987	Van	10	27,850	7,651	81407	Own	Lift	2	NR	1996
LLEFTEC, Lennox	16	10,899	Ford	1984	Mimibus	17	36,514	6,320	80754	Own	Ramp	NR	Radio	1994
BHWCH, Rapid City	16	0	Ford	1986	Bussette	16	33,433	6,533	79164	Own	NR	NR	NR	1995
HAATC, Huron	16	0	Dodge	1981	Pick-up	NR	67,189	1,679	78942	Own	NR	NR	None	NR
NHTC,Spearfish	16	0	Dodge	1990	Sedan	7	15,182	8,880	77342	own	None	NR	Noe	1995
BCSC, Martin	16	20,167	Ford	1988	Van	15	24,994	6,900	73294	Own	Ramp	None	St. Band	2000
RSTT, Rosebud	18	120,760	Ford	1988	Van	8	73,089	NR	73089	Own	DNA	DNA	Radio	NR
BEPSC,Box Elder	16	300	Ford	1989	Sedan	4	2,300	10,000	72300	Own	DNA	0	DNA	1999
DHCF, Spearfish	16	0	Chev	1981	Van	15	71,043	NR	71043	Own	None	None	Radio	1993
AST, Sisseton	18	0	Ford	1988	Van	10	20,703	7,025	69878	Own	Lift	2	Radio	1997
HASC, Huron	18	0	Ford	1991	Minivan	16	8,713	8,713	69704	Own	None	0	Radio	1998
SSTC, Spearfish	SP	11,624	Dodge	1979	Van	14	67,866	0	67866	Own	None	None	Radio	1993
LIVE, Lemmon	18	0	Ford	1988	Minibus	10	22,500	6,433	67531	Own	Lift	1	Radio	NR
EHCC, Eureka	18	3,450	Ford	1985	Van	13	29,022	5,271	65919	Own	Lift	1	Radio	1995
SVS, Sioux Falls	16	0	Ford	1985	Van	15	NR	9,000	63000	Own	None	None	None	1995
SVS, Sioux Falls	16	0	Chev	1983	Van	12	NR	9,000	63000	Own	Lift	1	None	1998
SVS, Sioux Falls	16	0	Ford	1986	Van	15	NR	9,000	63000	Own	None	None	None	1996
SVS, Sioux Falls	16	0	Ford	1984	Van	15	NR	9,000	63000	Own	None	None	None	1994
SVS, Sioux Falls	16	0	Chev	1990	Van	12	NR	9,000	63000	Own	Lift	1	None	2000
SVS, Sioux Falls	16	141,074	Ford	1987	Van	15	NR	9,000	63000	Own	None	None	None	1997
ILCA, Brookings	18	0	Ford	1988	Van	12	18,257	6,309	62420	Own	Lift	1	Radio	2005
AST, Sisseton	18	0	Ford	1985	Van	13	29,404	4,534	61142	Own	Lift	2	Radio	1998
HAATC, Huron	16	0	Ford	1990	Minibus	NR	10,975	6,665	57630	Own	NR	NR	None	1995
BHWCH, Rapid City	16	0	Ford	1985	Bussette	13	31,421	3,697	57300	Own	Lift	2	NR	1994
NHTC,Spearfish	16	0	Ford	1991	Bus	26	4,055	6,046	46377	Own	None	NR	Radio	1994
RSVP, Mitchell	18	82,254	Chev	1981	Van	19	42,231	DNA	42231	Own	Lift	2	Radio	1993
HAATC, Huron	16	0	Dodge	1990	Van	NR	15,497	2,875	35622	Own	NR	NR	None	1996
SGSCNH, Scotland	16	6,600	Ford	1981	Minivan	14	31,569	NR	31569	Own	Lift	2	Radio/CB	1996
LIVE, Lemmon	18	0	Chev	1990	Minibus	16	10,000	2,882	30174	Own	None	0	Radio	NR
BSC, Bridgewater	18	5,705	Ford	1990	Van 12-1	15	13,000		13000	Own	Ramp	0	Radio	1996
TOTAL 54		506,838			Average:	12	31,920	6,694	77,912	Total:	21	32	25	

_____County(s)

TRANSPORTATION STUDY SURVEY FORM FOR TRANSIT PROVIDER AGENCIES IN SOUTH DAKOTA

Please return in attached envelope to: Peter Schauer
Peter Schauer Associates
RR2, Box 266
Boonville, Missouri 65233

If you have questions about this form contact:
Peter Schauer, PSA, 816-882-7388
or
Lowell Richards or Willis McLaughlin, SDDOT, 605-773-4831

Instructions: In order to evaluate passenger transportation services in South Dakota, it is critical that all of the questions below are answered, complete with explanatory notes when necessary. If the requested information is not available, please write NA (NOT AVAILABLE) and note when it will be available. If the information is both not available and impossible to obtain for this study, please enter NAI (NOT AVAILABLE/IMPOSSIBLE). If the question is inappropriate or does not apply, please enter DNA (DOES NOT APPLY). Do not leave any answer spaces blank. Mail completed Study Survey Form so it will reach Peter Schauer by October 18. Thank you.

I. Organization Characteristics

The first set of questions has to do with the general characteristics of your organization.

1. Date questionnaire completed_____

2. Identification of Agency:

   a. Name of Agency_____

   b. Contact person and title _____

   c. Address_____

   _____

   d. Telephone number_____

   e. County(s)/Reservation served:_____

3. What are the major functions/services that your organization directly provides? (Mark all that apply)

____ a. Transportation
____ b. Health Care
____ c. Social Services
____ d. Nutrition
____ e. Counseling
____ f. Daycare
____ g. Job Training
____ h. Job Placement
____ i. Mental Health
____ j. Information/Referral
____ k. Homemaker/Chore
____ l. Nursing Home
____ m. Other (Specify)
_____

4. How is your organization legally established?

Legally established as:
____ a. Private or Public Non-Profit
____ b. Private For-Profit
____ c. Public Governmental Agency
____ d. Other (Specify)
_____

5. In what manner does your organization provide, purchase, operate or arrange transportation? (check all that apply)

____ a. Personal vehicles of agency staff
____ b. Agency car/van/bus driven by non-transportation staff (e.g., caseworker)
____ c. Contract/purchase service from another organization
____ d. Paid-in-advance user subsidy (cash/script/token/ticket)
____ e. Client reimbursements
____ f. Volunteers and/or family members
____ g. Operate own transportation system with staff assigned specifically for that purpose (e.g., paid drivers; has transportation component within organization to administer and operate program)
____ h. Other (Explain)_____
_____

____ i. None of the above. Agency is not involved in passenger transportation in any manner. Please go to Questions #21-26 and provide comments if you desire.

6. What are the regular daily hours for your main transportation program?

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

_____

_____

7. Indicate the number of transportation days in a year your agency uses for budget purposes:

_____

8. Which of the following types of transportation does your organization provide? Mark all that apply.

____ a. Repetitively scheduled (e.g., daily, 3 days/week) transportation operating on regular routes
____ b. Demand-responsive (Call-a-Ride, Reserve-a-Ride) Is an advance reservation required? ____Yes ____ No. If yes, how much time?
____ c. Regularly scheduled transportation but operating no established route
____ d. On need/emergency basis, or related to casework
____ e. Other (Specify)_____

_____

9. Describe how the transportation operation is organized within the parent organization. (Attach an organizational chart to this page, or draw one on the back of this page).

a. How many of your drivers are:

____ Paid full-time ____ Paid part-time
____ Agency staff ____ Volunteers

b. If volunteer drivers are reimbursed in any way, please explain:

_____

_____

_____

_____

c. Please estimate the total annual man-hours of your staff and/or volunteers devoted to providing passenger transportation.

Functions	Staff Annual Hours	Volunteers Annual Hours
Administration		
Maintenance		
Dispatch		
Driver		
Total		

II. Ridership

The following question has to do with ridership.

10. Passenger Statistics:

Are ridership figures exact? _____
Or estimate? _____
Time period for ridership counts or estimates?_____

		Avg. Daily	Avg. Monthly	Avg. Yearly
a.	Total number of unduplicated persons provided transportation			
b.	Total number of trips*			
c.	Number of riders who use a wheelchair and/or are disabled			

*A trip equals one person getting on a vehicle one time. Most riders make two or more trips a day since they get on once to go somewhere and then get on again later to return.

III. Transportation Services

The following questions seek information about the organization's transportation services. When applicable, please always respond in terms of trips as defined under question 10. If data is not available in this form, please note and explain.

11. What is the geographic service area of your organization?
    a. Specific name of county(s), reservation, town and description

    _____

    _____

    _____

    _____

    _____

    b. Describe gaps or areas and towns served less than once per week by your service. Please plot these areas on the attached map marked "GAPS".

    _____

    _____

    _____

    _____

    _____

12. For all transportation service operated on a regular basis, please plot on the attached map marked "Current Service" the city(s), town, or specific area (example: unincorporated housing clusters) and indicated the days you regularly serve them.

13. For which of the following trip purposes does your organization provide transportation services, and what percentage of the total transportation service does each trip purpose represent?

	Percent of Total Trips
a. Health/medical (e.g., trips to doctor, clinic, drug store, treatment center)	_____
b. Nutrition (e.g., trips to a nutrition site)	_____
c. Life support (e.g., trips to food stamp, welfare, unemployment offices, etc.)	_____
d. Social (e.g., visits to friends/relatives)	_____
e. Recreation (e.g., trips to cultural, social, athletic events, etc.)	_____
f. Education/training (e.g., trips to training centers, schools, etc.	_____
g. Employment (e.g., trips to job interview sites or places of employment, etc.)	_____
h. Volunteer employment (e.g., RSVP)	_____
i. Shopping	_____
j. Personal needs (trips to barber, beauty shop, etc.)	_____
k. Social services (e.g., trips to social service centers--elderly, daycare, training, etc.)	_____
l. Other (Specify)_____ _____	_____

14. If vehicles are owned or leased by your organization, enter the following information for each vehicle. (Use additional sheets if necessary.

List only vehicles used for passenger transportation.

A Vehicle Model	B Year	C Type[1]	D Seating Capacity[2]	E Current Odometer[3]	F Total Miles During FY 90[4]	G Own or Lease	H Source of Capital Purchase Funds[5]	I Lift or Ramp? specify	J Number of Wheelchair Stations	K Radio Equipped (Y or N)	L Year of Expected Replacement[6]

[1]Vehicle Type: Bus = seating capacity greater than 25; Van = seating capacity of 12-15; Minivan = seating capacity less than 25; Sedan = standard automobile or station wagon.

[2]Include driver position

[3]Total accumulated vehicles miles

[4]Determine total miles for the 12-month period ending September 30, 1990.

[5]Statutory source of funds if purchased with government funds (e.g., County, UMTA 16(b)(2), Older Americans Act, etc.)

[6]To the best of your ability, estimate year you expect to replace vehicle and describe in question 15 expected source of funds for replacement.

15. Source of replacement funds for vehicles listed in column "L" of question 14.

Vehicle	Source	Amount

16. Please estimate the number of unduplicated persons and trips who need transportation that the organization is <u>unable</u> to serve. (When thinking of persons and trips think of both geographic areas that you are unable to serve and think of days and hours of service that you are unable to provide.)

	Per Day	Per Week	Per Month	Per Year
<u>Unduplicated</u> Persons				
<u>Trips</u>				

a. Do you expect this unmet need to continue in the future?

b. Describe type of service needed to meet unmet needs. (Attach additional sheets if necessary)

17. Has your organization been approved or does it have budgetary authority to purchase a new vehicle(s) this fiscal year for use in passenger transportation?

_____ Yes _____ No

How many vehicles? _____

Replacement or expansion? _____

If replacement, which existing vehicle(s) listed in question 14) will be replaced? _____

IV. Annual Revenue and Expenditures

The following questions concern your transportation funding sources and annual revenues and expenditures.

18. Please list the organization's revenues for funding transportation operation only* and indicate sources for revenue. Also, include transportation grants and both State and Federal sources.

*List all transportation expenses excluding capital purchases.

		Your Organization's Program or Service Name	Name of Specific Fed., State, or Local Source of Funds	Most Recent Annual Amount (12 mo.)
Ex.	A.	Medicaid	Federal - HHS	$25,000
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			
	11.			
	12.			
	13.			
	14.			
	15.			

(Attach additional sheets, if necessary)

Total $_____

19. Please give the organization's total annual transportation budget, using actual data from FY 1991 and data projected for FY 1992

Item		Actual FY-1991	Projected FY-1992
Transportation Operations			
1.	Wages, salaries, fringes (Drivers, Dispatchers, Maintenance Workers)	$_____	$_____
2.	Fuel, oil lubricants	_____	_____
3.	Sub-contracted or purchased services	_____	_____
4.	Vehicle depreciation	_____	_____
5.	Vehicle insurance	_____	_____
6.	Radio and communications systems	_____	_____
7.	Staff reimbursements	_____	_____
8.	Other mileage reimbursements to friends neighbors, etc.	_____	_____
9.	Parts and Equipment	_____	_____
10.	Subcontracted or purchased maintenance service	_____	_____
11.	Other (Explain)		
	_____	_____	_____
	Subtotal	_____	_____

Administration and Overhead

1.	Wages, Salaries, fringes	$_____	_____
2.	Professional fees and services	_____	_____
3.	Travel expenses	_____	_____
4.	Office supplies	_____	_____
5.	Company liability, building and contents insurance	_____	_____
6.	Postage and phone	_____	_____
7.	Other (Explain)		
	_____	_____	_____
	Subtotal	_____	_____
	GRAND TOTAL	_____	_____

20. If you charge a fare or have a suggested donation, please describe using the following categories:

In town _____

Out of town _____

Out of county or service area _____

Wheelchair or non-ambulatory _____

Other (attach additional sheets, if necessary) _____

V. Coordination

The following questions concern your position about coordinating your organization's transportation services with those of other organizations.

21. Would you want to participate in a system of arranging and coordinating the provision of transportation for the clients of other organizations?

_____ a. Yes, definitely

_____ b. Perhaps

_____ c. Doubtful

_____ d. No, definitely not

22. Has your organization, in the past, coordinated or entered into cooperative arrangements with other organizations to provide transportation?

_____ a. Yes, frequently -- ongoing arrangement(s)

_____ b. Yes, occasionally

_____ c. No, not at all

23. If some type of coordinated transportation service were established for a number of organizations, do you think your clients would have any problem riding with clients of other agencies?

_____ a. No problems -- could ride with other clients

_____ b. Some problems could be expected

_____ c. Numerous problems with such a system

_____ d. Impossible -- clients could not ride with clients of other agencies

24. From your experience, what (if any) are the most difficult barriers to your organization's ability to coordinate and/or consolidate transportation services with other agencies? (List specific problems you know about in the blanks following all the barriers you mark.)

_____ a. Federal Regulations_____

_____ b. Contractual Specifications

_____

_____ c. State Regulations_____

_____ d. Your Organization's Regulations

_____

_____ e. Other Organization's Regulations

_____

_____ f. Expected Reduction in Quality/Coverage/Efficiency of Service

_____

_____ g. Accountability/Paperwork/Billing Problems

_____

_____ h. Client Attitudes/Preferences

_____

_____ i. Geographic location (too many miles to nearest other provider)

_____

_____ j. Not enough vehicles

_____

_____ k. Not enough seats on existing vehicles

_____

_____ l. Other_____

25. Describe your organization's future plans for transportation service.

	Describe (attach comments or write on back of of this sheet.)	Date
_____ New services anticipated	_____	_____
_____ Expanded service area	_____	_____
_____ New equipment	_____	_____
_____ New operating strategy	_____	_____
_____ Experimental project	_____	_____
_____ New service area	_____	_____
_____ Reduced service	_____	_____
Other (please describe)		
_____ _____	_____	_____
_____ _____	_____	_____
_____ _____	_____	_____
_____ _____	_____	_____

26. If there are any other issues, concerns, or data relevant to the need for improving or expanding transportation services in your service area that have not been covered in this questionnaire, please feel free to address them in the spaces below. (or attach additional sheets)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Thank you!

Appendix G

Formative Issues and Possible Recommendations For Coordination Districts

Boundaries for coordinated districts must recognize travel patterns, cultural characteristics, existing services and other factors. Figure G-1 contains possible coordination districts. Formulative issues for creating districts follow:

- District should represent reasonable catchment area for activities such as trade, health care, social services and employment.
- Districts should represent sensitivity to existing service providers and cultural issues such as Indian Reservations, existing transit programs and any other regional services.
- To enhance management activities no district should be so large so as to prevent convenient (ideally less than two hours) of travel to any population cluster in the district. This issue addresses the importance of centrally locating district managers.

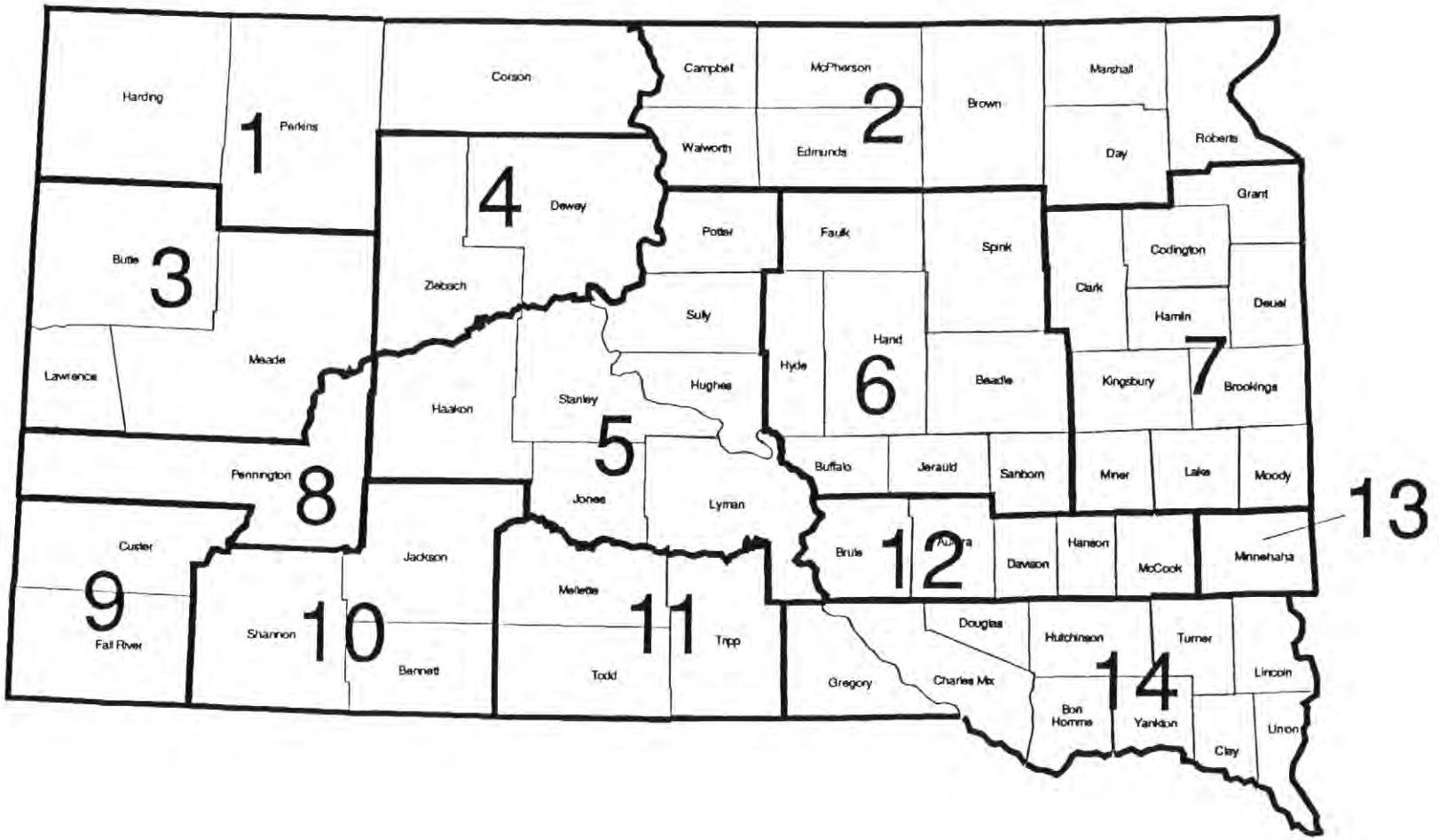
Table G-1

District	Possible Management Location	County(s)
1	Lemmon	Corson Harding Perkins
2	Aberdeen	Brown Campbell Day Edmunds McPherson Marshall Roberts Walworth
3	Sturgis	Butte Lawrence

		Meade
4	Dupree	Dewey Ziebach
5	Pierre	Haakon Hughes Jones Lyman Potter Sully Stanley
6	Huron	Beadle Buffalo Faulk Hand Hyde Jerauld Sanborn Spine
7	Brookings	Brookings Clark Codington Devel Grant Hamlin Kingsbury Lake Miner Moody
8	Rapid City	Pennington
9	Hot Springs	Custer Fall River
10	Martin	Bennett Jackson Shannon
11	Rosebud	Mellette

		Todd Tripp
12	Mitchell	Aurora Brole Davison Hanson McCook
13	Sioux Falls	Minnehaha
14	Yankton	Bon Homme Charles Mix Clay Douglas Gregory Hutchinson Lincoln Turner Union Yankton

Figure G-1
Possible Service Districts for South Dakota Transit



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